Impact assessment for HIV/STI prevention programmes

Baseline report series

SUMMARY REPORT

Behavioural Surveillance Survey in Gujarat, India

GUJARAT STATE AIDS CONTROL SOCIETY

DFID Department for International Development

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This report is part of a series of baseline surveys conducted to monitor the impact of HIV/STI prevention programmes in five states of India: Andhra Pradesh, Gujarat, Kerala, Orissa, West Bengal and in the Healthy Highways Project. The surveys conducted include behavioural surveillance surveys (BSS), STI/HIV prevalence surveys and health care providers surveys. Together these surveys follow the methods outlined by UNAIDS/WHO for evaluation and monitoring of large scale HIV/STI prevention programmes.

Surveys in each state were implemented by a variety of research organizations, NGOs, medical colleges and laboratories, in collaboration with the respective State AIDS Control Societies. Family Health International provided technical assistance in the implementation of these surveys with funding from the UK Department for International Development.

This report was compiled in 2001

SUMMARY REPORT
Behavioural Surveillance
Survey in Gujarat,
India

A study Implemented by ORG Centre for Social Research, a division
of ORG-MARG Research Ltd., under the guidance of Gujarat
State AIDS Control Society, with technical assistance from
Family Health International

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MESSAGE

I am glad to note that the Impact Assessment Project is drawing to a close and is now ready to disseminate the findings of its work. The Impact Assessment Project , supported by DFID was carried out under the guidance of NACO and the State AIDS Control Societies in the states of Orissa, West Bengal , Kerala, Gujarat , Andhra Pradesh and among highway populations. The studies, which include behavioural surveillance surveys, STI prevalence studies and health care provider survey's, provide a mine of information for the planning, design, implementation and monitoring and evaluation of HIV/AIDS control programmes.

I must record here my appreciation for the technical support provided by the Family Health International and their constant efforts to maintain very high standards of quality. I would also like to thank NACO and the State AIDS Control Societies for their ungrudging support throughout this exercise. I hope this report will be a valuable source of information for all people working in the field of HIV/ AIDS prevention in India and the world at large.

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FOREWORD

Sexualy Transmitted Infections (STIs) have been a major public health problem in all the developing countries. India had a National STD Control Programme even before we got our independence. The issue of STI control, however, did not receive the due attention till the programme was merged with the National AIDS Control Programme developed after the emergence of HIV/AIDS as a significant public health problem. HIV/AIDS has now, very rightly, been recognised as an important developmental challenge with a potential to adversely affect the entire socio-economic infrastructure of the nation.

A number of activities are being implemented as a part of the National AIDS Control Programme under the leadership of National AIDS Control Organization in the state of Gujarat for the prevention of HIV/STI. Activities include awareness generation, behaviour change communication, condom promotion, management of STIs including the training of health care providers etc. Activities are also directed towards monitoring and evaluation (including impact assessment) of the programme.

Impact Assessment Project implemented in the state under the overall guidance of Gujarat State AIDS Control Society (GSACS) with technical assistance of Family Health International (FHI) and funding from Department for International Development (DFID) is an important step for tracking the trend of sexual behaviour (behavioural surveillance survey), STI prevalence studies and STI case management practices of health care providers [health care providers survey (HCPS)]. BSS was implemented by ORG MARG (a market research firm), STI prevalence studies were implemented among female sex workers (FSWs) in Ahmedabad by Jyoti Sangh and in Surat by Department of Community Medicine of Government Medical College, Surat and HCPS was implemented by COHESION (a private research firm) in the whole state and by PSM Department of M. P. Shah Medical College in Jamnagar district.

All these surveys have provided useful insight into the prevalence of STIs among FSWs, the behaviour of some of the important groups in the state (like FSWs and clients, slum

dwellers etc.) and the way STI patients are managed in the health care settings. For instance, STI prevalence studies among the female sex workers revealed very high prevalence of curable STIs among them, which prompted initiation of additional measures (like organizing regular camps for screening sex workers, who are asymptomatic for STI) for control of STIs. Following the STI prevalence studies, efforts were also made to try and test alternate methods of STI control among them.

It will be important to repeat these studies at periodic interval to see the change in these parameters over time.

We thank DFID for providing the financial support to this project.

It is expected that these reports will also be useful for agencies and individuals involved in the fight against STI/HIV/AIDS elsewhere in the country.

Dr. D. M. Saxena
Project Director

Contents

Abbreviations and Acronyms

AIDS   Acquired immunodeficiency syndrome
BSS   Behavioural Surveillance Survey
DFID   Department for International Development
EP   Equal probability
FHI   Family Health International
FSD   Female slum dwellers
FSW   Female sex workers
GSACS   Gujarat State AIDS Control Society
HIV   Human immunodeficiency virus
MC   Male clients of female sex workers
MDIW   Male diamond industry workers
MSD   Male slum dwellers
MUS   Male university students
NGO   Non governmental organization
PCO   Project co-ordination office
PPS   Probability proportional to size
PSH   Partnership in sexual health
PSU   Project support unit
STI   Sexually transmitted infection
WHO   World Health Organization

Executive summary

This report is a summary of the methodology and findings of the Gujarat HIV Risk Behavioural Surveillance Survey (BSS). This survey, which was a part of the impact assessment of HIV prevention activities in Gujarat, was conducted in late 1999, for the Gujarat State AIDS Control Society (GSACS). The technical assistance from provided by the Family Health International (FHI) and funding was from Department for International Development (DFID). ORG Centre for Social Research, a division of ORG-MARG Research Limited had implemented the survey.

This BSS was intended to serve as a baseline from which future trends in HIV/AIDS related knowledge, attitudes and behaviours could be measured in the sub-populations of Gujarat at particular risk of HIV infection. It was also meant to contribute to the larger monitoring and evaluation efforts of the GSACS. The two core indicators on which data was collected included behaviour indicators and knowledge indicators

Secondary indicators provided information on incidence of STI symptoms, treatment-seeking behaviour, messages recalled on HIV and sources of HIV related information, practices related to condom use etc. All the indicators were based on those recommended by WHO/UNAIDS for national AIDS programmes.

Sampling

The study sample was drawn from sub population groups that ranged from those with known high-risk behaviour such as female sex workers (FSW) and male clients of female sex workers (MC) to others who had varied estimated high-risk behaviours like sexual intercourse with a non-regular partner. Representatives from GSACS, Project Support Unit (PSU), Ahmedabad, Project Coordination Office (PCO), Surat, Ahmedabad

Municipal Corporation AIDS Control Society, DFID representatives and other local experts had together prepared a list of possible groups that could be included in the survey. Information on the risk behaviour was taken from available research findings, anecdotal information and reports from NGOs working with high-risk groups. Based on this information, the study groups were finally chosen. The sub populations sampled included male slum dwellers (MSD), male diamond industry workers (MDIW), female slum dwellers (FSD) and male university students (MUS).

