KERALA

Impact assessment for HIV/STI prevention programmes

Baseline report series

SUMMARY REPORT

Behavioural Surveillance Survey in Kerala, India

DFID Department for International Development

KSACS

FHI

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

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SUMMARY REPORT
Behavioural Surveillance Survey in Kerala, India

A study Implemented by Taylor Nelson Sofres Mode (TNS Mode) under the guidance of Kerala State AIDS Control Society, with technical assistance from Family Health International

Funded by UK Department for International Development

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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

Sexually transmitted infections (STI) and Human Immunodeficiency Virus (HIV) infection have emerged as an important public health problem in India in recent times. STI/HIV is not only a public health problem but also an important developmental challenge.

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 Kerala for the prevention of HIV/STI. Activities include awareness generation, behaviour change communication, condom promotion, management of STIs, 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 Kerala State AIDS Control Society (KSACS) 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 surveys, BSS), sexually transmitted infections (STI prevalence studies) and STI case management practices of health care providers [health care providers survey (HCPS)]. STI prevalence studies among female sex workers (FSWs) were implemented by different NGOs (1. SOMA in Thiruvanthapuram, 2. CSRD in Calicut and 3. ACS in Trissur); BSS was implemented by TNS MODE in the whole state; and HCPS was implemented by C-GRAF, Department of Futures Studies, University of Kerala in the whole state.

All these surveys 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,

plantation workers etc. and the way STI patients are managed in the health care settings. For instance, BSS showed that the level of risk behaviour of some of the groups were substantially different from what was estimated before the survey. In the case of Auto rickshaw drivers, while the estimated measurement was 25%, the actual measurement was 13.8%, for Plantation workers it was 20% and 4.8% respectively.

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.

Thiruvananthapuram

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Contents

Acronyms and Abbreviations

AIDS	Acquired immunodeficiency syndrome
BSS	Behavioural Surveillance Survey
DFID	Department for International Development
EP	Equal probability
FHI	Family Health International
FSW	Female sex workers
HIV	Human immunodeficiency virus
KSACS	Kerala State AIDS Control Society
MARD	Male auto rickshaw drivers
MC	Male clients of female sex workers
MPW	Male plantation workers
MUS	Male university students
NGO	Non governmental organization
PPS	Probability proportional to size
PSH	Partnership in sexual health
SMA	State Management Agency
STI	Sexually transmitted infection
WHO	World Health Organization

Executive summary

This report is a summary of the methodology and findings of the Kerala HIV Risk Behavioural Surveillance Survey (BSS). This survey was part of the impact assessment project of HIV prevention activities in Kerala and was conducted in late 1999 for the Kerala State AIDS Control Society (KSACS). Taylor Nelson Sofres Mode (TNS Mode) had implemented the survey.

The BSS in Kerala was intended to track trends in HIV/AIDS related knowledge, attitudes and behaviours in sub-populations in Kerala, especially those at high-risk of acquiring HIV infection. It was also intended to contribute to the larger monitoring and evaluation efforts of the KSACS. The measurements of indicators obtained in this survey served as a baseline from which future trends could be measured. The core indicators on which data were collected included (a) behaviour indicators and (b) knowledge indicators.

The secondary indicators provided information on, among others, prevalence of STI symptoms, treatment-seeking behaviour, messages recalled on HIV and sources of information on issues concerning HIV and practices related to condom use. These indicators were based on those recommended by WHO/UNAIDS for monitoring and evaluation large scale AIDS programmes.

Sampling

The sub-population groups sampled ranged from those with known high-risk behaviours such as female sex workers (FSW) and male clients of female sex workers (MC) to others with varying estimates of high-risk behaviours such as those having sexual intercourse with a non-regular partner. Representatives from KSACS, State Management Agency (SMA), officials from the state health department and other local experts had collectively prepared a list of possible groups that could be included in the survey. Based on available research

findings, anecdotal information and reports from NGOs about the groups included in this list, the risk behaviour of each group was estimated and three sub-populations were finally selected for the study. These included male plantation workers (MPW), male auto rickshaw drivers (MARD) and male university students (MUS).

The BSS sampling universe consisted of areas in the state where major concentrations of the selected groups were located. The seven places where the survey was implemented covered cities and some districts. The sample sizes were decided 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 NGOs and individuals working with the specific sub-populations and through mapping exercises. A two stage systematic random sampling procedure was used to select respondents. Clusters were selected in the first stage and respondents were randomly selected 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 Malayalam following intensive pre-testing. The implementation team received training in data collection methods, HIV/AIDS, sex and sexuality, etc. Many NGO partners from the PSH project assisted TNS Mode to understand the socio dynamics of the sex industry and also in the design and implementation of training of field workers. A supervisory team closely monitored the quality. The data was analysed using SPSS. The questionnaires were administered after informed consent was obtained, either by an interviewer or as in the case of students, through self-administration.

Key Findings

Profile of respondents

Female sex workers: The mean age of the female sex workers was 32.6 years. A total of 48% of them were reported to be married once but were divorced/separated/widowed or

not living with their husbands at the time of the survey. Only 15% of the sex workers said that they were illiterate.

Clients of female sex workers: The mean age of the clients of female sex workers was 31.3 years. Only 2% respondents of this group were illiterate. A high proportion (81%) of them said that they were married and were living with their wives. Their occupational profile included skilled and unskilled categories such as auto-rickshaw or taxi drivers (21%), unskilled labourers (29%) and self-employed or in businesses (18%).

Other male sub-population groups: The mean age of the auto rickshaw drivers was 31.4 years. All of them were literate and 98% were reported to be married and living with their wives. The mean age of the plantation workers was 34.4 years. Only 2% of them were illiterate and 97% said that they were married and were living with their wives. The mean age of the university students living in hostels was 20.8 years.

Measurement of indicators

Female sex workers and condom use: Ninety-nine percent female sex workers reported having one-time clients and 45% said that they also had regular clients. Eighty nine percent of the sex workers who had reported having one-time clients said that such clients had used a condom during the last sexual intercourse with them. The corresponding figure for regular clients was 67%.

Male sub-population groups and non-regular partners: Percentage of respondents who reported having sexual intercourse with any non-regular partner (including commercial partners, non-regular, non-commercial partners and male partners) was 13.8% among auto rickshaw drivers, 9.3% among the university students and 4.8% among the plantation workers. Six percent auto rickshaw drivers, 2% plantation workers and 3% university students had also reported having paid sex or sexual intercourse with a FSW.

