

Sri Lanka Behavioural Surveillance Survey

First Round Survey Results 2006 - 2007



Ministry of
Healthcare and
Nutrition
Sri Lanka



NATIONAL
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CONTROL
PROGRAMME

Sri Lanka Behavioural Surveillance Survey

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In memory of the late Dr AVKV de Silva



Preface

Surveillance is an integral part of a National STD /HIV /AIDS control programme to provide information to monitor the epidemic. The surveillance systems were initially designed to look at the impact of the epidemic and to track the populations which are affected by the epidemic. It provided the managers information on the disease burden in the country.

As the HIV epidemic continues to spread, the importance of prevention to control the epidemic has been increasingly recognised. Every country needs information to design appropriate prevention programmes and monitor and evaluate the success of these programmes. With the evolution of second generation surveillance, behavioural surveillance which tracks risky sexual and drug taking behaviours that put people at high risk of contracting HIV has shown over the years to make an important and useful contribution to informing the national response to HIV.

National STD/AIDS Control Programme in Sri Lanka has been conducting HIV sero surveillance annually over the past 13 years and it has shown that Sri Lanka continues to be a low prevalence country as prevalence of HIV among the most at risk populations sex workers, STD patients and drug users remaining well below 1%.

The National programme quite appropriately recognised the need for changing to second generation surveillance and initiated action over the past years towards establishing behavioural surveillance. This goal was achieved finally and the first round of behavioural surveillance was conducted in 2005-2006 among selected populations including sex workers, men having sex with men, drug users, beach boys, male and female factory workers and three wheel taxi drivers.

The first round survey has given very rich baseline information on knowledge of HIV transmission and prevention, level of stigma towards people affected with HIV, patterns of risk behaviours and practice of safe sexual and drug taking behaviours.

I hope that the stakeholders of the National response make use of this information in planning prevention programmes and designing interventions.

I commend UNSW Global Pty Limited and the National Centre in HIV Social Research of The University of New South Wales in Australia and local partners MG Consultants and the local survey team of the Sociology Department of University of Sri Jayawardenapura who conducted the survey for a job well done.

I thank the World Bank for providing the necessary funds.

I would like to make special mention of the Surveillance team of the NSACP, and the members of the Planning committee for their technical advice and for working hand in hand with the consultancy to make this a success.



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Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral treatment
BSS	Behavioural Surveillance Survey
COJ	Companions on a Journey
FTZ	Free Trade Zones
GS	Grama Sevaka
IDA	International Development Association
HIV	Human Immunodeficiency Virus
LKR/SLR	Sri Lanka rupee
MGC	MG Consultants
MoH	Ministry of Healthcare and Nutrition
MSM	Men who have sex with men
NA	Not applicable
NCHSR	National Centre in HIV Social Research
NHAPP	National HIV/AIDS Prevention Project
NSACP	National STD/AIDS Control Programme
PPC	Project Planning Committee
PPS	Probability proportional to size
RDS	Respondent-driven sampling
STD	Sexually transmitted disease
STI	Sexually transmitted infection
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children Fund
UNSW	The University of New South Wales
WHO	World Health Organisation

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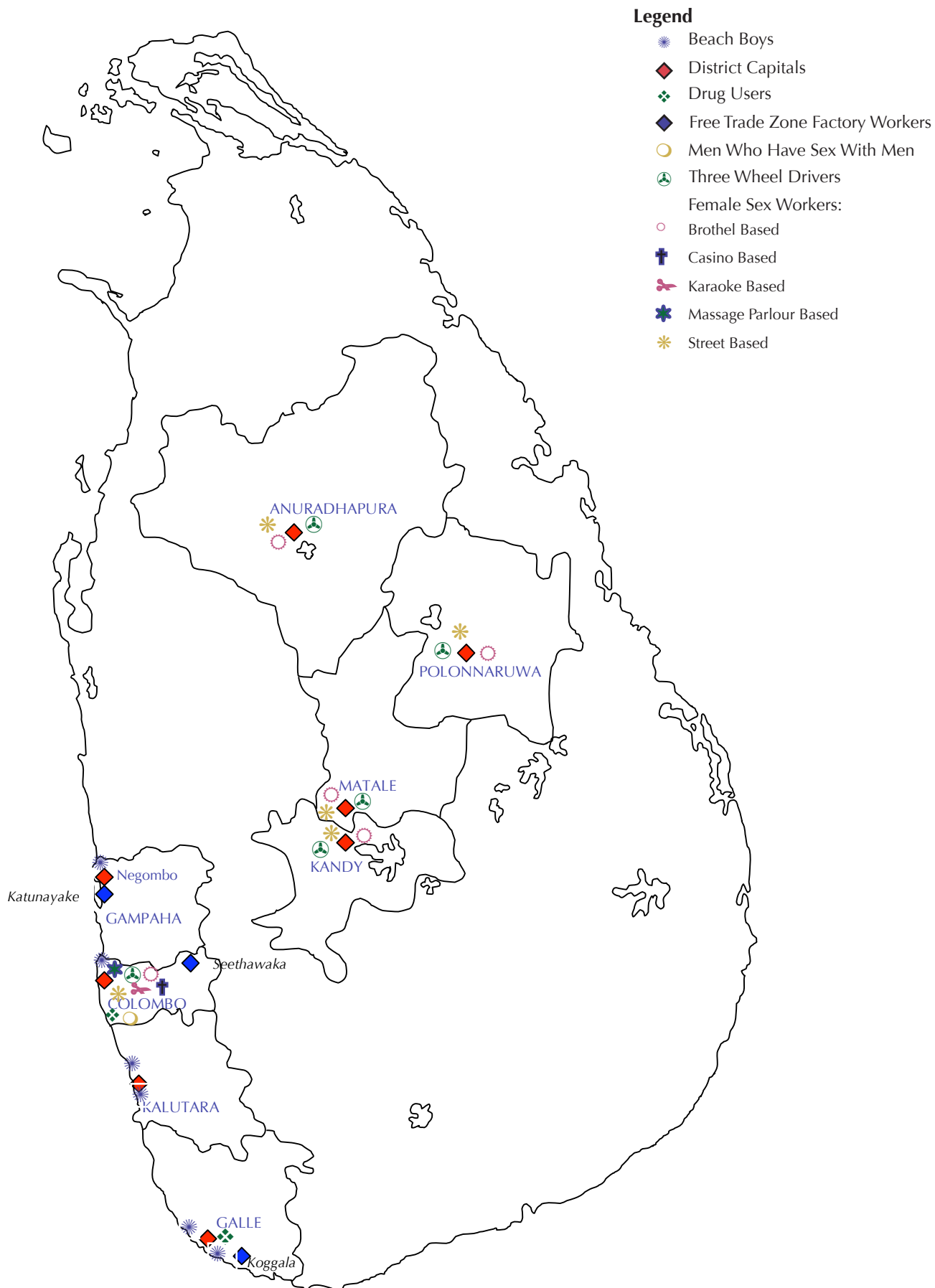
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Recruitment and Interview Locations in Selected Districts for Populations Surveyed in the Study



1 Executive summary

The Government of Sri Lanka, while recognising that the current prevalence of HIV/AIDS in Sri Lanka is low, has committed to a program to prevent the spread of the epidemic. The Democratic Socialist Republic of Sri Lanka has received a grant from the IDA/World Bank toward the cost of the National HIV/AIDS Prevention Project (NHAPP). The NHAPP is part of the existing National STD/AIDS Control Programme (NSACP).

Critical to the success of the National STD/AIDS Control Program (NSACP) is a surveillance system that:

- tracks the changes to the prevalence of HIV over time
- monitors the impact of prevention efforts
- describes risk behaviours and risk contexts of the sub-populations at most risk of/most vulnerable to HIV/AIDS
- monitors changes in the risk behaviours of these sub-populations over time (trends)
- informs the efficient and effective prioritisation of resources.

While Sri Lanka has been conducting sentinel sero-surveillance in several populations - those who attend STD and TB clinics, female sex workers, transport workers and service personnel at army camps - since the early 1990s¹, the need for transition to a second generation surveillance system has been recognised.

In February 2005 the Behavioural Surveillance Survey (BSS) was tendered and in November 2005 the contract was awarded to UNSW Global Pty Limited (formerly NewSouth Global Pty Limited), in association with the National Centre in HIV Social Research (NCHSR) of the University of New South Wales (UNSW) and local partners MG Consultants (MGC). The Government of Sri Lanka counterpart for the implementation of the BSS is the Ministry of Healthcare and Nutrition (MoH).