The BSS sampling universe consisted of areas in the state where major concentrations of the above groups were located. The seven places where the survey was implemented covered cities as well as purposefully selected districts. The sample sizes were chosen based on the estimated level of key risk behaviours and the degree of confidence (95%) required to detect a significant change (15%) in behaviour over time.

The sampling frame was constructed with the assistance of those working with the specific sub populations as well as mapping exercises. A two stage systematic random sampling procedure was used to select respondents. Clusters were selected in the first stage of sampling and the respondents were selected randomly in the second stage. Depending on the nature of the group, the clusters were selected with either probability proportional to size (PPS) or equal probability (EP).

Implementation

Qualitative exploratory research was first conducted to facilitate exposure to the target groups and to gain information that would contribute to development of the questionnaire. The standardised BSS questionnaires were adapted for use in Gujarati and Hindi after intensive pre-testing. The implementation team had received training in, among other topics, methods of data collection, HIV/AIDS, sex and sexuality and socio-cultural sensitivities related to working with high-risk groups. PSU and many NGO partners, especially Jyoti Sangh and SAHAS from the PSH project had assisted ORG to understand the socio dynamics of the sex industry and also in the designing and implementing training of field workers. A supervisory team had closely monitored the quality of data collection. The data was analysed using SPSS. The questionnaires were administered either by an interviewer or through self-administration as in the case of students after informed consent was obtained.

Key findings

Profile of respondents

Female Sex Workers: The mean age of the female sex workers (FSWs) was 27.7 years. In total, 47 % respondents had stated that they were once married but were divorced/ separated/widowed at the time of the survey, 31% FSWs had said that they were never married. Forty four percent of the sex workers were illiterate and 80% had no other source of income.

Clients of Female Sex Workers: The mean age of the clients of female sex workers was 28.8 years and 77% was literate. Fifty three percent of them were reported to be married, 34% had said that they were unmarried and 15% had said that they were separated, widowed or divorced. The occupational profile of the clients of FSWs ranged from skilled and unskilled categories. For example 27% were autorickshaw/taxi/truck drivers, 29% were manual labourers and 20% were reported to be working in government or private service.

Other sub population groups: The mean age of the male diamond industry workers was 26 years. Only 5% of them were illiterate and 54% of them had studied up to class X and 53% respondents had said that they were married. The mean age of the male slum dwellers was 30.3 years, 14% of them were illiterate and 41% had studied up to class X. In total, 75% of the respondents in this group were married. The mean age of the working female slum dwellers was 30 years, 58% of them were illiterate and 84% were reported to be married. The mean age of the university students living in hostels was 20.9 years.

Indicator measurements

Female Sex Workers and condom use: Ninety six percent FSWs had said that they had one-time clients and 75% had stated that they also had regular clients. Regarding condom usage, 93% sex workers who had one-time clients had reported that these clients used a condom during the last sexual intercourse with them. The corresponding figure for regular clients was 90%.

Other sub population groups and non-regular partners: The percentage of diamond industry workers, university students and male slum dwellers who had sex with non-

regular partner was higher than those who had sex with female sex workers. Paid sex or sexual intercourse with a female sex worker was reported by 7% of the male diamond industry workers, 2% of the male slum dwellers and 1% of the university students.

Condom use by male sub population groups: Eighty-eight percent of clients of FSWs had said that they had used condoms during the last sexual intercourse. Of the other sub-populations who had reported having sexual intercourse with a FSW, 75% of the male diamond industry workers, 71% of the university students and 68% of the male slum dwellers had stated that they had used condoms during their last sex.

Other findings

University students: Percentage of students who had said that they had ever had sex was 17.5%. The mean age at first sexual intercourse for the students was 19 years. 12.3% of the students had reported that they had sexual intercourse in the preceding twelve months.

Other sub population groups: The mean age at first sexual intercourse for male clients of female sex workers was 19 years, for male diamond industry workers and male slum dwellers, it was 20 years, was 17 years for working female slum dwellers and female sex workers.

<u>Introduction</u>

HIV/AIDS in Gujarat

Gujarat is classified as Group II State based on the HIV prevalence among adults in the state as measured through sentinel surveillance data. This means that HIV infection had crossed 5% or more among high-risk groups but the infection was below 1% in the low-risk groups. Sentinel surveillance reports in the year 2000 had indicated that the prevalence of HIV infection among STI patients (which represents the high-risk group) was 4.65 and among women attending antenatal clinics (which represents the low-risk group) was 0.5. The prevalence of HIV among these groups was higher in the districts of Ahmedabad, Baroda and Surat as compared to other districts in the state.

Prevention activities by the State AIDS Control Society

The Gujarat State AIDS Cell was established to prevent and control the spread of HIV infection in the state. The initial activities included ensuring blood safety in the state, training of health care providers in the public sector in the syndromic management of sexually transmitted diseases, strengthening of public STI clinics and provision of counselling services in these clinics. In order to create awareness in the public regarding HIV/AIDS, campaigns had been conducted using TV, radio, print media and folk art forms. The thrust of the programme, however, had shifted from creating awareness to changing behaviour through interventions in populations at high risk of contracting and spreading HIV/AIDS in the general community.

Partners

The Department for International Development (DFID) of the UK government has been providing funds to the Gujarat State AIDS Control Society through the National AIDS Control Organisation for implementing targeted interventions among certain sub

population groups at high-risk of HIV infection. These sub groups include, among others, commercial sex workers, men having sex with men, injecting drug users, truck drivers, migrant labour, slum dwellers, etc. The components of the HIV/AIDS prevention project in Gujarat include surveillance, condom promotion by ensuring that quality condoms are available and acceptable to those who are vulnerable to STIs and HIV, and to strengthen service providers to respond to the needs of the high-risk groups that are reached through targeted interventions.

Strategies adopted for reducing risks of the populations reached through targeted interventions include behaviour change communication mainly through the peer educators, provision of STI treatment services, condom promotion and counselling where necessary. GSACS had contracted several NGOs to work with the target groups. This was mainly because NGOs were able to develop a better rapport and gain the trust of high-risk groups.

Behaviour surveillance surveys (BSS)

The BSS is a monitoring and evaluation tool designed to track trends in HIV/AIDS related knowledge, attitudes and behaviours in sub-populations at particular risk of HIV infection. The BSS findings provide indicators of success or failure of prevention activities, highlight persistent problem areas, identify appropriate intervention target populations, identify specific behaviours in need of change, function as a policy and advocacy tool and supply comparative data concerning behavioural risks.

Objective

The objective of the BSS in Gujarat was to measure HIV-related risk behaviours in selected population sub-groups. The measurements presented in this report serve as a baseline from which to measure trends in the future.

Methodology

Indicators

Behavioural surveillance consists of repeated cross-sectional surveys in selected population groups which provide measurements on certain indicators. In the baseline wave in Gujarat,

data were collected on two main indicators: (a) behaviour indicators and (b) knowledge indicators. The list of indicators is included in the Annex.