Condom use by male sub-population groups: Among the respondents who said that they had sex with a female sex worker, 91% auto rickshaw drivers, 58% plantation workers and 66% students said that they had used condom during their last sexual intercourse with a female sex worker. Eighty percent of the clients of female sex workers had reported condom use during last sexual intercourse with such a partner.

Other findings

University students: A total of 15.6% students reported ever having sexual intercourse. The median age at first sexual intercourse for the students was 17 years. A total of 9.5% of the students said that they had sexual intercourse in the last twelve months. While 3.2% of the students stated that they had sexual intercourse with one partner, 6.3% reported having sexual intercourse with more than one partner during the preceding 12 months. Only 3.8% of the students reported having more than 4 partners. The median number of sex partners reported by the students was 3.

Other male sub-population groups: The median age at first sexual intercourse for male clients of female sex workers was 21 years, for male plantation workers it was 23 years, for male auto rickshaw drivers it was 24 years and for the female sex worker, it was 18 years.

Introduction

HIV/AIDS in Kerala

The first HIV positive person in Kerala was identified in 1987. Since then the epidemic in the State has been growing gradually. Infections were initially reported to have been acquired from outside the state. Subsequently, however, more infections were said to have been acquired within the state. The sentinel surveys had shown an HIV prevalence of 3.5% among STI clinic attendees and 0.2% among pregnant women in Kerala during 1999.

Prevention activities by the State AIDS Control Society

The State AIDS Cell was established towards the end of 1993 to prevent and control the spread of HIV infection in the state. The initial activities included ensuring blood safety in the state, training public sector health care providers in the syndromic management of sexually transmitted infections, strengthening public STI clinics and provision of counselling services in these clinics. In order to create general awareness about HIV/AIDS, campaigns were conducted using TV, radio, print media and folk art forms. Students in schools and colleges and young school dropouts were being reached through a variety of programmes. The thrust of the programme however subsequently shifted from awareness creation 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 had been providing supplementary funds to the Kerala State AIDS Control Society through the National AIDS Control Organisation for carrying out targeted interventions among certain sub-population groups. The groups at high-risk of HIV infection such as female sex

workers, men having sex with men, injecting drug users, street children, prisoners, truck drivers, migrant labourer etc. were identified and a multi-pronged strategy was used to reduce their risk.

The activities of targeted interventions included intensive behaviour change communication mainly through peer educators, provision of STI treatment services, condoms and counselling wherever necessary. The targeted interventions were implemented by non-governmental organizations (NGOs) since they would win the trust of the marginalised groups of people and develop a better rapport with them. At the time of the survey, there were 40 such interventions in all the districts of Kerala. Since most of the HIV infected people in Kerala had acquired the infection outside the state, a cross border initiative had been started with neighbouring states and with the city of Mumbai to control the epidemic in Kerala more effectively.

Behavioural 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 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 Kerala was to measure HIV-related risk behaviours in selected population sub-groups. The measurements presented in this report serve as a baseline from which future trends could be measured.

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 Kerala,

data were collected on two main indicators: (a) behaviour indicators and (b) knowledge indicators. In addition, there were secondary indicators such as incidence of STI symptoms, treatment-seeking behaviour, practices related to condom use and main sources of information for messages on prevention of STI and HIV/AIDS. The list of indicators and the total responses for each were as included in the Annex.

The measurements of the core indicators provided information on the proportion of the total respondents who had reported a particular behaviour or knowledge.

Study Population

In Kerala, the subpopulations surveyed included those with known high-risk behaviours and others with varying estimates of risk behaviours. Representatives from KSACS, State Management Agency (SMA), officials from the state health departments and other local experts had collectively prepared a list of possible groups that could be included in the survey. Information on the risk behaviour among these groups was complied based on available research findings, anecdotal information and reports from NGOs. Based on this information, the groups with relatively higher risk behaviour were purposefully selected for the study. Table 1 lists the sub-populations surveyed in Kerala BSS.

Table 1: Sub-populations surveyed in the Kerala 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 plantation workers (MPW)	Men aged 18-49 years working on plantations
Male auto-rickshaw drivers (MARD)	Men aged 18-49 years working as auto-rickshaw drivers
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 Kerala BSS had also listed out the locations where these groups were found in the state. Based on available information on the concentration of these groups in the short-listed locations, the places with highest concentration of these groups were chosen. These sites included large and smaller towns and rural areas in districts such as Pathanamthitta. The study sites were as listed in Table 2.

Table 2: BSS sites and sample sizes

	FSW	MC	MARD	MPW	MUS
Sample size	400	400	1000	1200	2500
Thiruvananthapuram	✓	✓	✓		✓
Ernakulam	✓	✓	✓		✓
Kozhikode	✓	✓	✓		✓
Trissur	✓	✓			✓
Kollam				✓	
Pathanamthitta				✓	
Kottayam				✓	

Sampling design and sample sizes

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

The sample sizes were chosen based on the measurement of change on a given indicator. This is 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 have been raised about the validity of self-reported data on sexual behaviour. Growing experience in collecting data on sexual behaviour have indicated that the extent to which people answered questions openly and truthfully depended on factors such as the setting of the question, privacy and confidentiality, attitudes and profile of the interviewer. 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 well be under or over reported.

However, for those tracking the HIV epidemic, the trends in risk behaviours are of greater concern than the exact level of risk behaviour at any given point of time. Even when there is misreporting, repeat behavioural surveys have indicated changes in trends over a period of time, provided the magnitude or direction of misreporting did 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 respondents felt 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 Malayalam after doing intensive pre-testing. The implementation team received training mainly in methods of data collection, basic facts on STIs and HIV/AIDS, sex and sexuality and socio-cultural issues related to such a survey. A supervisory team had closely monitored the quality of data collection. The questionnaires were administered after informed consent was obtained, either by an interviewer or as in the case of students, through self-administration. The field-work was done between August and October 1999. The data was analysed using SPSS.

Key findings

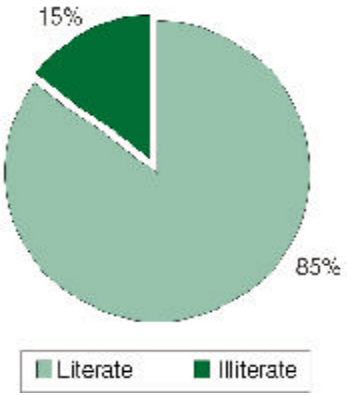
Key findings described briefly in this section mainly focus on demographic profile and knowledge and behaviour indicators in various sub-population groups included in the study.