¹ Though sero surveillance commenced in the 1990s there was no continuation until 1993 when the proper Sero surveys according to the WHO protocol were undertaken and continued annually. The populations surveyed in the early years were sex workers, women attending antenatal clinics, attendees of STD clinics, TB patients and blood donors. In 1996 the surveillance of blood donors and ANC were discontinued. In 2003 military and transport workers were added with new evidence and in 2005 a pre-employment category was included.

The objectives of the BSS consultancy are to:

- establish and implement a behavioural surveillance system in Sri Lanka
- provide geographical and other relevant information regarding at-risk and vulnerable populations and complement the on-going HIV sero-surveillance work.

In pursuing these objectives, the aims or the purpose of the BSS in Sri Lanka are to:

- monitor change in HIV-related behaviours of specified populations or sub-populations over time
- inform the development of prevention-related interventions and activities
- evaluate the impact and effectiveness of prevention-related interventions and activities.

The first round of behavioural surveillance produced some very interesting results. Six groups considered at risk of HIV infection were surveyed between October 2006 and March 2007: factory workers in the Free Trade Zones (FTZ), three-wheel drivers (drivers of three-wheeled taxis), female sex workers, drug users, men who have sex with men (MSM), and 'beach boys'. (Beach boys are predominantly young men who work near or on the beaches, typically tourist beaches, and who offer sexual services in exchange for some form of payment. These young men may also work as tourist guides and may not all identify as 'beach boys'. Beach boys may also be working in restaurants, hotels, guest houses and boating-related tourism). The major indicators of risk for HIV are vaginal or anal intercourse without a condom or sharing injecting needles.

Given that the survey instrument asked questions about very sensitive areas of people's lives, the response rate was extremely good (over 7,000 people were surveyed, with an overall response rate of 92.1%). Response rates across each of the groups surveyed are shown in Table 1. It should be noted that in Table 1 the response rates for drug users and beach boys may slightly overestimate the true response rates. This is because the respondent-driven sampling (RDS) method used to recruit drug users and beach boys obscured the number of participants who may have been approached to participate in the survey by a fellow drug user or beach boy, and who declined to participate.

Table 1: Response rates for each of the groups in the survey

Group	Completed interviews	Refusals	Response rate (%)
Three-wheel drivers	1,444	347	80.6%
Drug users	779	5	99.4%
Factory workers in the FTZ	2,888	97	96.8%
Beach boys	553	25	95.7%
MSM	302	3	99.0%
Female sex workers			
brothel	303	11	96.5%
street	498	106	82.5%
massage parlour	179	14	92.7%
karaoke bar	74	0	100%
casino	40	0	100%
Total	7,060	608	92.1%

1.1 Major results: sexual behaviour

Sexual behaviour varied considerably between groups, with some groups showing worrying levels of risk for HIV due to unprotected sex with casual and regular sexual partners, both male–male and male–female. There were other groups who either had no sexual partners or one partner only, although condom use amongst monogamous respondents was extremely low. Tables 2 to 5 summarise rates of condom use over the 12-month period for each of the groups according to different types of partners.

Table 2: Summary of condom use for vaginal intercourse ‘every time’ in the previous 12 months by each group, with regular, non-regular and commercial partners

	Regular partners ‘used a condom every time’ Freq (%)	Non-regular partners ‘used a condom every time’ Freq (%)	Commercial partners ‘used a condom every time’ Freq (%)
Three-wheel drivers	2.3	31.2	64.8
Drug users (male)	1.1	18.8	47.4
Drug users (female)	0.0	9.1	50.0
FTZ Factory workers (male)	4.4	28.3	81.8
FTZ Factory workers (female)	2.0	¹	²

¹ Too few participants had non-regular partners to report the percentage. ² No commercial partners.

Table 3: Summary of condom use for vaginal intercourse ‘every time’ in the previous 12 months: with paying clients and non-paying partners of female sex workers

	Paying clients ‘used a condom every time’ Freq (%)	Non-paying partners ‘used a condom every time’ Freq (%)
Brothel	62.9	9.8
Massage parlour	70.4	4.2
Street	81.9	11.7
Karaoke	62.5	2.4
Casino	39.4	4.8

Table 4: Summary of condom use for vaginal intercourse ‘every time’ in the previous 12 months: with regular and non-regular female partners of beach boys and MSM

	Regular partners ‘used a condom every time’ Freq (%)	Non-regular partners ‘used a condom every time’ Freq (%)
Beach boys	4.8	47.2
MSM	18.2	36.1

Table 5: Summary of condom use for male-to-male anal intercourse ‘every time’ in the previous 12 months: with regular and non-regular partners of beach boys and MSM

	Regular partners ‘used a condom every time’ Freq (%)	Non-regular partners ‘used a condom every time’ Freq (%)
Beach boys	21.6	45.9
MSM	25.9	46.5

1.1.1 Factory workers in the Free Trade Zones (FTZ)

- Over half of the male factory workers (49.3%) had had sexual intercourse in the year prior to the survey; 29% of the female factory workers had had sexual intercourse in the year prior to the survey.
- Of those factory workers who had had sex in the previous 12 months, 71.1% of women had had sex with a regular partner compared with 46.2% of men.
- Of those factory workers who had had sex in the previous 12 months, very few (7.6% of men and 0.4% of women) had had sex with casual partners.
- Fourteen male factory workers had paid for sex in the previous 12 months and only one female factory worker had been paid for sex during that period. Condom use in the previous 12 months among male factory workers was low with regular partners (4.4%), higher with casual partners (28.3%) and very high with commercial partners (81.8%).

- Female factory workers' condom use with both regular and casual partners in the previous 12 months was almost non-existent.

1.1.2 Three-wheel drivers

- Most three-wheel drivers (88.7%) had had sexual intercourse in the 12 months prior to the survey, a fifth with casual partners.
- Condom use was low with regular partners (2.4% always used condoms), higher with casual partners (31.2% always used condoms) and higher still with commercial partners (64.8% used condoms).
- A similar pattern emerged with each type of partner on the most recent occasion that the drivers had had sex.
- A very small percentage (0.8%) had had anal intercourse with a man in the previous 12 months.

1.1.3 Drug users

- Two-thirds (65.2%) of male drug users had had sexual intercourse in the previous 12 months, 49.7% with a regular female partner, 27.3% with a casual female partner and 15.6% with a female sex worker.
- Condom use among male drug users at each occasion of vaginal intercourse in the previous 12 months was extremely low with regular partners (1.1%), higher with casual partners (18.8%) and higher still with commercial partners (47.4%).

1.1.4 Beach boys

- 81% of beach boys had had vaginal intercourse with a woman in the year prior to the survey.
- 45.4% had had anal intercourse with a man in the previous 12 months.
- In the previous 12 months, over half of the beach boys had had a regular female partner and 70.7% had had casual female partners.
- 18.5% had had anal intercourse with a regular male partner in the previous 12 months, 41% had had anal intercourse with a casual male partner and 44.5% had engaged in anal intercourse with a foreign male partner.
- Condom use in the previous 12 months with regular female partners was very low (4.8% always used a condom); 47.2% always used a condom with casual female partners.

- Condom use was higher on the most recent occasion, 11.3% with regular female partners and 71.4% with casual female partners.
- 21.6% had always used a condom for anal intercourse with regular male partners in the previous 12 months, 45.9% with casual partners.
- Condom use on the most recent occasion of anal intercourse with a man was higher, 39.6% with regular partners and 68.8% with casual partners.

1.1.5 Men who have sex with men (MSM)

- 92.4% of MSM had had anal intercourse in the previous 12 months, 67.5% with a regular male partner and 80.9% with a casual male partner.
- Condom use in the previous 12 months during sex with men was low; 25.9% had always used condoms with regular male partners and 46.5% had always used condoms with casual male partners.
- Almost a quarter of the sample (23.0%) had had sexual intercourse with a woman in that period, 14.7% with a regular female partner and 12.2% with a casual female partner.
- While constant condom use in the previous 12 months was low with female partners, it was the highest of all groups with regular partners (18.2%) and 36.1% with casual partners.