The measurements of these indicators provide proportions reporting a particular behaviour or knowledge.

Study population

In Gujarat, the subpopulations surveyed included those with known high-risk behaviours and others with varying estimates of risk behaviours. Representatives from GSACS, Project Support Unit (PSU), Ahmedabad, Project Co-ordination Office (PCO), Surat, Ahmedabad Municipal Corporation AIDS Control Society, DFID and other local experts gathered together to list out possible groups for inclusion in the survey. Available research findings, anecdotal evidence and reports from NGOs were the basis from which information on risk behaviour was taken. The groups, presented in Table 1, were finally chosen for the survey from the list of suggested groups.

Table 1: Sub populations surveyed in the Gujarat BSS	
Sub populations	Definitions
Female Sex Workers (FSW)	Women aged 18 years and above reporting having sold sex for money or gifts during the past year
Male Clients of FSW (MC)	Men aged 18 years and above reporting having bought sex from FSW in the past year
Male Diamond Industry Workers (MDIW)	Men aged 18-49 years working in the diamond industry for alteast the past one year
Male Slum Dwellers (MSD)	Men aged 18-49 years residing in slums for at least the past one year
Working Female Slum Dwellers (FSD)	Women aged 18 to 39 years, residing in slums for at least the past one year and working for at least the past six months
Male University Students (MUS)	Male students, aged 18 years and above residing in hostels who are at least second year students of designated universities and colleges

Study sites

The expert group that had met to decide on the sub population groups for the Gujarat BSS had also listed out the locations where these groups were found in the state. Places with highest concentration of these groups were chosen based on the information available on the short-listed locations. Table 2 lists the sites where the study was conducted.

Table 2: BSS sites and sample sizes						
	FSW	MC	MDIW	MSD	FSD	MUS
Sample size	400	400	1097	1072	1000	2634
Ahmedabad	√	√	√	√	√	√
Bhavnagar			√			
Jamnagar				√	√	
Rajkot	√	√		√	√	√
Surat	√	√	√	√	√	
Vadodara				√	√	√
V.V. Nagar						√

Sampling design and sample sizes

The sampling frame was constructed in two ways — with the assistance of NGOs working with the specific sub populations and through mapping exercises. A two stage sampling procedure was used to select respondents. The clusters were selected using either probability proportional to size (PPS) or equal probability (EP) in the first stage of sampling and the respondents were randomly selected in the second stage.

The sample sizes were chosen based on the measurement of change on a given indicator. This was based on various factors such as the estimated baseline level of the indicator, a magnitude of change (15%) that can be detected reliably, using a desired level of significance and power as well as the percent of the population that is eligible to be considered for the indicator.

Issues in behavioural data collection – validity of self reported data on sexual behaviour:

Many questions were raised about the validity of self-reported data on sexual behaviour. Growing experience in collecting data on sexual behaviour indicates that the extent to which people answer questions openly and truthfully depends on factors such as the setting of the question, privacy and confidentiality, attitudes & profile of the interviewer, etc. While it was not possible to validate data on sexual practices by direct observation, it was possible to triangulate them with data from other sources to see if the picture presented was consistent and credible. Still, some misreporting of risk behaviour could occur and true levels of risk may either be under or over reported. However, for those tracking the HIV epidemic, the trends in risk behaviours is of greater concern than the exact level of risk behaviour at any given point of time. Even where there is misreporting, repeat behavioural surveys show changes in trends over time provided that the magnitude or direction of misreporting does not change significantly. To ensure maximum validity, the survey was implemented with high levels of quality control. This included intensive sensitisation and training of the interviewers, provision of a setting conducive to privacy, assuring and maintaining confidentiality so that the respondent could feel comfortable.

Survey Implementation

Qualitative exploratory research was first conducted to facilitate exposure to the target groups and to gain information that would contribute to the questionnaire development. The BSS questionnaires, based on those recommended by WHO/UNAIDS, were adapted for use in Gujarati and Hindi after doing intensive pre-testing. The implementation team was trained extensively in methods of data collection, basic facts of STIs and HIV/AIDS, sex and sexuality, socio-cultural issues related to working with high-risk groups and common problem situations in data collection along with approaches to manage them. This training was intended not only to enhance the quality of data collection but also to ensure consistent quality among the team members. A supervisory team had closely monitored the quality of data collection. Informed consent of all respondents was obtained before the questionnaires were administered either by an interviewer or in the case of students, through self-administration. The field work was done between October and November 1999. The data was analysed using SPSS.

Key findings

Key findings described briefly in this section mainly focus on demographic profile and knowledge and behaviour indicators in various sub-groups included in the study.

Female sex workers

Key demographics

The mean age of the female sex workers was 27.7 years. Forty four percent of the sex workers were illiterate (Figure. 1). Twenty percent of FSWs had reported having studied up to Class V and only 8% had stated that they were educated until Class X.

Figure 1. Educational status of the FSWs

44%   46%

10%

☐ Literate   ☐ Illiterate but can sign   ■ Illiterate
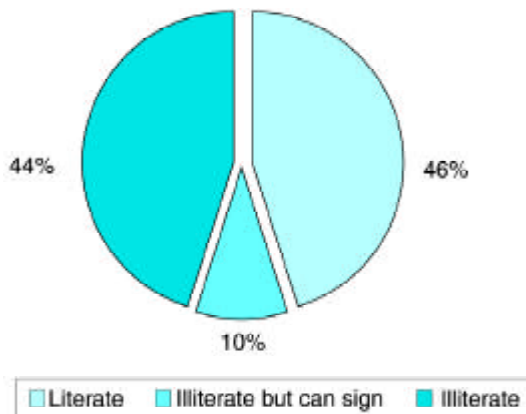
The marriage profile of the sex worker revealed a mixed picture. Thirty one percent FSWs had said that they were unmarried or had never married, 22% had indicated that they were married and 47% stated that they were either divorced/separated or widowed (Figure 2).

Figure 2. Marital status of the FSWs
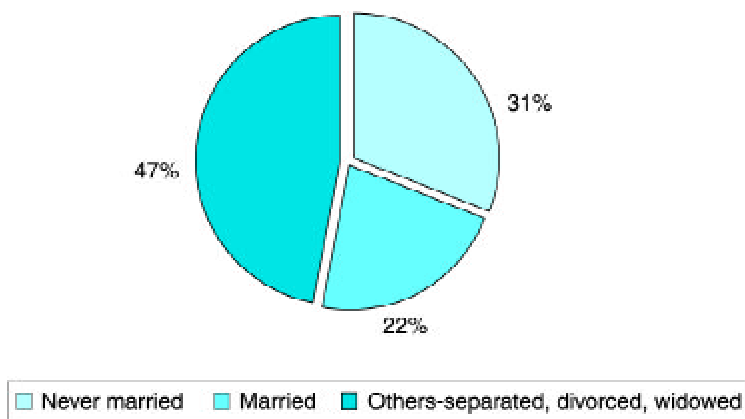

Behavioural indicators

Ninety six percent, 75%, 16% and 8% sex workers had reported having sexual intercourse with a one time client, regular client, spouse or cohabiting partner and non-paying partner respectively in the preceding month.