Female Sex Workers

Key demographics

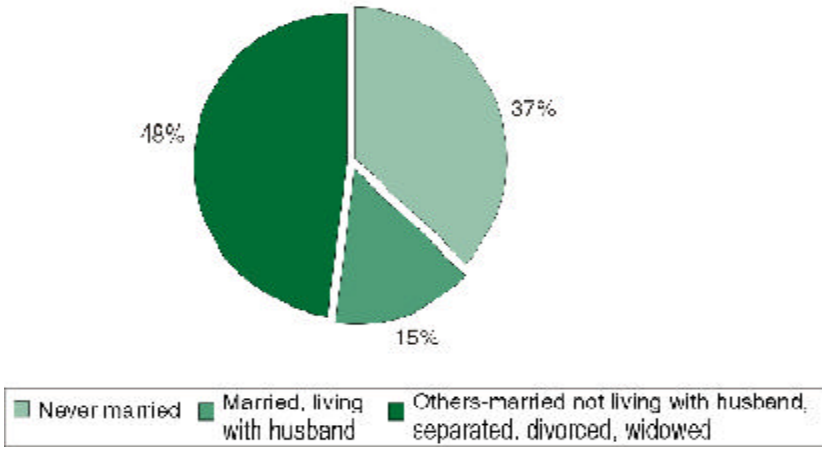
The mean age of the female sex workers was 32.6 years. While 15% of the sex workers were illiterate, rest 85% were literate (Figure 1).

Figure 1. Education status of female sex workers



Thirty seven percent FSWs had said that they were unmarried or had never married. Only 15% of them had stated that they were married and were living with their husbands. A total of 29% respondents were reported to be married but were not living with their husbands and 19% of them were either divorced/separated or widowed (Figure 2).

Figure 2. Marital status of female sex workers



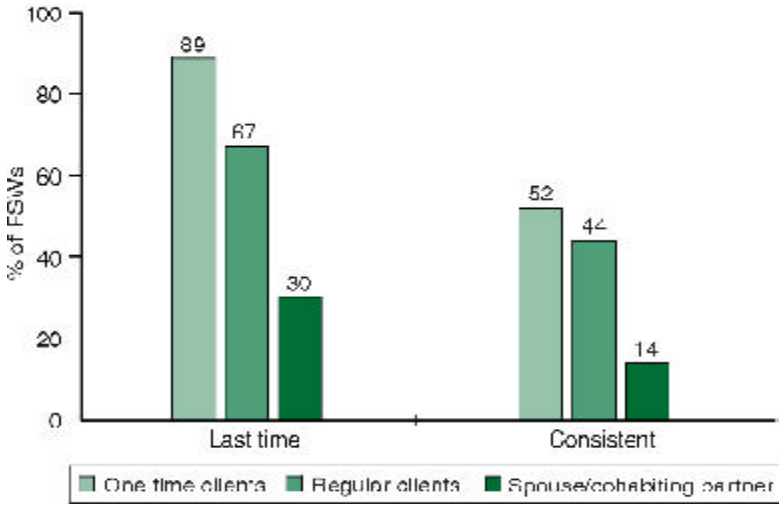
Behavioural indicators

Ninety-nine percent sex workers reported that they had sexual intercourse with one-time client during the preceding month. Forty five percent had stated that they had sex with a regular partner and 33% reported having sex with spouse or cohabitating partner during the same period.

Condom use

The study indicated that percentage of respondents who had reported consistent condom use was lower than the reported condom use during the last sex as shown in Figure 3. Consistent condom use with one-time clients during the preceding 12 months was reported by 52% FSWs, which was not significantly higher than the reported consistent condom use with regular clients (44%).

Figure 3. Reported condom use by female sex workers



Two percent FSWs had said that they had never used a condom with one-time clients during the previous 12 months. This proportion was less than the reported non-use of condoms with regular partners, which was 8%.

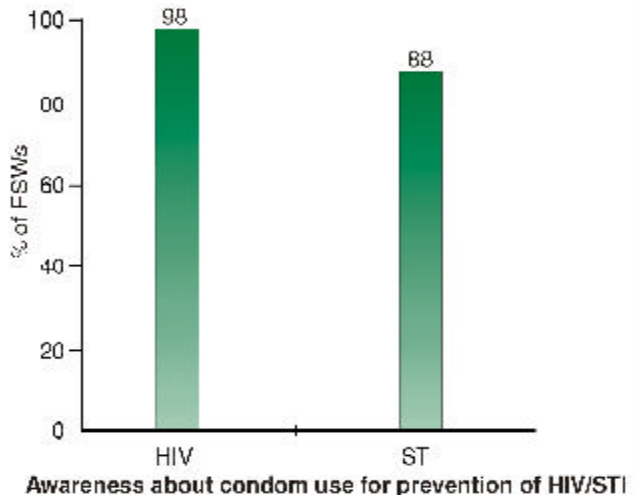
Number of clients on last working day

About 84% sex workers reported having between 1 and 3 one-time clients on the last working day before the survey. Only two percent of them said that they had six different partners on the same day. A total of 73% FSWs had also said that they had between 1 and 3 regular clients on the last working day. More than 25% respondents reported that they did not have sex with a regular client on the last working day.

Knowledge indicators

Almost all sex workers (98%) were aware that condom use could prevent HIV infection. A total of 88% of them had said that consistent condom use could prevent STIs, thus indicating that the knowledge about condoms use to prevent HIV infection was greater than the knowledge of condoms for preventing STIs (Figure 4). About 30% FSWs had said that avoiding sex with a person with STIs would prevent them from acquiring the disease.

Figure 4. Awareness about condom use among female sex workers



A significantly lower proportion was aware of two other methods for preventing HIV infection – avoiding injections with contaminated needles (35%) and using screened blood for transfusion (34%).