1.1.6 Female sex workers

- Almost all of the brothel and street sex workers had had sexual intercourse in the previous 12 months (99.3% and 99% respectively) but fewer of the karaoke (85.1%), casino (87.5%) and massage parlour workers (72.1%).
- Very few massage parlour workers (15.1%) had had vaginal or anal intercourse with paying clients in the previous 12 months. The vast majority of other types of sex workers had had anal or vaginal intercourse with clients.
- Condom use with clients 'every time' in the previous 12 months was dependent on the type of sex worker; 39.4% of casino workers, 62.9% and 62.5% of brothel and casino workers, respectively, 70.4% of massage parlour workers and 81.9% of street workers had used a condom every time during this period.
- In the previous 12 months 74.4% of all sex workers had faced some difficulties getting clients to use condoms.

- Overall, 90.5% of sex workers had used a condom with their most recent paying client and this varied only slightly between the different types of sex workers.
- The major reason for sex workers not using condoms at the most recent sexual occasion was that clients objected.
- Half of all sex workers who had had sex with clients had also had sex with non-paying partners.
- These sex workers had low rates of condom use with non-paying clients; around 10% used a condom 'every time'.
- Around 11% of all sex workers had been forced to have sex in the previous 12 months.
- Street workers, in particular, faced harassment from police for carrying condoms (33.2% in the previous 12 months).

1.1.7 Drug use

- Apart from the drug user group, few respondents used drugs, and injecting drug use was practically non-existent. The most used drug was cannabis, followed by heroin.
- Of the drug user group, almost all had used drugs in the previous 12 months, mostly heroin (94.7%) and cannabis (85.1%).
- 34 (4.4% of) drug users had injected in the previous 12 months.
- Sharing needles was common, with 42.3% of injectors having shared a needle used by someone else and 51.1% having shared their used needle with someone else.

1.1.8 Other results – all groups

- Respondents had heard about HIV from a range of sources, most often TV, newspapers, family and friends, health services and school.
- Median income of respondents was between LKR10,000 and LKR20,000, with factory workers being the poorest paid and sex workers the highest paid.
- Knowledge about HIV was poor. While most knew that HIV was sexually transmitted, over 50% of the respondents incorrectly identified HIV as being transmitted by mosquito bites, over a third of respondents did not know that condoms provided protection from HIV and a

majority felt that someone with HIV could not look healthy.

- Most of the respondents had had little close contact with the HIV epidemic.
- Attitudes to those with HIV and AIDS were extremely negative. Over half of all respondents would not want to work or live in the same house with someone with HIV, and a third did not think a student with HIV should be allowed to attend school.
- Awareness of new HIV treatments was low.
- Levels of HIV testing were extremely low overall, with the exception of MSM and, in particular, sex workers.
- Government hospitals were the most utilised sites for HIV testing, with some groups being tested at STI clinics and private clinics. Those who had been tested tended to have done so in the previous year.
- While most were aware of STIs, few had ever had symptoms of STIs, particularly in the previous 12 months. Knowledge of asymptomatic STIs was low.
- Overall, alcohol consumption was low, especially among women. An exception was among drug users, 27.4% of whom drank every day.
- Rates of smoking (tobacco) were high among men and very low among women.

1.2 UNGASS Indicators: Knowledge and Behaviour

In this section the data have been organised according to the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) guidelines on the construction of core indicators for knowledge and behaviour pertaining to low-prevalence epidemics.

1.2.1 Knowledge about HIV transmission and prevention

The UNGASS indicator to assess knowledge is based on correctly answering the following five questions:

1. Can having sex with only one faithful, uninfected partner reduce the risk of HIV transmission?
2. Can using condoms reduce the risk of HIV transmission?
3. Can a healthy-looking person have HIV?
4. Can a person get HIV from mosquito bites?

- Can a person get HIV by sharing a meal with someone who is infected?

In the current study all questions above were included in the questionnaires for each group except for question 1. As such, for calculating this knowledge indicator, question 1 was replaced by the following question, which has a slightly different meaning:

- Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?

The percentages reported in Table 6 were calculated with the following numerator and denominator:

Numerator: Number of participants who gave correct answers to all five knowledge questions.

Denominator: Number of participants who gave answers, including 'don't know', to all five knowledge questions.

As shown in Table 6, knowledge about HIV prevention was quite low across all groups. Such knowledge was relatively higher, albeit low, among Beach Boys and MSM.

Table 6: Percentage of participants who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission

Group	Men		Women	
	Age category		Age category	
	< 25	>=25	< 25	>=25
Three-wheel drivers	11.7% (17/145)	9.8% (122/1245)	NA	NA
Drug users	12.5% (13/104)	6.1% (38/627)	²	14.8 (4/27)
Factory workers	10.0% (69/691)	13.6% (82/603)	6.8% (69/1009)	9.4% (48/508)
Beach Boys	18.5% (49/265)	21.6% (61/282)	NA	NA
MSM	17.7% (25/141)	24.1% (35/145)	NA	NA
FSW-brothel	NA	NA	11.2% (10/89)	7.1% (14/198)
FSW-massage parlour	NA	NA	9.7% (3/31)	15.8% (23/146)
FSW-street	NA	NA	11.1% (2/18)	10.1% (48/474)
FSW-karaoke	NA	NA	6.5% (2/31)	10.8% (4/37)
FSW-casino	NA	NA	14.3% (2/14)	3.8% (1/26)

FSW=Female sex worker. MSM=men who have sex with men. NA-not applicable. Please note that some of the percentages are based on small numbers and therefore the result should be treated with caution. ¹ This UNGASS

indicator is usually disaggregated by location of residence (urban/rural). Such disaggregation was not performed here because all samples were predominantly urban. ² Too few women in this age group to run the analysis.

1.2.2 Sex workers: condom use

This indicator reports on the proportion of female sex workers who used a condom for vaginal intercourse with their last paying partner (client). The analyses were disaggregated by age: those less than 25 compared with women 25 or older. The percentages reported in Table 7 were calculated with the following numerator and denominator:

Numerator: Number of participants who reported that a condom was used on the last occasion they had vaginal intercourse with a client.

Denominator: Number of participants who reported having sexual intercourse with a paying client in the previous twelve months.

The percentages fluctuated across the groups and there was no set pattern by age. For some groups of female sex workers, the older women were more likely to have used a condom, whereas it was the converse for other groups. Moreover, small numbers for some of the sex worker groups suggest caution in interpreting results reported in Table 7.

Table 7: Percentage of female sex workers reporting the use of a condom the last time they had vaginal intercourse with a client

Group	Age category	
	< 25	>=25
FSW-brothel	92.2 % (83/90)	84.0 % (178/212)
FSW-massage parlour	50.0 % (2/4)	72.7 % (16/22)
FSW-street	89.5 % (17/19)	94.8 % (454/479)
FSW-karaoke	71.4 % (15/21)	82.9 % (29/35)
FSW-casino	90 % (9/10)	62.5 % (15/24)

FSW=female sex worker. ¹ This UNGASS indicator is usually disaggregated by location of residence (urban/rural). Such disaggregation was not performed here because the female sex worker sample was predominantly urban. Another variation to the way the indicator is often measured is that the current data is based on last vaginal intercourse whereas the UNGASS indicator is usually based on sex with the most recent client. Here we have specifically used data about vaginal intercourse because non-penetrative sexual practices are quite common. Please note that some of the percentages are based on very small numbers and therefore the result should be treated with caution.

1.2.3 Men who have sex with men: condom use

This indicator measures the rates of condom use for anal intercourse with the last non-regular male partner. The percentages were calculated using the following:

Numerator: Number of participants who reported that a condom was used on the last occasion they had anal intercourse with a man.

Denominator: Number of participants who reported having had anal intercourse with a man in the previous twelve months.

Rates of condom use with the last non-regular male partner were remarkably similar for both MSM and Beach Boys (Table 8). This result reaffirms the robustness of the findings. Around 60% to 66% of men used condoms for anal intercourse with their last non-regular male partner. There was no difference by age group. This result indicates that at least a third of men who have anal intercourse with men are not using condoms and are at risk of HIV transmission (acquiring or transmitting).

Table 8: Percentage of men reporting the use of a condom the last time they had anal intercourse with a non-regular partner

Group	Age category	
	< 25	>=25
MSM	61.5 % (75/122)	60.4 % (67/111)
Beach Boys	66.2 % (90/136)	62.2 % (56/90)

¹ This UNGASS indicator is usually disaggregated by location of residence (urban/rural). Such disaggregation was not performed here because the MSM and Beach Boy groups were predominantly urban. Another variation to the way the indicator is often measured is that the percentages reported in the table above are based on anal intercourse with non-regular partners rather than with any partner.