Condom use during last sexual intercourse and consistent condom use during the past year

The study indicated that the reported consistent condom use was lower than the reported condom use during the last sexual intercourse (Figure 3). Consistent condom use with one-time clients in preceding 12 months was reported to be 73%, which was lower than that with regular clients (78%).

The proportion of FSWs who had never used a condom in the preceding 12 months (4%) was lower with one-time clients than with regular clients (6%).

Figure 3. Reported condom use by FSWs
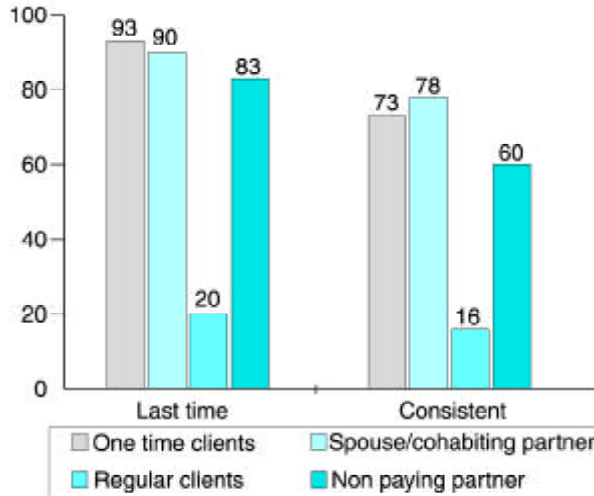
Number of clients on the last working day

The majority of sex workers (68%) had said that they had between 2 and 4 one-time clients on the last working day before the survey. Three percent of FSWs had reported having had six partners on the last working day. However, the majority of sex workers (64%) had reported having either one or two regular clients on the last working day. About 25% sex workers had reported no contact with a regular client and 3% did not have a one-time client on the last working day. While 16% had 5 or more one-time clients on the last working day, only 2% had 5 or more regular clients.

Knowledge indicators

STI/HIV infection prevention knowledge –consistent condom use

Ninety percent sex workers had said that they had heard about HIV/AIDS and 87% had stated that they had heard about STIs. A large proportion of sex workers were aware that use of condom could help prevent HIV infection and STIs.

Though a large majority of sex workers (65%) was aware that condom use could prevent STI infection, this proportion was lower than those aware of condom use being a preventive

measure against HIV (79%) (Figure 4). Twenty five percent of FSWs were also aware that avoiding sex with a person with an STI could prevent STI.

Figure 4. Awareness about condom use
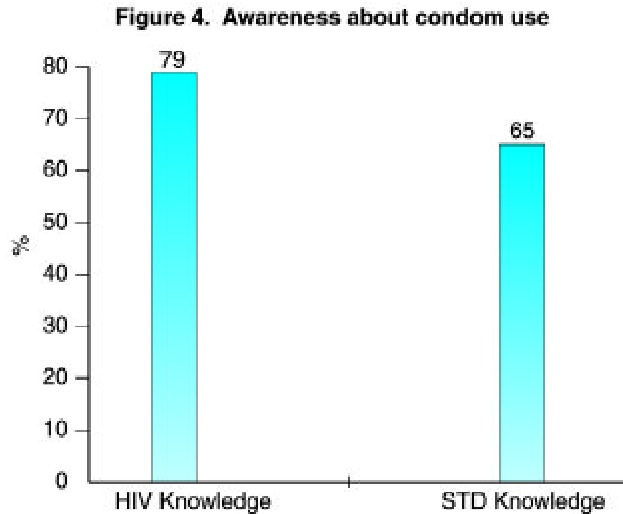
A noticeably lower proportion was aware of two other areas of knowledge: avoiding injections with contaminated needles (17%) and using screened blood for transfusion (13%) to prevent HIV infection.

Other population sub groups

Key demographics

Mean age of other sub population groups

The mean age of clients of sex workers was 28.8 years and was 26 years for diamond industry workers.

The mean age of male slum dwellers was 30.3 years and for working female slum dwellers was 30 years. The mean age of male university students was 20.9 years.

Educational status

About 58% working female slum dwellers were illiterate, which was much higher than the corresponding male sub groups. Literacy level among diamond industry workers was highest at 93% and 77% clients of sex workers and 82% male slum dwellers were literate.

Figure 5. Literacy levels in sub-population groups
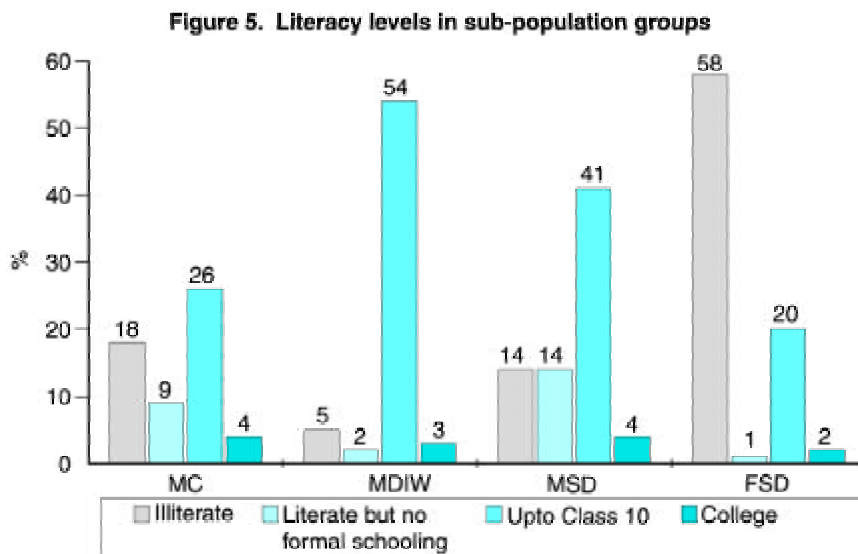
Higher levels of education were reported among the diamond industry workers and male slum dwellers than among the clients of sex workers. Fifty four percent diamond industry workers and 41% male slum dwellers had studied at least up to Class X as compared to only 26% of the clients of sex workers (Figure 5). Higher education levels were however low and 2% and 4% respondents from all groups had gone to college.

Marital status

In all sub-groups except students, the percentage of married respondents was higher than unmarried ones. This difference was especially significant among the slum dwellers (Figure 6).