Male population sub groups

Key demographics

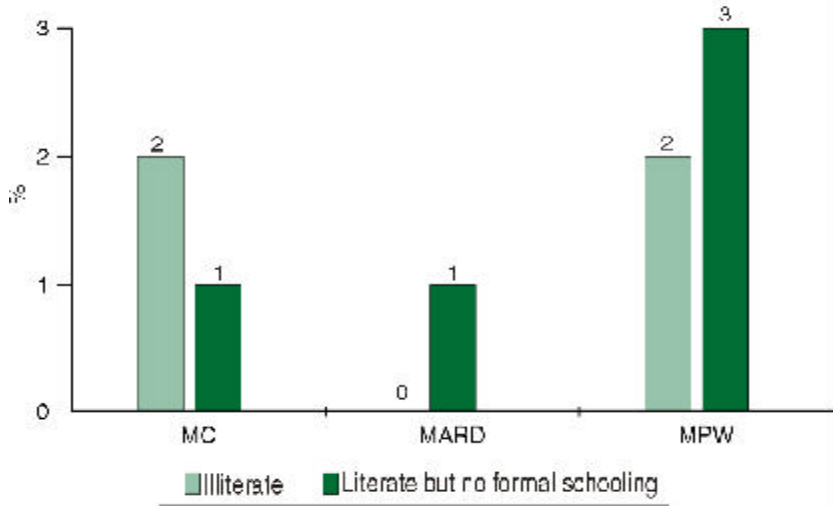
Mean age of male sub-population groups

The mean age of clients of sex workers was 31.3 and that of auto rickshaw drivers was 31.4 years. The mean age of plantation workers was higher at 34.4 years. The mean age of male university students was 20.8 years.

Educational status

Only 2% clients of sex workers and plantation workers were reported to be illiterate. One percent clients of sex workers and auto rickshaw drivers each, and three percent plantation workers said that though they were literate, they did not have formal education (Figure 5).

Figure 5. Literacy levels among male sub-population groups

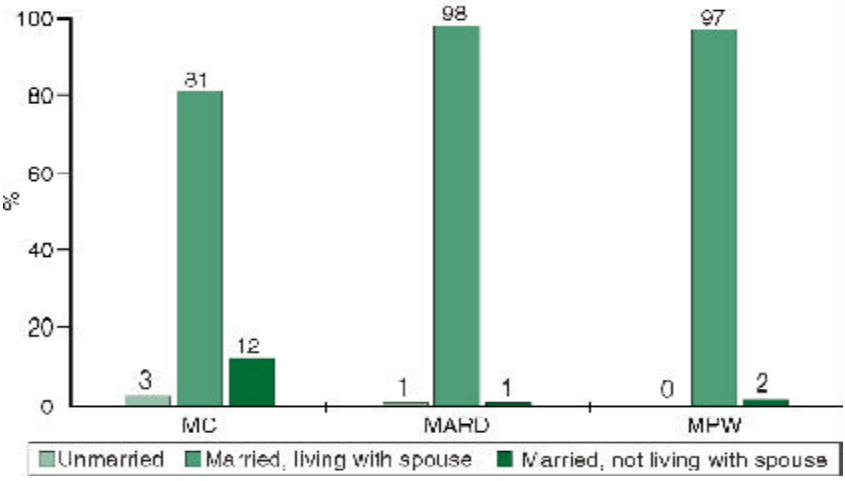


Higher levels of education were reported among the male clients and auto rickshaw drivers than the plantation workers. 48% clients and 43% auto rickshaw drivers were reported to have studied at least up to Class X while only 23% of the plantation workers had studied up to the same level.

Marital status

Almost all male auto rickshaw drivers and plantation workers were married (Figure 6).

Figure 6. Marital status of male sub-population groups



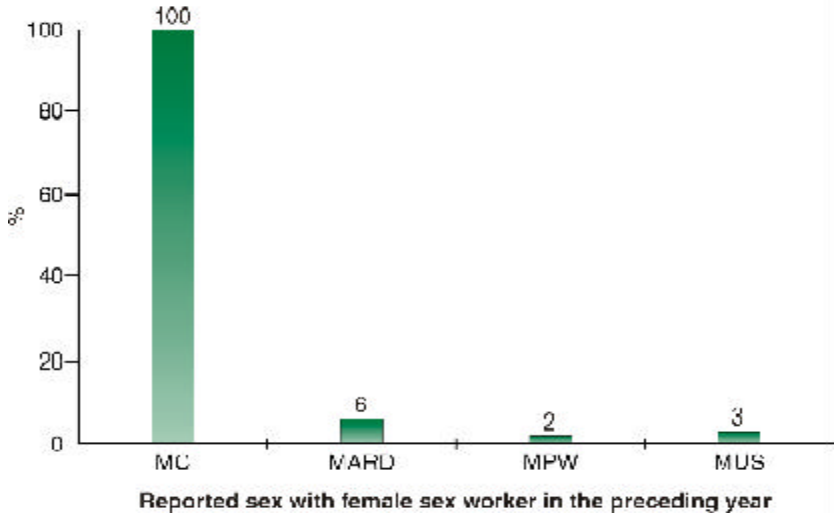
The proportion of male clients who were married and not living with their wives was higher (12%) when compared to auto rickshaw drivers (1%) and plantation workers (2%).

Behavioural indicators

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

Female sex worker: Six percent auto rickshaw drivers and 2% plantation workers and 3% male university students had reported having had sexual intercourse with a female commercial partner during the preceding year (Figure 7).

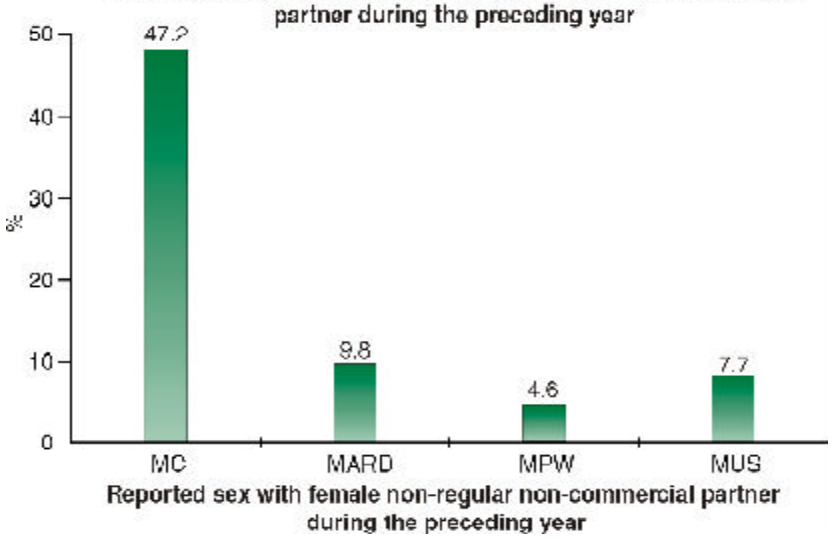
Figure 7. Reported sex with female sex worker in the preceding year



Female non-regular non-commercial partner (does not include female sex worker): Apart from having commercial partners, nearly half (47.2%) the male clients of sex workers said that they also had sex with non-regular partners during the previous year.