1.2.4 Injecting drug users: safe injecting and sexual practices

Since there were only twelve drug users who had injected drugs in the last twelve months and who had also had sexual intercourse in the same period, the percentage for this indicator must be treated as unreliable. As such the percentage is not reported in a table and is merely mentioned here in the text. The percentage of injecting drug users who had avoided sharing needles and had used condoms in the last twelve months was 33.3% (4/12). Please note that this UNGASS indicator is

usually based on a shorter time period, of about one month, compared with the twelve months used here. Although the percentage may be unreliable because of small numbers of injecting drug users, the result nonetheless suggests that health promoting behaviours around injecting drugs is likely to be low in this population.

2 Introduction

2.1 Overview

This report provides results on the main indicators which are sexual risk of HIV and STI transmission, drug use, knowledge of HIV and STIs, HIV testing and treatments, and attitudes towards others with HIV/AIDS, as part of the results of the first round of behavioural surveillance. It also contains recommendations to assist the National STD/AIDS Control Program (NSACP) to carry out targeted HIV knowledge, prevention and anti-discrimination programs.

In this report results are reported separately for each of the six groups—three-wheel drivers, drug users, factory workers in the Free Trade Zones, beach boys, men who have sex with men (MSM) and female sex workers—and a set of summary tables in the Executive Summary enable cross-group comparisons.

Behavioural surveillance plays a key role in the monitoring and evaluation of the national response to HIV/AIDS, complementing epidemiological surveillance data that describe the rates of prevalence and incidence of HIV. The findings of behavioural surveys provide a valuable resource in the assessment of the impact of HIV/AIDS policies and programs.

Behavioural survey data identify risk behaviours and links in the chain of HIV transmission and measure levels of risk among populations over time. They give an appreciation of the levels of risk behaviours in sub-populations, particularly those with higher rates of risk behaviours. Behavioural survey data assess the degree to which particular sub-populations adopt safer behaviours to reduce the risk of HIV transmission and provide insights into factors that facilitate the uptake of safer behaviours and the barriers to such uptake.

The aims of this survey are to:

- provide baseline data on which to build an ongoing behavioural surveillance system in Sri Lanka which will be able to monitor changes in risk behaviours and the uptake of safer behaviours over time
- identify and assess levels of risk behaviours in those sub-populations believed to be at high risk
- provide demographic and other information regarding those vulnerable sub-populations.

2.2 Epidemiology of HIV/AIDS in Sri Lanka

Sri Lanka has been classified by UNAIDS as a country with a low-level HIV epidemic, with a national HIV prevalence of less than 0.1% that is non-generalised across the population. Most HIV infections are acquired through heterosexual contact.

According to UNAIDS/WHO, the estimated number of adults aged between 15 and 49 who were living with HIV/AIDS in Sri Lanka at the end of 2003 was 3500. There is no estimation of how many children aged under 15 were living with HIV/AIDS at this time. By the end of 2003, the cumulative number of AIDS cases was 161, with a male-to-female ratio of 1.4 to 1, and the cumulative number of reported AIDS deaths was 119.

The National STD/AIDS Control Program of the Sri Lankan Ministry of Health, Nutrition and Welfare has conducted sentinel sero-surveillance each year since 1993. The 2003 survey tested five high-risk sub-populations: female sex workers, attendees of STD clinics, TB patients, army service personnel and truck drivers. Of the total number of 9765 samples, 10 tested positive to HIV antibodies. Of these, eight were attendees of STD clinics, one was a female sex worker and one was a TB patient. However, recruitment proved difficult in some of these sub-populations, particularly among female sex workers, which may help to explain the low rates of HIV infection.

A number of international agencies are currently involved in HIV-prevention projects and programs. The results of these local evaluations, which sometimes include one-off behavioural survey data including HIV risk behaviours and knowledge, will provide useful corroboration and triangulation of the behavioural surveillance data resulting from the plan described below.

3. Method

Development of the sampling frame was informed by mapping each of the populations in the survey.

3.1 Mapping populations

Mapping information was completed for each of the six populations that were surveyed in Round 1: (i) female sex workers, (ii) men who have sex with men (MSM), (iii) drivers of three-wheeled taxis, (iv) factory workers from the Free Trade Zone (FTZ), (v) drug users and (vi) beach boys. This mapping exercise provided two important pieces of information: 1) an estimation of the size of the populations in each of the intended sampling locations; and 2) the whereabouts and accessibility of the populations in each of the intended sampling locations. Based on the two preceding points, the type of sampling method most appropriate for each population was ascertained.

Table 9: Type of sampling strategy intended for each population in the survey

Population	Identifiable clusters	Intended sampling strategy
Three-wheel drivers	Drivers of three-wheeled vehicles at designated stands	Probability
Drug users	Identify key informants and key locations	Non-probability
Factory workers in the FTZ	Houses accommodating FTZ factory workers in the Grama Sevaka (GS) divisions surrounding factories	Probability
Beach boys	Identify key informants and key locations	Non-probability
MSM	Identify key organisations who work with MSM and key events	Non-probability
Female sex workers		
brothel	Brothels	Probability (Take-all)
street	Street locations	Probability (Take-all)
massage parlour	Massage parlours	Probability (Take-all)
karaoke	Key informants in karaoke bars	Non-probability
casino	Key informants in casinos	Non-probability

Table 9 broadly summarises the type of sampling method agreed to by the Project Planning Committee (PPC), based on information that was obtained during the mapping phase. Table 9 shows

that probability sampling was used for only three groups: drivers of three-wheeled taxis, drug users and three sub-groups of female sex workers (those working in brothels, massage parlours and on the streets). The specific type of probability or non-probability sampling used to survey each group is reported on in the individual chapter for each group.

3.2 Primary indicators and calculations of sample sizes

One of the major aims of a behavioural surveillance survey (BSS) is to monitor trends in risk-related behaviour and knowledge. Trends are monitored by collecting the same type of data across time and analysing whether there have been significant upward (upturn) or downward (downturn) movements in a particular indicator. An indicator in a BSS is a marker of specific behaviour or knowledge that is measured and monitored for change or stability.

Although several indicators were measured in the Sri Lanka BSS for each sub-population, the calculation of sample sizes was based on one primary indicator for each sub-population: the proportion who engaged in consistent condom use with non-regular partners². This indicator was chosen not only because of its importance in behavioural surveillance but also because baseline data from the relevant literature was more readily available for this indicator compared with others. For some of the sub-populations, a perfect match between the chosen indicator and the available literature was not possible. For example, in some cases the data reported in the literature were based on a slightly different indicator, and/or the sub-population studied in the literature was not identical to the targeted sub-population in the Sri Lanka BSS. In these situations, the baseline indicator was taken as the closest match, or best guess, based on the available literature.

Since the primary indicator for all sub-populations, except for sex workers, was based on consistent condom use with non-regular partners, an upward adjustment to the sample sizes were required to ensure that there would be at least as many

² The denominator for calculating these proportions for each sub-population was those people who had sex with non-regular partners. For sex workers, the primary indicator is consistent condom use with clients.

participants with non-regular partners as the required sample sizes. To illustrate such an adjustment, assume that 50% of three-wheel drivers have non-regular partners. As such, we would have to double the sample size for three-wheel drivers to ensure that the number with non-regular partners matched the required sample size. Since the available research literature generally did not indicate the proportion of the sub-populations who had non-regular partners in the previous 12 months, and if it did the studies were often out of date, we assumed the percentage to be about 50% for each of the sub-populations. While this figure is somewhat arbitrary, it was expected that 50% would generally account for the proportion with non-regular partners in the previous 12 months. Prior to the second round of data collection, the exact rates of condom use with non-regular partners will be known, thus enabling a more precise estimate of the required sample sizes in each population.

A further adjustment was necessary to achieve the required sample sizes: the necessity to factor in a 20% level of absentees and refusals. This type of adjustment was not made to the required sample sizes reported in the table below but rather was made at the time of organising clusters from which to sample. In Table 10 it can be seen that for each of the populations that were sampled by probability methods, the target sample size was reached or exceeded, with the exception of female sex workers in massage parlours. The populations recruited through non-probability methods were more difficult to sample, hence the slightly lower sample sizes compared with the target sample sizes.