Figure 6. Marital status of sub-population groups

Legend: Unmarried | Married | Divorced, separated widowed

MC: Unmarried 33, Married 53, Divorced/separated/widowed 14
MDIW: Unmarried 44, Married 53, Divorced/separated/widowed 3
MSD: Unmarried 24, Married 75, Divorced/separated/widowed 1
FSD: Unmarried 8, Married 84, Divorced/separated/widowed 8
MUS: Unmarried 96, Married 4, Divorced/separated/widowed 0
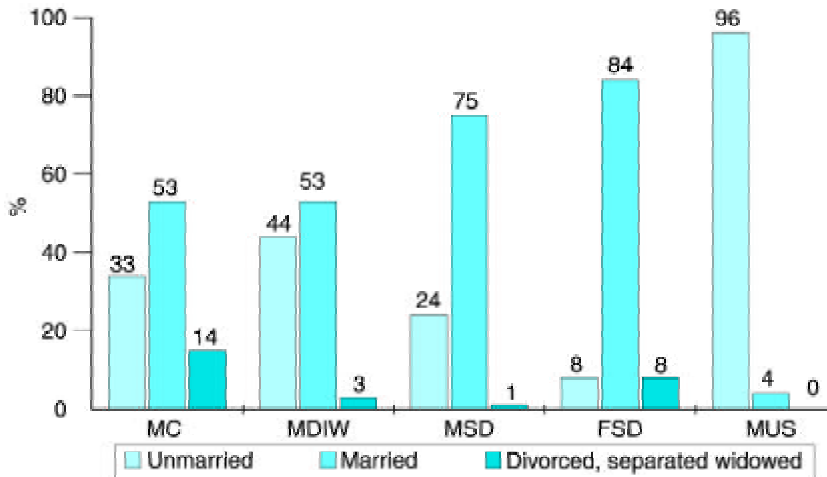
Behavioural indicators

Male subpopulation groups reporting sexual intercourse with different types of partners in the past one-year

Female sex worker: Seven percent diamond industry workers and 2% male slum dwellers had reported having had sexual intercourse with a female commercial partner in the preceding year and 1% male university students had also reported similar sexual behaviour during the same period (Figure 7).

Female non regular partner (does not include female sex worker) : Apart from having commercial partners, nearly one third of the male clients of sex workers had non-regular partners in the preceding year.

Just as for having commercial partners, a lower proportion of male slum dwellers (5%) had sex with non-regular partners as compared to the diamond industry workers (10%) as shown in Figure 8. A larger proportion of male university students had reported having sex with female non-regular partners than with female commercial partners.

Figure 7. Percentage of respondents reporting sex with FSWs in the preceding year
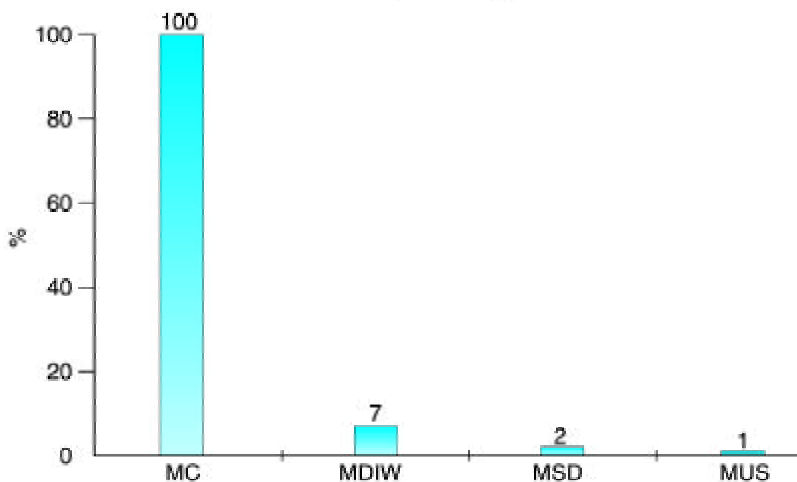
Figure 8. Percentage of respondents reporting sex with female non-regular partner in the preceding year
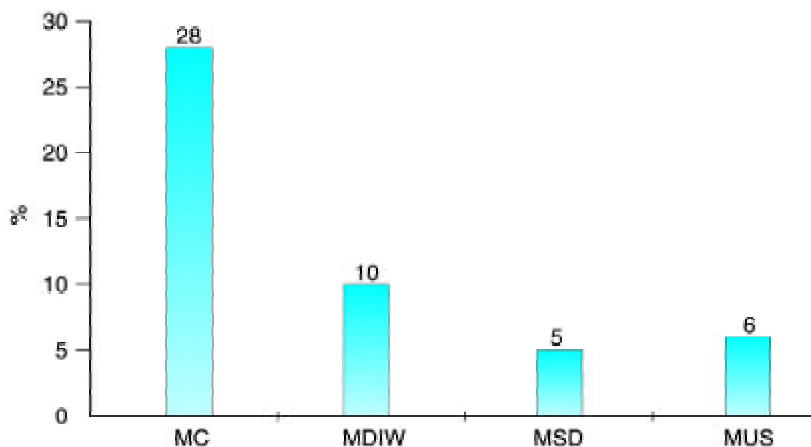
Male partner: Apart from commercial and non-regular female partners, 2.4% male clients and small proportions of other male sub groups had also reported anal sex with a male partner in the last one-year (Figure 9).
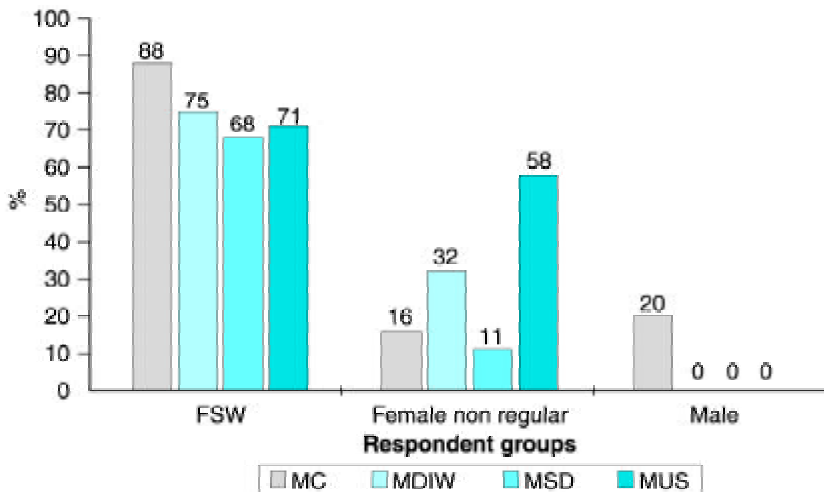
Figure 9. Percentage of respondents reporting sex with a male partner in the preceding year
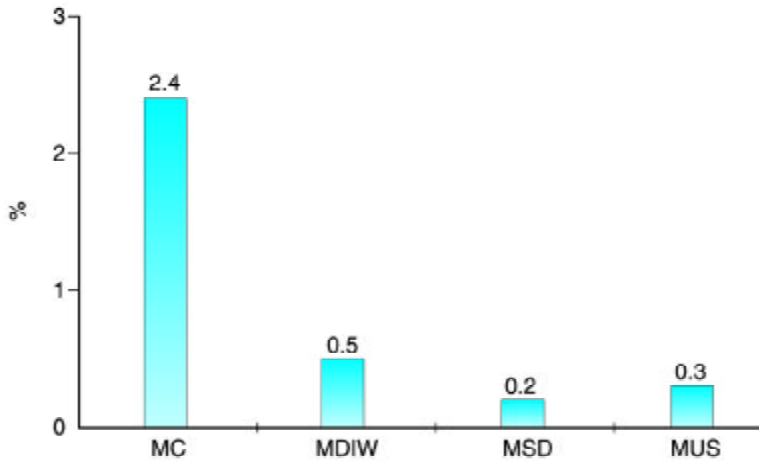
Condom use with last partner:

Condom use during last sexual intercourse with a female sex worker was highest among clients of sex workers (88%) followed by diamond industry workers (75%) (Figure 10).