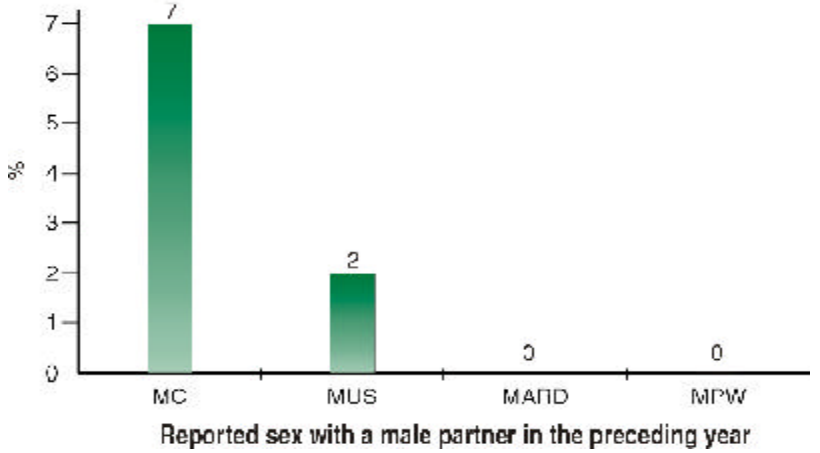
In total 4.6% male plantation workers and 9.8% auto rickshaw drivers said that they had sex with non-regular partners during the preceding year (Figure 8). This difference was similar to the difference observed for the number of respondents who had sex with a commercial partners. The female non-regular partners of male university students included friends, relatives, neighbours and acquaintances.

Figure 8. Reported sex with female non-regular non-commercial partner during the preceding year



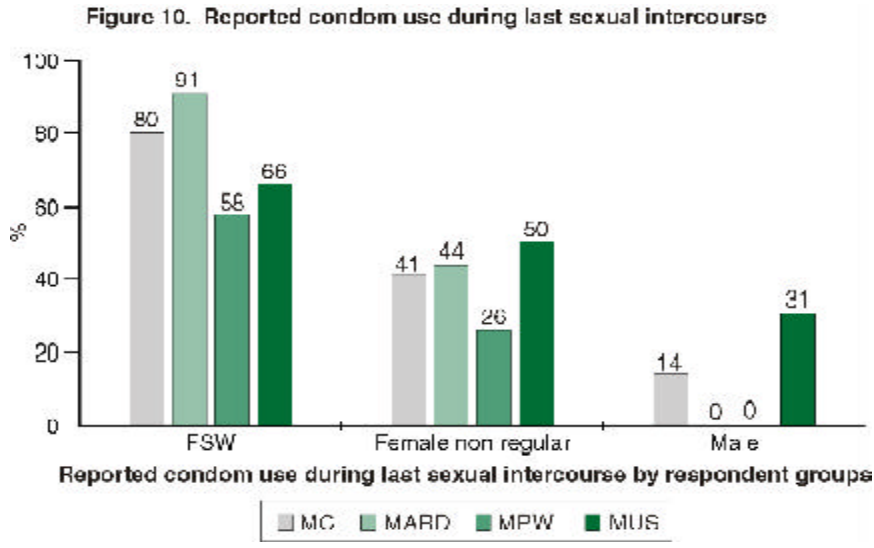
Male partner: In addition to reported sex with commercial and non-regular female partners, 7% male clients and 2% male university students had said that they had anal sex with a male partner during the preceding year (Figure 9).

Figure 9. Reported 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 male auto rickshaw drivers (91%) followed by male clients (80%). It was lowest among male plantation workers (58%) and was not significantly higher among male university students (66%) (Figure 10).



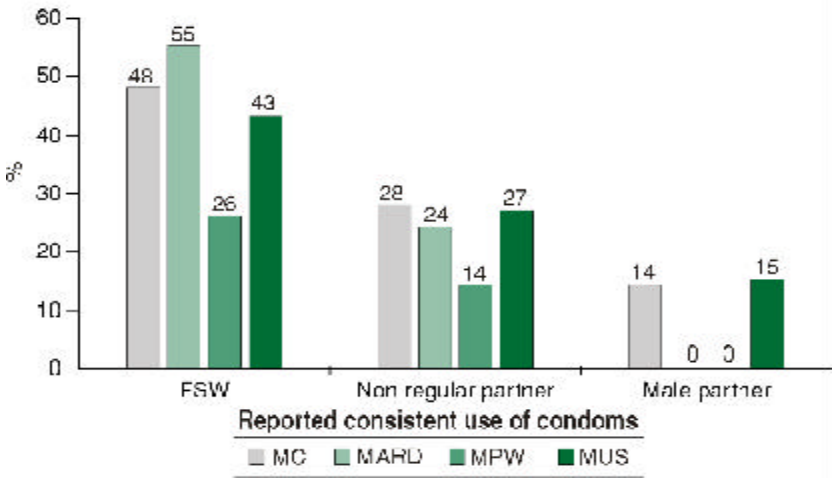
The proportion of respondents who had reported condom use during their last sexual intercourse with a female non-regular partner was low. It was 44% among male auto rickshaw drivers and 41% among male clients. Condom use was reported to be lowest among male plantation workers, which as 26%. The difference between condom use with a FSW and non-regular partner was least among university students (16%) and highest among auto rickshaw drivers (47%). Most respondents had said that non-regular partners mainly included neighbours, relatives or casual friends. Plantation workers had also reported co-workers as non-regular partners. The proportion of respondents who reported condom use during their last sexual intercourse with male partner was lower than the condom use for other corresponding groups. It was 31% for male university students and 14% for male clients.

Consistent condom use

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

The pattern for consistent condom use was similar to the pattern reported on condom use during last sexual intercourse. The group that had highest proportion of reported consistent condom use with female sex worker during the last year was male auto rickshaw drivers (55%) followed by male clients (48%) and male university students (43%) (Figure 11).

Figure 11. Reported consistent use of condoms



The reported consistent condom was lowest among male plantation workers (26%). Just as in the previous section, 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

A total of 90% male clients said that condom use could prevent HIV infection. However, knowledge about the role of mutual monogamy and abstinence for prevention of

HIV infection was low. For example, 72% and 58% auto rickshaw drivers had said that condom use and being in a mutually faithful relationship respectively could prevent HIV infection. On the other hand, 85% plantation workers had said that mutual monogamy prevented HIV as compared to 55% of them who had listed condom use a way to prevent HIV infection (Table 3).