Table 10: Target sample sizes and actual sample sizes achieved

Population	Target sample sizes	Actual sample sizes
Three-wheel drivers	1,210	1,444
Drug users	800	779
Factory workers in the FTZ		
men	1,272	1,325
women	1,272	1,563
Beach boys	600	553
MSM	400	302
Female sex workers		
brothel	305	303
street	505	498
massage parlour	257	179
karaoke	80	74
casino	15	40

3.3 Data collection and supervision in the field

Data were collected from each of the populations in the survey by means of a questionnaire administered by an interviewer. Interviewers were graduates from the Sociology Department at the University of Sri Jayewardenepura (cf below). Each interviewer undertook a week's training course to prepare them for the task. For every five interviewers in the field there was one supervisor to support the staff and ensure that the work was being carried out according to the sampling and field protocols. These supervisors were also graduates from the same university as the interviewers. Overseeing the supervisors were two experienced researchers (acting as consultants for the project) from the University of Sri Jayewardenepura. In turn, these two consultants reported to the Project Manager and to the Local Survey Consultant Manager. A further level of accountability in the data collection process was achieved by employing a consultant to monitor protocols in the field and to report these observations directly to the Project Manager and the Local Survey Consultant Manager. Independent monitoring of some aspects of the field survey were carried out by the behavioural surveillance coordinator at the NSACP.

3.4 Data analysis

The data presented in this report are reported in frequency form as the authors considered this to be the most effective way of providing an overview of the main results. It is anticipated, and indeed hoped, that this report will point the way for further bivariate and multivariate analyses that will be analysed in the coming months. It is expected that further discussions will take place with the NSACP to decide on the most important analyses to conduct.

Please note that although RDS methods were used to recruit drug users and beach boys, the chains were not long enough (i.e. there were insufficient waves) for equilibrium to be reached. As such, the data for these two groups were not analysed using RDSAT. Instead, the samples of drug users and beach boys were treated as convenience samples and analysed accordingly, without any adjustment based on RDS estimates.

4 Results: three-wheel drivers

Approximately 111,000 registered three-wheeled taxis operate in Sri Lanka. In a social assessment exercise for the World Bank (2002), the Sri Lankan Ministry of Health identified transport workers such as three-wheel drivers as a group that is vulnerable to HIV because they have a close association with the commercial sex trade. Three-wheeled taxis are frequently used to transport sex workers and their clients, and they are used as venues for sex, with the drivers functioning as pimps.

There do not appear to be any specific data on rates of condom use among the population of three-wheel drivers in Sri Lanka. However, three studies of Sri Lankan men indicate that among male attendees of the Colombo STD Clinic, 14% used a condom in their most recent sexual encounter (Abeysekera, 2000); among unmarried youth living in slum and shanty settlements in Colombo, 16.6% used a condom in their most recent sexual encounter (Rajapaksa, 1996); and among men living in the Dehiwela, Mt Lavinia Municipal Council area, 12.1% did so (Rifai, 1996).

4.1 Sample size

Based on 90% power and a 95% significance level, the sample size required to detect a 10 percentage point increase in the primary indicator is 590. Making an adjustment for the estimated proportion (50%) who will have had a non-regular partner in the previous 12 months, it was necessary to double the required sample size. As such, the target sample size became 1,180 (590*2). The number of three-wheel drivers sampled in each location was calculated as a relative proportion of the population size of three-wheel drivers in each location. Since this calculation resulted in small sample sizes for Anuradhapura, Kandy and Dambulla, the target sample sizes in these three cities were increased to a nominal 40 each, making the total target sample size 1,210.

4.2 Sampling

Mapping in this population involved recording the locations of every three-wheeled taxi stand and, with the exception of Colombo, the numbers of three-wheeled vehicles at each stand. In Colombo the number of stands was too large to count the exact number of vehicles. Table 11 shows the

number of taxi stands that were mapped in each of the survey locations.

Sampling entailed a two-stage cluster sample design in which clusters of taxi stands were sampled with equal probability in each location at the first stage, and then three-wheel drivers were sampled at each of the chosen stands in the second stage, using a take-all approach starting with the fourth taxi in the queue and working backwards. This design results in a self-weighted sample, thus avoiding the need to weight the data at the analysis stage.

Since the required sample size for three-wheel drivers was 1,210, at least 1,500 participants were approached to participate in the study to account for an estimated 20% level of absentees and refusals. The actual sample size by geographic location appears in Table 11. As shown in Table 11, the actual sample sizes exceeded the target sample size by about 300 participants.

Table 11: Sampling targets and actual sample size - three-wheel drivers

Districts	Mapped no. of taxi stands	Per centage of taxi stands in each location	Target sample size	Actual sample size
Colombo	391	76.7%	1,090	1,302
Anuradhapura	60	11.8%	40	51
Kandy	41	8.0%	40	46
Dambulla	18	3.5%	40	45
Total	510	100%	1,210¹	1,444

¹ The target sample size was 1,210. Based on an estimated 20% level of absentees and refusals, the sampling frame was calculated on 1,510 three-wheel drivers to arrive at a sample size of about 1,210.

4.3 Demographic profile

Table 12: Level of education - three-wheel drivers

	Frequency	Per cent (%)
Completed pre-school	10	0.7
Completed primary	127	8.9
Completed Years 6 to 10	543	37.9
Completed O-level	624	43.6
Completed A-level	127	8.9
Completed diploma	1	0.1
Completed degree	0	0
Completed higher degree	0	0
Total	1,432¹	100%

¹ Missing values (N = 12)

The mean age of drivers was 36 years, with a range from 18 to 76. The data in Table 12 reveals most of the three-wheel drivers had some secondary education and over half had completed O-level or higher. None had completed a university degree.

The majority of three-wheel drivers were of Sinhalese origin, although there were some Tamil (13.5%) and Moorish (15.9%) drivers (see Table 13).

Table 13: Ethnicity - three-wheel drivers

	Frequency	Per cent (%)
Sinhalese	1,014	70.3
Sri Lanka Tamil	181	12.6
Indian Tamil	13	0.9
Moor	229	15.9
Burgher	3	0.2
Malay	2	0.1
Other	0	0
Total	1,442¹	100%

¹ Missing values (N = 2)

Table 14 shows that about 80% of drivers were married and about a fifth were single, with very little cohabitation or separation/divorce.

Table 14: Marital status - three-wheel drivers

	Frequency	Per cent (%)
Single (never married)	270	18.7
Living together but not married	5	0.3
Married	1,151	79.9
Divorced/Separated	10	0.7
Widowed	6	0.4
Total	1,442¹	100%

¹ Missing values (N = 2)

The median monthly wage category for three-wheel drivers was between LKR10,001 and 20,000, with few earning below LKR5,000 or above LKR30,000 (Table 15).

Table 15: Monthly income - three-wheel drivers

	Frequency	Per cent (%)
< 5000 LKR	13	0.9
5000 to 10,000 LKR	350	24.5
10,001 to 20,000 LKR	853	59.6
20,001 to 30,000 LKR	193	13.5
> 30,000 LKR	21	1.5
Total	1,430¹	100%

¹ Missing values (N = 14)

4.4 Knowledge about HIV and AIDS and its transmission

4.4.1 Awareness of HIV

Almost all the three-wheel drivers had heard about HIV (Table 16) and most had heard about it from a range of sources (Table 17), most often from television (87.3%) and newspapers (61.8%).

Table 16: Have you ever heard of HIV or the disease called AIDS? - three-wheel drivers

	Frequency	Per cent (%)
Yes	1,421	99.0
No	15	1.0
Total	1,436¹	100%

¹ Missing values (N = 8)

Table 17: How did you find out about HIV and AIDS? - three-wheel drivers

	Yes Freq (%)	No Freq (%)	Total (%)
School	131 (9.2)	1,266 (89.1)	1,397² (100)
Health services	357 (25.4)	1,047 (74.6)	1,404³ (100)
Workplace	111 (7.9)	1,293 (92.1)	1,404³ (100)
Friends/Family	381 (27.0)	1,028 (73.0)	1,409⁴ (100)
Television	1,239 (87.6)	175 (12.4)	1,414⁵ (100)
Newspaper/ Magazine	886 (62.7)	526 (37.3)	1,412⁶ (100)
Posters/Billboards	263 (18.7)	1,141 (81.3)	1,404³ (100)
Pamphlets/Leaflets	146 (10.4)	1,259 (89.6)	1,405⁷ (100)
Radio	555 (39.4)	855 (60.6)	1,410⁸ (100)
NGOs	117 (8.4)	1,284 (91.6)	1,401⁹ (100)

Freq = frequency. ¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. ² Missing values or don't know (DK) (N = 24). ³ Missing values/DK (N = 17). ⁴ Missing values/DK (N = 12). ⁵ Missing values/DK (N = 7). ⁶ Missing values/DK (N = 9). ⁷ Missing values/DK (N = 16). ⁸ Missing values/DK (N = 11). ⁹ Missing values/DK (N = 20).