Figure 10. Reported condom use during last sexual intercourse

The reported condom use during last sexual intercourse with a female non-regular partner was low. It was 32% among diamond industry workers and 16% among male clients. Condom use was lowest among male slum dwellers (11%). A larger proportion of the university students (58%) had said that they had used condoms during their last sex with a female non-regular partner. The difference between condom use with a FSW and non-regular partner was least among the university students at 13% and was highest among clients of sex workers at 72%. Only the clients of sex workers had reported condom use (20%) during last sexual intercourse with a male partner.

Consistent condom use

The consistent condom use over the preceding year as reported by all groups was considerably lower than condom use during their last sexual intercourse.

The pattern here was similar to the pattern reported on condom use during last sexual intercourse. The percentage of clients of sex workers who had reported consistent use of condoms was 66%, which was higher than that reported by other sub-groups (Figure 11).

Figure 11. Reported consistent use of condoms in the preceding year
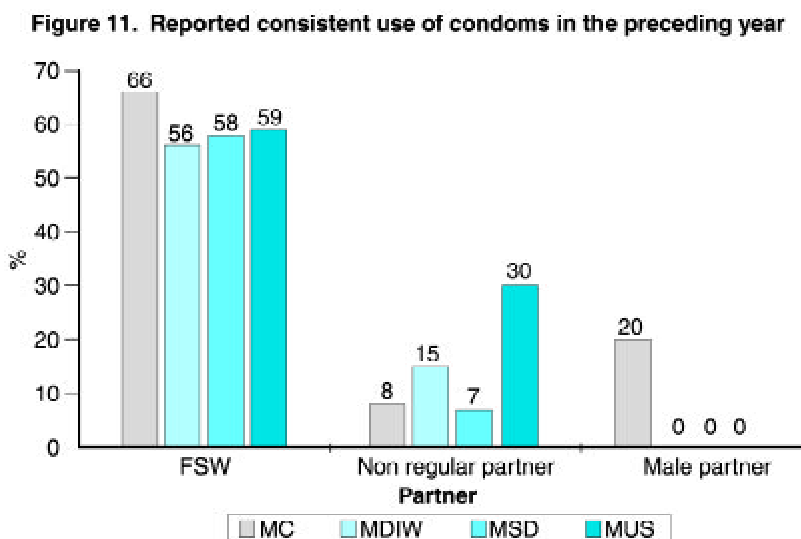
Similarly, just as in the previous section, the reported consistent condom use with non-regular partners was lower than that with female sex workers.

Knowledge indicators

Knowledge of methods to prevent transmission of HIV

Only 28% of the working female slum dwellers had heard about HIV/AIDS. Except for clients of sex workers (71%) and university students (75%), the proportion of respondents who knew that using condoms could prevent HIV infection was low among other groups. More clients of sex workers had mentioned "not using used syringes" (30%) as a way to prevent HIV infection than mutually faithful relationship between HIV negative partners (17%). Seventy five percent university students had said that a mutually monogamous relationship would prevent HIV infection. The percentage of other respondents who had stated the same way to prevent HIV infection ranged between 14% and 35% (Table 3).

Table 3: Knowledge of methods to prevent transmission of HIV					
Response	Sub-groups				
(Figures in %)	MC	MDIW	MSD	FSD	MUS
Aware of HIV/AIDS	89	95	84	28	99
Use condoms	71	52	39	4	75
Mutual monogamy between HIV negative partners	17	35	31	14	75
No casual sex	13	55	35	5	-
No sex at all	4	2	3	0.4	3
Avoid used syringes	30	-	-	-	70

Forty-two percent male university students also mentioned that using tested blood prevented HIV infection and 81% respondents in this age group had said that creating awareness would prevent HIV infection.

STI Knowledge – that consistent condom use can prevent STIs

The knowledge that condom use prevented STI was highest among students (66%) and male clients (56%) (Figure 12). This proportion was similar to those who had knowledge

about HIV prevention. Similarly, a higher percentage of university students (58%) had cited mutual monogamy as a means to prevent STI as compared to those who stated condom use as a preventive measure.

Figure 12. Knowledge of methods to prevent STI infections
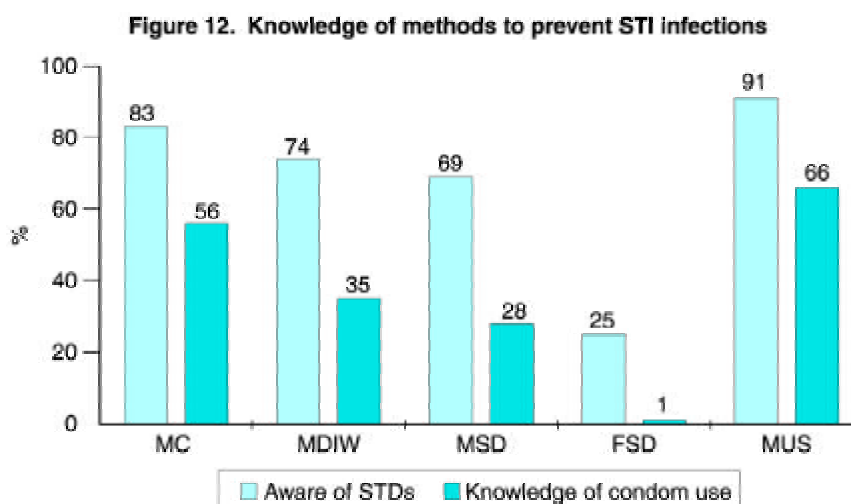
Other findings

Age at first sexual intercourse

The reported mean age at first sexual intercourse ranged from 17 years among FSWs to 19 years amongst the clients of FSW. It was 20 years for diamond industry workers and male slum dwellers, 19 years for male university students and 17 years for working female slum dwellers.

About 6% female sex workers and 8% of the working female slum dwellers had said that they had their first sexual intercourse below 15 years of age. A little more than half the sex workers had first sexual intercourse between the ages of 15 and 17 years (Figure 13). For all the male groups, however, about half in each group had their first sexual intercourse between the ages of 18 and 20 years.