Table 3: Knowledge of methods to prevent transmission of HIV

Response	Sub-groups			
(Figures in %)	MC	MARD	MPW	MUS
Use condoms	90	72	55	91
Mutual monogamy between HIV negative partners	34	58	85	82
No sex at all	4	3	2	25

Ninety one percent male university students were aware that consistent use of condoms prevented HIV infection. Although only 16% of them had reported ever having had sexual contact, 25% students has listed abstinence a way to prevent HIV infection.

STI Knowledge – that consistent condom use can prevent STIs

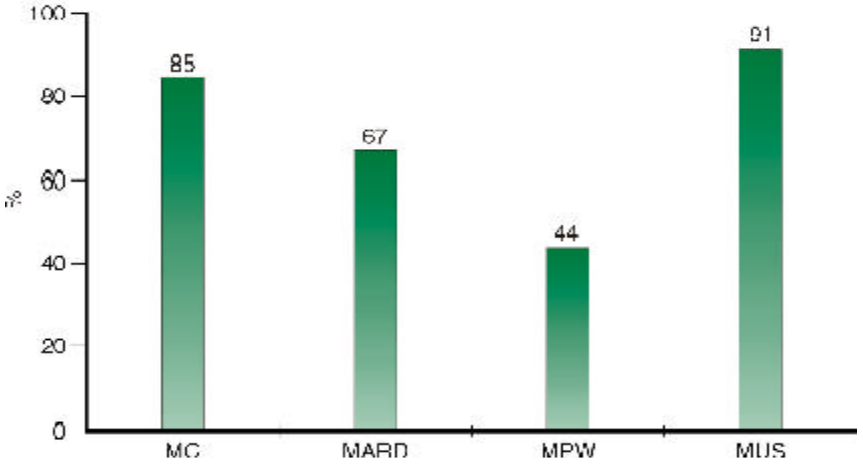
Just as with knowledge about HIV prevention, the knowledge that condom use could prevent STI was highest among students (91%) and male clients (85%). Sixty seven percent auto rickshaw drivers and less than half the plantation workers had the same knowledge (Figure 12). A total of 60% plantation workers and 39% auto rickshaw drivers said that a mutually faithful relationship prevented STIs. This number of was higher than that of the response for condom use as a method to prevent STIs.

Other findings

Age at first sexual intercourse

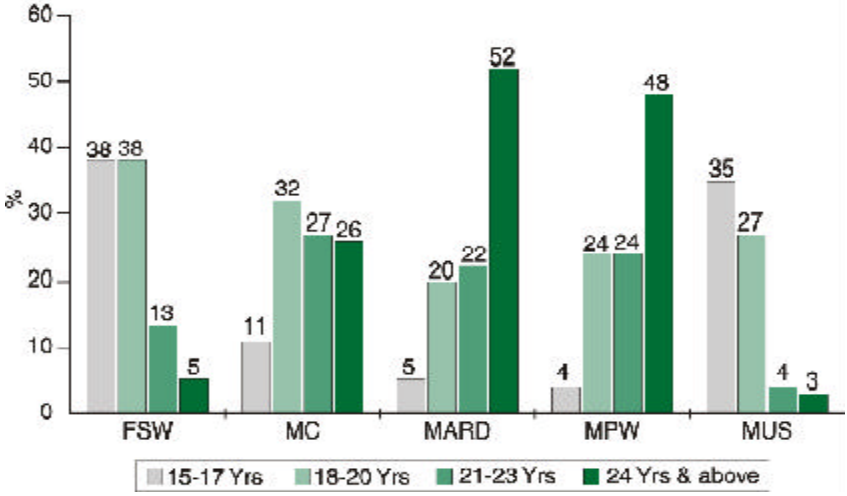
The mean age at first sexual intercourse ranged from 18 among FSWs to 21 among clients of FSWs. It was 23, 24 and 17 years for plantation workers, auto rickshaw drivers and university students respectively. About 5% female sex workers had said that their age at first

Figure 12. Knowledge of method to prevent STIs



sexual intercourse was below 15 years. A total of 76% of them, however, reported that their age at first sexual intercourse was between 15-20 years (Figure 13).

Figure 13. Reported age at first sexual intercourse



Thirty two percent male clients stated that their first sexual intercourse was between the age of 18-20. About a third of the auto rickshaw drivers and plantation workers had their first sexual intercourse between 24 to 26 years. Of the students that had reported to have

ever had sex, 10% had said that their first sexual experience was before the age of 15 years and 35% had said it was between 15 and 17 years of age. A total of 23% students said that they could not recall their age at first sex.

Age at first commercial sex

About 53% and 40% FSWs had said that their age at first commercial sex was after 23 years and between 17-22 years respectively (Table 4). The mean age at first commercial sex was 23.5 years for FSWs and 24.5 years for male clients.

Table 4: Age of FSWs at first commercial sexual intercourse

Age in years	% reporting
16 and below	7
17-19	18
20-22	23
23-25	18
26-28	14
29 and above	20

About 60% clients of sex workers reported that their first commercial sex was between the ages of 20-25 years. About 15% of the clients reported first commercial sex before 19 years of age and 25% at age 26 and above.

Number of partners

The average number of commercial partners during the preceding 12 months were four for clients of sex workers, two for male auto rickshaw drivers, one for male plantation worker and four for male university students. The average number of non-regular, non-commercial partners during the preceding 12 months were two for male clients of FSWs, one each for male auto rickshaw drivers and male plantation workers and three for male university students.

Occupational Profile

Clients of sex workers

The occupation of clients of sex workers presented a mixed picture. About a fifth were auto or taxi drivers. There were almost as many unskilled workers (18%) and skilled workers (20%). A total of 17% respondents had said that they were self-employed, a tenth said that they had white collared jobs and 7% were reportedly working as manual labourers (Table 5).

Table 5: Occupation of clients of sex workers

Occupation	%
Drivers (auto, taxi)	21
Skilled worker	20
Unskilled worker	18
Self employed/Business/Trade	17
Clerical/salesman	10
Manual labourer	7
Cultivation/agriculture labour	3
Supervisory level/officer/executive	2
Others	2

Secondary occupation of sex workers

A total of 26% sex workers were reported to have a secondary occupation. Nine percent of the sex workers worked as housemaids and 7% worked in trade, for example, as shop girls, as door-to-door salesgirls or as street vendors. Six percent were reported to be working in small companies (Table 6).