4.4.2 Closeness to the epidemic

A third of three-wheel drivers knew someone who had HIV or who had died of AIDS-related conditions (Table 18), but few had close contact with the epidemic (Table 19). When data from tables 18 and 19 are considered together, it suggests that while some participants knew of a person with HIV in most cases that person was not a friend or relative.

Table 18: Do you know anyone infected with HIV or who has died of AIDS? - three-wheel drivers

	Frequency	Per cent (%)
Yes	496	34.8
No	931	65.2
Total	1,427¹	100%

¹ Missing values ($N = 17$)

Table 19: Do you have a close relative or friend infected with HIV or who has died of AIDS? - three-wheel drivers

	Frequency	Per cent (%)
Yes, a close relative	5	0.4
Yes, a close friend	42	2.9
No	1,385	96.7
Total	1,432¹	100%

¹ Missing values ($N = 12$).

4.4.3 Knowledge about HIV transmission

Table 20 indicates that three-wheel drivers' knowledge about HIV is patchy. While almost all drivers understood that HIV was sexually transmitted, only half understood that using a condom would protect them, and fewer than half identified that you couldn't be infected with HIV by a mosquito. As well, the majority did not understand that a person with HIV could show no signs of the disease.

Table 20: Knowledge about HIV transmission and living with HIV - three-wheel drivers

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	1,353 (95.8)	24 (1.7)	36 (2.5)	1,413² (100)
Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	767 (54.4)	393 (27.9)	249 (17.7)	1,409³ (100)
Can a person get the HIV virus from mosquito bites?	521 (36.8)	645 (45.6)	249 (17.6)	1,415⁴ (100)
Can a woman who has HIV pass on the disease to her unborn child?	1,203 (84.8)	82 (5.8)	133 (9.4)	1,418⁵ (100)
Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	790 (56.1)	533 (37.9)	85 (6.0)	1,408⁶ (100)
Can a person get HIV from a transfusion of blood/blood products?	1,340 (94.5)	30 (2.1)	48 (3.4)	1,418⁷ (100)
Do you think that a person infected with HIV can be healthy looking?	543 (38.9)	615 (44.1)	238 (17.0)	1,396⁸ (100%)

DK = Don't know. Freq = frequency. ¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. ² Missing values ($N = 8$); ³ Missing values ($N = 12$); ⁴ Missing values ($N = 6$); ⁵ Missing values ($N = 3$); ⁶ Missing values ($N = 13$); ⁷ Missing values ($N = 3$); ⁸ Missing values ($N = 25$).

4.5 Attitudes towards others with HIV and AIDS

Three-wheel drivers displayed negative attitudes towards those with HIV and AIDS (Table 21). Over half those surveyed would not be willing to work with someone who had HIV or felt that students with HIV should not be able to attend school. Two-thirds would not share a house with an HIV-positive person, while a third would not care for a sick relative. However a majority responded positively to the question about caring for a sick relative with HIV.

Table 21: Attitudes towards others with HIV and AIDS - three-wheel drivers

	Yes Freq (%)	No Freq (%)	Total (%)
Would you be willing to work with someone you knew who had HIV?	609 (43.6)	789 (56.4)	1,398² (100)
Would you agree to live in the same house as someone with HIV?	450 (31.9)	959 (68.1)	1,409³ (100)
If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	906 (65.0)	487 (35.0)	1,393⁴ (100)
If a student has HIV, but is not sick, should he or she be allowed to continue attending school?	672 (48.7)	707 (51.3)	1,379⁵ (100)

Freq = frequency. ¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. ² Missing values (N = 23); ³ Missing values (N = 12); ⁴ Missing values (N = 28); ⁵ Missing values (N = 42).

4.6 HIV treatments

Awareness of treatments for HIV was low among three-wheel drivers (Table 22). It should be noted that there may have been some ambiguity about what 'new drugs' referred to in this question. As such, it is possible that these results do not reflect true awareness levels of antiretroviral therapy.

Table 22: Awareness of HIV treatments - three-wheel drivers

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV and AIDS?	337 (23.8)	772 (54.6)	305 (21.6)	1,414² (100)
In Sri Lanka, can people get treatments for HIV and AIDS other than western drugs?	123 (8.7)	851 (60.4)	436 (30.9)	1,410³ (100)

DK = Don't know. Freq = frequency. ¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. ² Missing values (N = 7); ³ Missing values (N = 11).

4.7 HIV testing

Table 23 shows that very few three-wheel drivers had been tested for HIV and, of those who had, half had been required to take a test. Almost three-quarters had been tested in a government

hospital/STI clinic (Table 24). Half of those tested had had their test over two years ago (Table 25).

Table 23: HIV testing - three-wheel drivers

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had an HIV test?	78 (5.4)	1,358 (94.6)	1,436¹ (100)
	Voluntary Freq (%)	Required Freq (%)	Total (%)
Did you voluntarily have the HIV test or were you required to have it? ³	33 (48.5)	35 (51.5)	68² (100)

Freq = frequency. ¹ Missing values (N = 8). ² Missing values (N = 10). ³ The denominator includes only those who had ever had an HIV test.

Table 24: Where did you get the HIV test? - three-wheel drivers

	Frequency	Per cent (%)
Government hospital / Special STI clinic	49	73.2
Private clinic	9	13.4
Private hospital	9	13.4
Total	67²	100

¹ The denominator includes only those who had ever had an HIV test. ² Missing values (N = 11).

Table 25: When did you have your most recent HIV test? - three-wheel drivers

	Frequency	Per cent (%)
Within the past 6 months	12	17.6
Between 6 and 12 months ago	11	16.2
Between 1 and 2 years ago	13	19.1
Between 2 and 4 years ago	11	16.2
More than 4 years ago	21	30.9
Total	68¹	100

The denominator includes only those who had ever had an HIV test. ¹ Missing values (N = 10).

4.8 Sexually transmitted infections (STIs)

Taxi drivers' awareness of STIs was high. However, few of them had ever had symptoms of infections (Table 26). Only a third realised that you could have an STI without displaying symptoms (Table 27).

Table 26: Awareness and experience of STIs - three-wheel drivers

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever heard of diseases that can be transmitted sexually?	1,327 (93.0)	100 (7.0)	1,427¹ (100)
Have you had a genital discharge in the past 12 months?	26 (1.8)	1,381 (98.2)	1,407² (100)
Have you had a genital/ulcer sore in the past 12 months?	32 (2.2)	1,407 (97.8)	1,439³ (100)
Have you ever had STI symptoms?	91 (6.4)	1,339 (93.6)	1,430⁴ (100)

Freq = frequency. ¹ Missing values (N = 17), ² Missing values (N = 37), ³ Missing values (N = 5), ⁴ Missing values (N = 14).

Table 27: Is it possible to have an STI without there being any symptoms? - three-wheel drivers

	Frequency	Per cent (%)
Yes	494	34.4
No	560	39.0
Don't know	381	26.6
Total	1,435¹	100

¹ Missing values (N = 9)

4.9 Alcohol and non-medically prescribed drug use

Table 28 shows that most of the three-wheel drivers had consumed alcohol, although about a third of them either did not drink or did not drink in the previous four weeks (Table 29).

Table 28: Have you ever had drinks containing alcohol? - three-wheel drivers

	Frequency	Per cent (%)
Yes	1,237	86.0
No	202	14.0
Total	1,439¹	100

¹ Missing values (N = 5)

Table 29: In the past four weeks, how often have you had drinks containing alcohol? - three-wheel drivers

	Frequency	Per cent (%)
I never drink alcohol	213	14.9
Never in the last 4 weeks	300	21.0
Less than once a week	487	34.0
At least once a week	296	20.7
Every day	135	9.4
Total	1,431¹	100

¹ Missing values (N = 13)

Over half the drivers currently smoked tobacco and only a quarter had never smoked (Table 30).