Figure 13. Reported age at first sexual intercourse
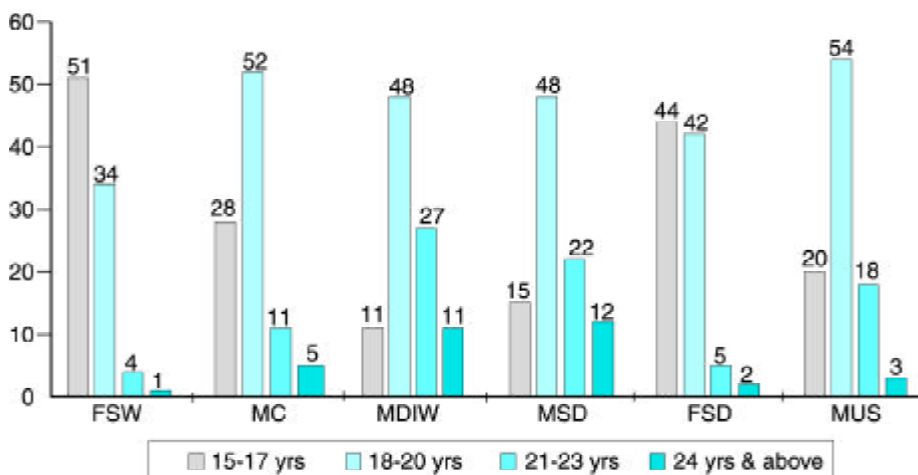
Age at first commercial sex

A total of 64% FSWs had said that their first commercial sex was before the age of 22 years while 35% of them had said that it was after 23 years (Table 4). The mean age at first commercial sex was 21.4 years for FSWs and 23 years for clients of sex workers.

Table 4: Age of FSWs at first commercial sexual intercourse	
Age in years	% reporting
16 and below	8
17-19	28
20-22	28
23-25	20
26-28	10
29 and above	5
Don't remember	1

Majority (53%) of the clients of sex workers had reported their first commercial sex between the ages of 20-25 years. More than a third (36%) respondents in this group had reported first commercial sex at below 19 years of age and 15% of them had said that they had their first commercial sex after at age 26 years.

Number of partners

The median number of partners reported by the clients of sex workers in the year preceding the survey was 12. Eighty percent of the clients had reported having had four or more female sex worker partners in the previous 12 months. The median number of female sex worker partners reported was 11 and 4 each by the male slum dwellers and male diamond industry workers respectively.

Occupational Profile

Clients of sex workers, Male slum dwellers and Working female slum dwellers

The largest occupational group among the clients of sex workers was drivers (27%), 34% of the male slum dwellers were either in government or private employment, 30% female slum dwellers reported to be working as casual labourers while 31% had said that they were working as domestic help (Table 5).

Table 5: Occupation of clients of sex workers, male and female slum dwellers (Figures in %)			
Occupation	MC	MSD	FSD
Drivers (auto, tax, truck)	27	6	-
Service	20	34	22
Casual labour	19	24	30
Construction worker	10	4	3
Vendor-vegetable, fruit, flower, others	8	6	3
Petty business/Shopkeeper	8	16	10
Domestic help	2	3	31
Others	6	8	2

Secondary Occupation of Sex workers

Twenty percent of the sex workers reported having other sources of income. Seven percent of them had stated that they worked as housemaids, 3% were reported to be involved in petty business and 4% said to work in construction sector (Table 6).

Table 6: Secondary occupation of sex workers	
Job	%
Housemaid/Household job	7
Construction worker	4
Petty business	3
Street Vendors	3
Agriculture labour	3
Factory worker	2

Place of origin

Majority of the female sex workers and male university students living in hostels were from within Gujarat state. Five percent of female sex workers reported to be native of Nepal, 1% had come from Bangaladesh. Less than 1% students hailed from Nepal, Mauritius, Sri Lanka, Bangladesh and East Africa (Table 7).

Table 7: Place of origin		
Place of origin	FSW(%)	MUS(%)
Gujarat	65	81
Maharashtra	16	2
Uttar Pradesh	3	3
Tamilnadu	2	1
Rajasthan	1	3
Madhya Pradesh	<1	2
Other States	6	10
Other Countries	6	<1

Media and Messages

Four most frequently cited sources of HIV/AIDS information

The male sub population groups were the only one who had cited newspapers as one of their common source of information. All groups had said that bill-boards was their source

of information. Fifty seven percent students and 9% female slum dwellers had also cited radio as an information source (9%) (Table 8).

Table 8: Sources of information on HIV/AIDS						
Sources	Sub-groups					
(Figures in %)	FSW	MC	MDIW	MSD	FSD	MUS
Newspaper	–	49	50	50	–	92
Billboards	62	79	83	69	12	92
Television	59	74	74	71	23	95
Radio	–	–	–	–	9	57
Outreach worker	51	–	–	–	–	–

Reported incidence of genital ulcer/discharge and first step taken after onset of symptoms

Fourteen percent of the sex workers and 15% of their clients had said that they had genital ulcer/discharge in the preceding year. The proportion of other groups who had reported this symptom was lower. Two percent male university students and male slum dwellers each, 6% working female slum dwellers and 4% diamond industry workers had also reported having had genital ulcer. Forty two percent sex workers had stated that the first step they took after the onset of genital ulcer/discharge was to take home based medicinal preparations. Thirty five percent of the male slum dwellers, 32% of the clients of sex workers and 26% of the university students had said that they normally sought treatment from a private health care facility. Forty five percent of the diamond industry workers had reported that they purchased medicines from the drug store. Of the sex workers who had said that they would take home remedy as soon as symptoms of STI manifested, 36% of them had said that they had visited a government health facility later while and 32% were reported to have sought treatment at a private health facility.

The respondents who had not reported any STI symptoms were asked what their preferred sources of treatment would be. Fifty five percent sex workers and 54% of their clients had said that they preferred treatment at a government facility.

In the other groups, among the respondents who had not reported having STI symptoms, 66% diamond industry workers and 74% university students had indicated a preference for treatment at a private health facility, 61% of the working female slum dwellers and 59% of the male slum dwellers had said that they preferred to seek treatment at a government health care facility.

Condoms

More than 90% of all groups except the working female slum dwellers (32%) had heard about a condom. All the groups had cited medical stores/pharmacies as a place to procure condoms (Table 9). Clients (43%) had also cited brothels/sex workers as condom sources. Except for male clients, all other groups had suggested family planning centres as places where condoms could be obtained.

Table 9: Three most commonly cited places where condoms can be obtained						
Places	Sub-groups					
(figures in %)	FSW	MC	MDIW	MSD	FSD	MUS
Medical shop/Pharmacy	81	92	87	74	19	83
Departmental store/Market	–	–	–	21	–	65
Govt. Hospital	48	39	45	38	14	–
Family planning center	48	–	22	21	49	51
Brothel/sex workers	–	43	–	–	–	–

Alcohol and drug consumption

The reported daily alcohol consumption was highest among male clients (9%) and 13% diamond industry workers and 9% clients of sex workers had said that they used to consume alcohol once a week (Figure 14).