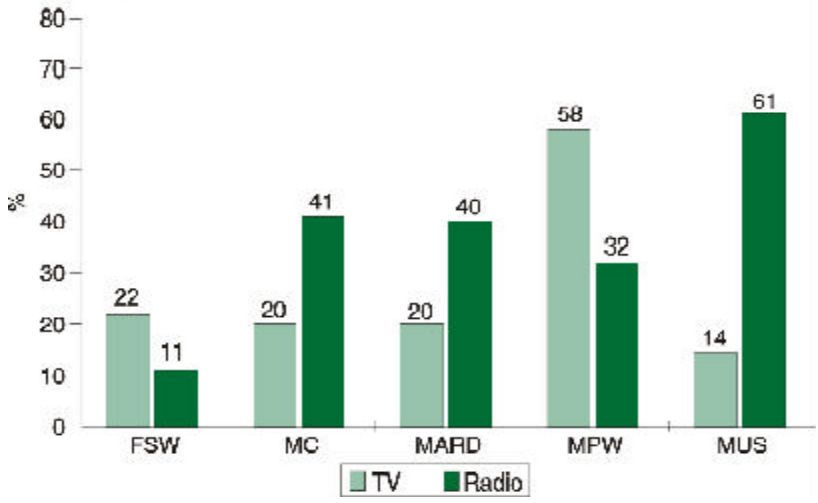
Table 6: Secondary occupation of sex workers

Job	%
Housemaid/Household job	9
Working in small companies	6
Sales woman in shop	3
Street Vendors	2
Sales Personnel - Door to Door	2
Others	4

Media and messages

Study findings indicated that the habit of watching TV daily was highest among male plantation workers (58%) and lowest among the male university students (14%) during the preceding month (Figure 14). The proportion of male university students who said that they listened to radio was 61%, which was higher than the same habit among other groups.

Figure 14. Reported media habits during the preceding month



The practice of listening to the radio or watching TV was comparatively low among sex workers. Apart from plantation workers, the number of respondents who had not listened to the radio during the preceding 4 weeks was higher than the number that had not watched the television.

Four most frequently cited sources of HIV/AIDS information

All the groups, except sex workers, had said that newspapers/magazines was the main source of information on HIV/AIDS. The main source of information for sex workers was reported to be cinema (Table 7). The other two common sources of information were television and radio.

Table 7: Sources of information on HIV/AIDS					
Sources	Sub-groups				
(Figures in %)	FSW	MC	MARD	MPW	MUS
Newspaper/Magazine	44	85	95	91	91
Radio	–	55	60	88	62
Television	38	73	78	62	93
Cinema	49	55	–	–	–
Poster	41	61	59	42	72

Posters were also cited as another common source of information on HIV/AIDS. More than 50% of the students had listed 9 sources of information, which were different from those mentioned above. These sources included lecturers, fellow students, friends, relatives and documentary films. Sex workers had listed least number of sources of information, which included cinema, newspapers, posters and television. Less than 50% FSWs were able to list any one source of information.

Three most commonly recalled messages on HIV/AIDS

The most commonly recalled message among all sub-population groups was 'Use condoms/Nirodh' (Table 8). 'Be faithful to one partner/single sex partner' was a less

Table 8: Messages recalled on HIV/AIDS					
Messages	Sub-groups				
(Figures in %)	FSW	MC	MARD	MPW	MUS
Use condoms/Nirodh	33	34	26	22	30
Be faithful to one partner/ single sex partner	3	10	16	–	10
AIDS is a great disaster/ dangerous diseases	5	9	–	–	–
If infected you can live only seven years	–	–	–	27	–
Beware of AIDS	–	–	–	–	9
No casual sex	–	–	27	–	–
No sex with other girls/women	–	–	–	16	–
Recall no particular message	56	46	39	51	45

recalled message. Auto rickshaw drivers also cited 'No casual sex' and male plantation workers had recalled 'If infected, you can live only seven years' as other messages. However, large percentage sub-population groups could not recall any specific message.

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

Twelve percent of the sex workers, nine percent male clients and two percent auto rickshaw drivers and students each had reported having genital ulcer/discharge during the previous year. The responses of the sex workers regarding the first step taken after onset of symptoms varied between the use of once procured prescriptions, treatment from a qualified private doctor, a practitioner of other systems of medicine and to a lesser extent, a qualified doctor in a government facility.

Condoms

Almost all the respondents in the survey had heard about condoms except for one percent sex workers, half a percent of the male plantation workers and five percent of the male university students. The two most common places cited for procuring condoms were medical and petty shops (Table 9). Another site, though less mentioned, was the departmental store. Among male university students, after medical shops, a high proportion (64%) had cited a government hospital or family planning centre as a place from where they could get condoms.

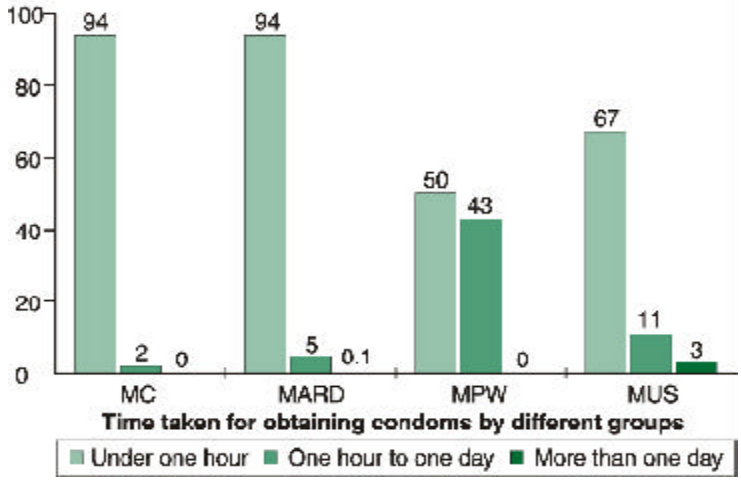
Table 9: Three most commonly cited places where condoms can be obtained

Places	Sub-groups				
(figures in %)	FSW	MC	MARD	MPW	MUS
Bunk/petty shop	88	82	63	61	–
Medical shop/Pharmacy	77	91	83	52	84
Departmental store/Market	39	33	–	–	48
Hospital	–	–	41	41	–
Govt. Hospital/Family planning center	–	–	–	–	64

Time taken for obtaining a condom

A total of 94% auto rickshaw drivers and male clients each had said that they could get a condom in less than an hour, less than three fourth students and half the plantation workers felt they could do so within the hour (Figure 15). Less than half the plantation workers and about one-tenth male university students had said that they needed between an hour to a day to get condoms.