Table 30: Have you ever smoked tobacco? - three-wheel drivers

	Frequency	Per cent (%)
No, never	352	24.5
Yes, currently	840	58.5
Yes, but stopped	244	17.0
Total	1,436¹	100

¹ Missing values (N = 8)

All participants were shown a list of the most commonly used non-medically prescribed drugs in Sri Lanka, and were asked to indicate which of these drugs they had ever tried. Non-medically prescribed drug use was very low overall, with cannabis the most used drug ever, having been tried by a third of the drivers (Table 31). While heroin had been used by 3.7% of the drivers (Table 31), only four drivers had injected drugs, none in the previous 12 months (Table 33).

Table 31: Which of the following drugs have you ever tried? - three-wheel drivers

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Cannabis	493 (34.7)	929 (65.3)	0 (0.0)	1,422¹ (100)
Cocaine	7 (0.5)	1,396 (98.4)	16 (1.1)	1,419² (100)
Ecstasy	2 (0.1)	1,367 (96.3)	50 (3.5)	1,420³ (100)
Amphetamines	4 (0.3)	1,347 (95.3)	63 (4.5)	1,414⁴ (100)
Opium	31 (2.2)	1,369 (96.4)	20 (1.4)	1,420⁵ (100)
Hashish	25 (1.8)	1,368 (96.3)	27 (1.9)	1,420⁵ (100)
Pethidine	2 (0.1)	1,350 (95.6)	60 (4.2)	1,412⁶ (100)
Codeine	5 (0.4)	1,341 (95.1)	64 (4.5)	1,410⁷ (100)
Heroin	52 (3.7)	1,350 (95.4)	13 (0.9)	1,415⁸ (100)
Methaqualone	3 (0.2)	1,341 (95.1)	66 (4.7)	1,410⁹ (100)
Methadone	9 (0.6)	1,336 (94.6)	67 (4.7)	1,412⁶ (100)
Benzodiazepines	2 (0.1)	1,334 (94.6)	74 (5.2)	1,410⁷ (100)

Freq = frequency. Responses reported in this table are not mutually exclusive. ¹ Missing values (N = 22), ² Missing values (N = 25), ³ Missing values (N = 24), ⁴ Missing values (N = 30), ⁵ Missing values (N = 24), ⁶ Missing values (N = 32), ⁷ Missing values (N = 34), ⁸ Missing values (N = 29), ⁹ Missing values (N = 34),

Table 32: In the previous 12 months, have you taken any drugs? - three-wheel drivers

	Frequency	Per cent (%)
Yes	262	18.4
No	1,164	81.6
Total	1,426¹	100

¹ Missing values (N = 18)

Table 33: Drug Injecting - three-wheel drivers

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever injected drugs?	4 (0.3)	1,423 (99.7)	1,427¹ (100)
Have you injected drugs in the previous 12 months?	0 (0.0)	1,427 (0.0)	1,427¹ (100)

Freq = frequency. ¹Missing values (N = 17),

4.10 Sexual practice and condom use

Table 34: Sexual Intercourse - three-wheel drivers

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had sexual intercourse?	1,366 (94.8)	75 (5.2)	1,441¹ (100)
Have you had sexual intercourse in the previous 12 months?	1,266 (88.7)	161 (11.3)	1,427² (100)
Have you had sexual intercourse with a woman in the previous 12 months?	1,208 (83.7)	236 (16.3)	1,444 (100)

Freq = frequency. ¹ Missing values (N = 3). ² Missing values (N = 17).

Table 35: Sexual intercourse in the previous 12 months with regular, non-regular and commercial female partners - three-wheel drivers

	Yes Freq (%)	No Freq (%)	Total (%)
Sexual intercourse with a regular female partner in the previous 12 months	1,177 (86.9)	178 (13.1)	1,355¹ (100)
Sexual intercourse with a non-regular female partner in the previous 12 months	325 (24.4)	1,006 (75.6)	1,331² (100.0)
Sexual intercourse with a commercial female partner in the previous 12 months	161 (12.2)	1,158 (87.8)	1,319³ (100)

Freq = frequency. The denominator includes only those who had ever had sexual intercourse with a woman. ¹ Missing values (N=3). ² Missing values (N=27). ³ Missing values (N=39).

Most three-wheel drivers had had sexual intercourse and 83.7% had had sexual intercourse with a woman in the previous 12 months (Table 34). Almost 90% of the drivers had had sex with a regular partner, while less than a quarter had had sex with a casual partner and 12.2% with a sex worker in the previous 12 months (Table 35).

Table 36 indicates that the level of condom use for vaginal sex was low with casual and, particularly, with regular partners, but reasonably high with sex workers, with about two-thirds of drivers using a condom every time in the previous 12 months and three-quarters using a condom with a sex worker on the most recent occasion (see Table 37).

Table 36: Condom use for vaginal intercourse in the previous 12 months with regular, non-regular and commercial female partners - three-wheel drivers

	Regular partners Freq (%)	Non-regular partners Freq (%)	Commercial partners Freq (%)
Every time	28 (2.4)	100 (31.2)	103 (64.8)
Almost every time	10 (0.9)	19 (5.9)	12 (7.5)
Sometimes	199 (16.9)	67 (20.9)	31 (19.5)
Never	938 (79.8)	135 (42.1)	13 (8.2)
Total	1,175² (100)	321³ (100)	159⁴ (100)

Freq = frequency. ¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a partner of that type in the previous 12 months. ² Missing values (N = 2). ³ Missing values (N = 4). ⁴ Missing values (N = 2).

Table 37: Condom use for vaginal intercourse on the last occasion with regular, non-regular and commercial female partners - three-wheel drivers

	Regular partners Freq (%)	Non-regular partners Freq (%)	Commercial partners Freq (%)
Yes, used a condom	67 (5.7)	117 (36.0)	122 (77.7)
No condom was used	1,110 (94.3)	208 (64.0)	36 (22.8)
Total	1,177 (100)	325 (100)	158² (100)

The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a partner of that type in the previous 12 months. ² Missing values (N = 3).

A surprisingly high number of three-wheel drivers had ever had sex with another man (14.8%), with just under half of those having had anal intercourse with a male partner (Table 38). However, few men (less than 1%) had had anal intercourse with a man in the 12 months prior to the BSS. Condom use for anal intercourse with male partners in the previous 12 months was relatively low. Of the 10 participants who responded to this question, six (60.0%) reported never using a condom, 3 (30.0%) indicated that they had sometimes used one, and only 1 (10.0%) used a condom on every occasion.

Table 38: Male sexual partners - three-wheel drivers

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had any male sexual partners? ¹	214 (14.8)	1,228 (85.2)	1,442² (100)
Have you ever had anal intercourse with a male?	98 (6.8)	1,344 (93.2)	1,442² (100.0)
Have you had anal intercourse with a male in the previous 12 months?	11 (0.8)	1,431 (99.2)	1,442 (100)

Freq = frequency. ¹ A male sexual partner was defined broadly to include any male partners with whom the participant had engaged in any type of sex. ² Missing values (N = 2).

Table 39 shows that those who had commercial partners tended to have more of those partners compared with those who had non-regular or regular partners.

Table 39: Mean number of female partners with whom participants had sexual intercourse in the previous 12 months - three-wheel drivers

	Full sample M (SD)	Reduced sample ¹ M (SD)
Mean number of regular female partners	0.8 (0.4) (N=1,441) ²	1.0 (0.1) (N=1,184)
Mean number of non-regular female partners	0.5 (1.3) (N=1,417) ³	2.1 (1.9) (N=326)
Mean number of commercial female partners	0.5 (2.6) (N=1,405) ⁴	3.5 (4.1) (N=160)

M=mean. SD=standard deviation. N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹ Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ² Missing values (N = 3). ³ Missing values (N = 27). ⁴ Missing values (N = 39).

4.10.1 Geographical location by condom use on the last occasion

As a way of gauging whether geographical location had any bearing on sexual risk practices, data were analysed for condom use for vaginal intercourse with non-regular and commercial partners on the last occasion. Condom use was quite unlikely with non-regular partners across each of the four district locations (Table 40). The use of condoms was more likely with commercial partners, though the numbers were too few to make any comparisons across the four districts (Table 41).

Table 40: Condom use for vaginal intercourse on the last occasion with non-regular female partners - three-wheel drivers

	Colombo Freq (%)	Kandy Freq (%)	Anuradhapura Freq (%)	Matale Freq (%)
Yes, used a condom	117 (9.1)	1 (2.4)	3 (5.9)	1 (2.2)
No condom was used	1167 (90.9)	41 (97.6)	48 (94.1)	44 (97.8)
Total	1,284 (100)	42 (100)	51 (100)	45 (100)

¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a non-regular partner in the previous 12 months.