Figure 14. Reported alcohol and drug use
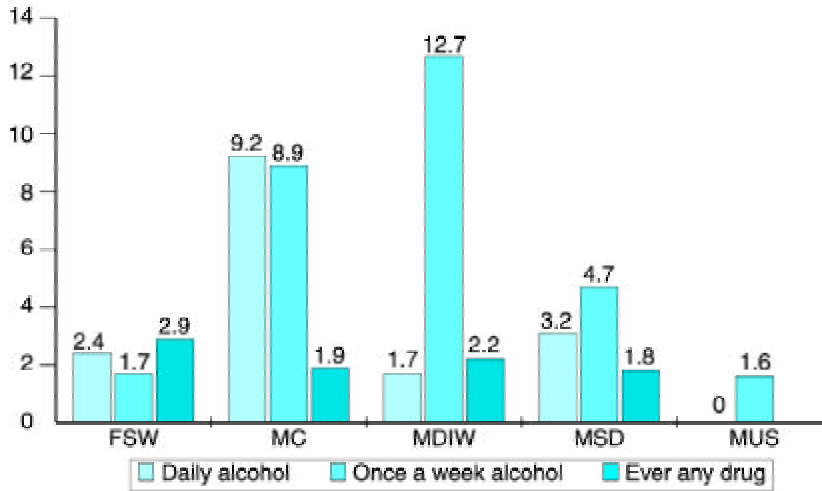
Discussion

The findings of this survey contributed to the baseline measurements of behaviour and knowledge indicators against which trends could be tracked over time. The results of this wave of the BSS also provided useful and actionable information regarding HIV related risk behaviours and knowledge prevalent at that point of time in Gujarat. Some of these are discussed below.

➤ In order to calculate the sample sizes required for the survey, the proportion of each sub population group that would report sexual intercourse with a non-regular partner in the past year was estimated. The results of the baseline wave of the BSS showed that there was a difference between the estimate and the actual measurement of the indicator. For example, in the case of diamond industry workers, while the estimated measurement was 25%, the actual measurement was 14.4%. Similarly, the estimated measurement for male slum dwellers was 25% while the actual measurement was 6.1%. In the case of University students living in hostels the estimate of 10% was closer to the actual measurement of 6.5%.

➤ The reported condom use during last sex was relatively high for all subpopulation groups with female sex worker and female non-regular partners (Range was from 11% to 88%). However, consistent condom use was relatively lower (range was from 7% to 66%).

➤ Female sex workers had reported lower last time as well as consistent condom use with regular clients (a difference of 12%) than with one time clients (a difference of 20%).

➤ More clients of sex workers had reported non-regular partners (both non commercial female and male) than from any other male sub population group.

➤ Billboards were the most frequently cited source of HIV/AIDS information across all groups, followed by television. Sex workers had also cited outreach workers (51%) as their third most common source of information.

➤ Awareness on HIV/AIDS was lowest (28%) among the working female slum dwellers and only 4% of them knew that using condoms prevented HIV infection.

Annex. BSS indicators at a glance, Baseline wave, Gujarat, 1999

	FSW	MC	MDIW	MSD	FSD	MUS
Sample Size (N)	415	414	1097	1072	1000	2634
	%	%	%	%	%	%
Knowledge of HIV Prevention Methods						
Consistent condom use	79	71	52	39	4	75
Mutual monogamy between HIV negative partners	-	17	35	31	14	75
Abstinence from sex	2	4	2	3	0.4	3
Respondents who had sex with non regular, non commercial partners in the past 12 months (N1)		117	108	49	0	156
Had sex with non regular, non commercial partners in the past 12 months		28	10	0	5	6
Average number of non regular, non commercial partners in the past 12 months		3	2	3	0	2
Condom use at last sex with non regular, non commercial partner (% of N1)		16	32	11	-	58
Consistent condom use with non regular, non commercial partner in the past 12 months (% of N1)		8	15	7	-	30
C.I of 95%		2-14	6-23	-2-16		21-40
Respondents who had commercial sex in the past 12 months (N2)		414	81	26	2	26
Had commercial sex in the past 12 months		100	7	2.4	0.2	1
Aveage number of commercial partners in the past 12 months		13	7	2.4	0.2	1
Condom use at last sex sith commercial partner (% of N2)		88	75	68	-	71
Consistent condom use with commercial partner in the past 12 months (% of N2)		66	56	58	-	59
C.I of 95%		61-70	44-68	36-80		35-82

	FSW	MC	MDIW	MSD	FSD	MUS
Sample Size (N)	415	414	1097	1072	1000	2634
	%	%	%	%	%	%
FSWs having sex with regular client in the past one month (N1)	*311*					
Have regular clients in past one month (% of N)	75					
Average number of regular client in the past one month	2					
Condom use at last sex with regular client (% of N1)	90					
Consitent condom use with regular client in the past 12 months (% of N1)	78					
C.I of 95%	74-83					
FSWs having sex with one time client in the past one month (N2)	*403*					
Have one time clients in past one month (% of N)	97					
Average number of one time client in the past one month	3					
Condom use at last sex with one time client (% of N2)	93					
Consistent condom use with one time client in past 12 months (% of N2)	73					
C.I of 95%	69-77					
Respondents who had anal sex with male partner in the past 12 months (N3)		*10*	*7*	*2*	*NA*	*6*
Had and sex with male partner in the past 12 months		2.4	1	0.2		0.2
Average number of anal sex partners in past 12 months		2	1	4		1
Condom use at last anal sex with male partner (% of N3)		20	0	0		0
Consistent condom use with male partner during anal sex in the past 12 months (% of N3)		20	0	0		0
C.I of 95%		5-55				

	FSW	MC	MDIW	MSD	FSD	MUS
Sample Size (N)	415	414	1097	1072	1000	2634
	%	%	%	%	%	
%Incidence of Genital Discharge/Ulcer in the past 12 months	*59*	*62*				
Suffered from discharge from genitals or ulcers in genitals in the past 12 months	15	15				

MC-Male Clients of Female Sex Workers; MDIW-Male Diamond Industry Workers; MSD-Male Slum Dwellers;
FSD-Female Slum Dwellers; MUS- Male Unversity Students living in hostels; FSW-Female Sex Workers

Some definitions

> Regular partner: Spouse or cohabiting partner
> Commercial sexual partner: Partner with whom respondent had sex in exchange for money or payment in kind.
> Non regular partner: Non spousal/cohabiting, non commercial partner
> For all male groups, the above are considered to be female partners, for female groups, they are considered to be male. Indicators related to anal sex by male respondent groups with male partners have also been measured.
> For the purposes of this survey, sex is defined as either vaginal or anal sex.
> Consistent condom use is defined as condom used every time.

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