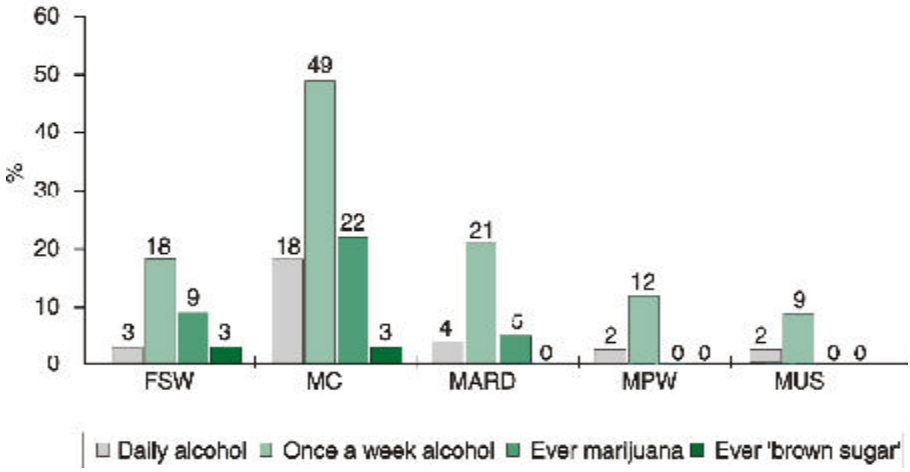
Figure 15. Reported time taken to obtain a condom



Alcohol and drug consumption

A total of 18% male clients had said that they consumed alcohol everyday, which was a higher proportion than the reported alcohol use in other groups (2-4%). Consumption of alcohol once a week was reported by about one tenth of the students and plantation workers, one fifth sex workers and drivers, and half the clients of sex workers (Figure 16).

Figure 16. Reported alcohol and drug use



Discussion

Interpretation and Implications of findings

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 Kerala. 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 (which included female commercial partners, male partners and non-regular non-commercial partners) in the past year was estimated. The results of the baseline wave of the BSS had shown that there is a difference between the estimate and the actual measurement of the indicator. For example, in the case of auto rickshaw drivers, while the estimated measurement was 25%, the actual measurement was 13.8%. Similarly, for plantation workers although the estimated measurement was 20%, its actual measurement was 4.8%. In the case of University students living in hostels, the estimate of 10% was closer to the actual measurement of 9.3%.

- The study indicated that the proportions of male university students reporting sex with a female sex worker and a male partner was not very different (3% and 2%). Students reporting sexual intercourse with only female non-regular partners was 8.3%, and with inclusion of male partners, the proportion becomes 9.3%. However, consistent condom use with the female sex worker partner (43%) was higher than with the male partner (15%).

- The reported condom use during last sex was relatively high for all subpopulation groups with female sex worker and female non-regular partners (Range 26% to 91%). However, the reported consistent condom use was relatively lower (range from 13% to 52%).

- Female sex workers reported lower last time as well as consistent condom use with regular clients (a difference of 23%) than with one time clients (a difference of 37%).

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

- While print media was the most frequently cited source of HIV/AIDS information, there was a wide disparity between different groups. For example, 44% of the sex workers had reported hearing about HIV/AIDS through newspapers and magazines as compared to 85% to 95% among other groups for the same source of information.

Annex: BSS indicators at a glance, Baseline wave, Kerala, 1999

	MC	MARD	MPW	MUS	FSW
Sample Size (N)	400	1000	1200	2500	400
	%	%	%	%	%
Knowledge of HIV Prevention Methods					
Consistent condom use	90	72	55	91	98
Mutual monogamy between HIV negative partners	34	58	85	82	
Abstinence from sex	4	3	2	25	
Respondents who had sex with non regular, non commercial partners in the past 12 months (N1)	*189*	*98*	*44*	*193*	
Had sex with non regular, non commercial partners in the past 12 months	47.2	9.8	4.6	7.7	
Average number of non regular, non commercial partners in the past 12 months	2	1	1	3	
Condom use at last sex with non regular, non commercial partner (% of N1)	41	44	26	50	
Consistent condom use with non regular, non commercial partner in the past 12 months (% of N1)	28	24	14	27	
C.I of 95%	22-34	15-32	4-24	21-33	
Respondents who had commercial sex in the past 12 months (N2)	*400*	*64*	*19*	*79*	
Had commercial sex in the past 12 months	100	6	2	3	
Average number of commercial partners in the past 12 months	4	2	1	4	
Condom use at last sex with commercial partner (% of N2)	80	91	58	66	
Consistent condom use with commercial partner in the past 12 months (% of N2)	48	55	26	43	
C.I of 95%	43-52	42-67	7-46	32-54	

Sample Size (N)	MC 400 %	MARD 1000 %	MPW 1200 %	MUS 2500 %	FSW 400 %
FSWs having sex with regular client in the past one month (N1)					*181*
Have regular clients in past one month (% of N)					45
Average number of regular client in the past one month					3
Condom use at last sex with regular client (% of N1)					67
Consistent condom use with regular client in the past 12 months (% of N1)					44
C.I of 95%					37-51
FSWs having sex with one time client in the past one month (N2)					*396*
Have one time clients in past one month (% of N)					99
Average number of one time client in the past one month					21
Condom use at last sex with one time client (% of N2)					89
Consistent condom use with one time client in past 12 months (% of N2)					52
C.I of 95%					47-57
Respondents who had anal sex with male partner in the past 12 months (N3)	*30*	*3*	*0*	*59*	
Had and sex with male partner in the past 12 months	7	0	0	2	
Average number of anal sex partners in past 12 months	3	0	0	5	
Condom use at last anal sex with male partner (% of N3)	14	0	0	31	
Consistent condom use with male partner during anal sex in the past 12 months (% of N3)	14	0	0	15	
C.I of 95%	1-26			6-24	

	MC	MARD	MPW	MUS	FSW
Sample Size (N)	400	1000	1200	2500	400
	%	%	%	%	%
Incidence of Genital Discharge/Ulcer in the past 12 months					
Suffered from discharge from genitals or ulcers in genitals in the past 12 months	9	2		2	12

MC – Male Clients of Female Sex Workers; MARD – Male Auto Rickshaw Drivers; MPW – Male Plantation Workers; MUS – Male University 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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