Table 41: Condom use for vaginal intercourse on the last occasion with commercial female partners - three-wheel drivers

	Colombo Freq (%)	Kandy Freq (%)	Anuradhapura Freq (%)	Matale Freq (%)
Yes, used a condom	121 (76.6)	0 (100.0)	1 (100.0)	1 (50.0)
No condom was used	37 (23.4)	0 (0.0)	0 (0.0)	1 (50.0)
Total	158 (100)	0 (100)	1 (100)	2 (100)

Please note that some of the percentages have been calculated on very small numbers and as such should not be considered reliable. ¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a commercial partner in the previous 12 months.

5 Results: drug users

Little is known about non-medically prescribed drug use in Sri Lanka. Sri Lanka has a large non-medically prescribed drug-using population of whom it is believed only between one and two per cent inject drugs. In Sri Lanka the majority of heroin users inhale or snort heroin. The only case of HIV transmission in Sri Lanka attributed to injecting drugs was reported in 2004. However, there has been a rapid transition to injecting in other parts of the region and this group may be at risk of HIV through needle sharing. Drug users also often experience difficulty accessing information and services for both prevention and treatment (World Health Organization, 2005).

One Sri-Lanka-based study found a strong association between non-medically prescribed drug use and the prevalence of STDs among women sex workers and men and women prisoners (see Gunaratne, 1994). Moreover, in a study of current drug users aged 15 to 49 and living in Colombo, Tissera (2005) reported that among the males³ who had had sex with a non-regular partner in the previous month, 50% had 'always' used a condom with commercial partners while 22.8% had 'always' used a condom with 'occasional' partners.

5.1 Sample size

Based on 90% power and a 95% significance level, the required sample size to detect a 10 percentage point increase in the primary indicator is 825. Doubling this figure, to take into account those who are likely to have had a non-regular partner in the previous 12 months, results in a sample size of 1650 drug users, which is well beyond the scope of the study in Round 1. Power was instead calculated for a sample size of 400, which was the agreed sample size at the Inception Workshop. With a sample of 400, 80% power and a 95% significance level, it is possible to detect a 13% percentage point increase or more in the primary indicator. The sample size was doubled, however, to take into account that as few as 50% of the participants may have had a non-regular partner in the previous 12 months. As such, the target sample size was 800.

³ There were far fewer females than males in the sample and only one female participant reported sex with an 'occasional' partner.

5.2 Sampling

Due to the hidden nature of non-medically prescribed drug use it was not possible to locate specific places in which there were sufficient numbers of drug users to recruit for the first survey roll-out. Instead, the mapping activities focused on identifying areas where there were known populations of drug users. Mapping also involved meeting a diverse range of key informants who, during the first survey roll-out, provided the starting point for accessing drug user networks using a respondent-driven sampling approach.

Table 42: Target and actual sample sizes - drug users

Districts/Areas	Target sample size	Actual sample size
Colombo	450	441
Colombo city (Borella, Maradhana, Pettah)	150	
Dehiwala (Dehiwala beach, Mt Lavinia, Badowita)	150	
Maharagama (Maharagama, Boralessgamuwa)	150	
Galle	350	338
Galle (Galle & Unawatuna)	200	
Habaraduwa	50	
Hikkaduwa (Hikkaduwa & Narigama)	100	
Total	800	779

Table 42 shows that the target sample size of 800 was almost reached using the RDS method of sampling. The RDS method worked by interviewing six 'seed' participants (i.e. key informant participants who were reasonably prominent and widely known in the drug-user community in particular areas) spread across the study locations. Following the interview, seeds were each provided with four referral and four payment coupons. Every subsequent new recruit was also given four referral and four payment coupons to recruit new people into the study. Reimbursement for participation was 100 LKR for each participant and 50 LKR for every additional person they recruited who matched the eligibility criteria, up to a maximum of four people. It should be noted that in Colombo, where recruitment occurred first, 200 LKR was paid to each participant for completing the interview. It quickly became apparent that this amount was unnecessarily high as drug-user recruitment in Colombo was completed within days due to the

haste at which drug users sought to be included in the survey. Thus, for RDS recruitment of drug users outside of Colombo, 100 LKR was paid to each participant for completing the interview. This amount, plus the 50 LKR for each recruit up to a maximum of four people, was sufficient for the RDS method to work well in this group.

5.3 Demographic profile

In total, the desired sample size was almost reached, of whom 750 (96.3%) were men and 29 (3.7%) women. Drug users were not primarily young men; the mean age of the sample was 35.9 years and ages ranged from 17 to 71. Table 43 indicates that the majority of drug users had completed some secondary schooling, with only a quarter having only had primary education. Their education level was the lowest of all groups surveyed.

Table 43: Level of education - drug users

	Frequency	Per cent (%)
Completed pre-school	13	1.7
Completed primary	193	25.7
Completed Years 6 to 10	391	52.0
Completed O-level	140	18.6
Completed A-level	15	2.0
Completed diploma	0	0.0
Completed degree	0	0.0
Completed higher degree	0	0.0
Total	752¹	100

¹ Missing values ($N = 27$)

Table 44 shows that the vast majority of drug users were Sinhalese (86.7%); less than 10% were Tamil.

Table 44: Ethnicity - drug users

	Frequency	Per cent (%)
Sinhalese	675	86.7
Sri Lanka Tamil	55	7.1
Indian Tamil	3	0.4
Moor	42	5.4
Burgher	2	0.3
Malay	1	0.1
Total	778¹	100

¹ Missing values ($N = 1$)

Given the high mean age of drug users, a high proportion (39.6%) were single (Table 45). This may have been due to the chaotic lifestyle of some drug users.

Table 45: Marital status - drug users

	Frequency	Per cent (%)
Single (never married)	308	39.6
Living together but not married	17	2.2
Married	365	46.9
Divorced/Separated	74	9.5
Widowed	14	1.8
Total	779¹	100

¹ Missing values ($N = 1$)

The median income of drug users was between LKR10,001 and 20,000, similar to that of the average male income in Sri Lanka⁴, but slightly higher than that of three-wheel drivers, with more than twice as many drug users as drivers earning more than LKR20,000 (Table 46).

Table 46: Monthly income - drug users

	Frequency	Per cent (%)
< 5000 LKR	19	2.5
5000 to 10,000 LKR	163	21.2
10,001 to 20,000 LKR	329	42.9
20,001 to 30,000 LKR	185	24.1
> 30,000 LKR	71	9.3
Total	767¹	100

¹ Missing values ($N = 12$)

5.4 Knowledge about HIV and AIDS and its transmission

5.4.1 Awareness of HIV

Awareness of HIV was high (Table 47) with most drug users having heard about HIV from television (67.5%), health services (35.9%) and friends and family (35.4%) (Table 48).

Table 47: Have you ever heard of HIV or the disease called AIDS? - drug users

	Frequency	Per cent (%)
Yes	773	99.2
No	6	0.8
Total	779	100

⁴ (SLR17,000 per month (Uditha Liyanage 2003. *Profiling the Sri Lankan Consumer*, Department of Census and Statistics, Ministry of the Interior, Sri Lanka).

Table 48: How did you find out about HIV and AIDS? - drug users

	Yes Freq (%)	No Freq (%)	Total (%)
School	58 (7.5)	714 (92.5)	772 (100)
Health services	277 (35.9)	495 (64.1)	772 (100)
Workplace	71 (9.2)	700 (90.8)	771 (100)
Friends/Family	273 (35.4)	499 (64.6)	772 (100)
Television	521 (67.5)	251 (32.5)	772 (100)
Newspaper/ Magazine	234 (30.4)	537 (69.6)	771 (100)
Posters/Billboards	55 (7.1)	716 (92.9)	771 (100)
Pamphlets/Leaflets	46 (6.0)	726 (94.0)	772 (100)
Radio	222 (28.8)	550 (71.2)	772 (100)
NGOs	54 (7.0)	717 (93.0)	771 (100)

Freq = frequency. ¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Missing values varied per response.

5.4.2 Closeness to the epidemic

A third of drug users surveyed knew of someone who had HIV or who had died of AIDS (Table 49), but few (4.4%) had a relative or friend in that category (Table 50).

Table 49: Do you know anyone infected with HIV or who has died of AIDS? - drug users

	Frequency	Per cent (%)
Yes	243	31.4
No	531	68.6
Total	774¹	100

¹ Missing values (N = 5)

Table 50: Do you have a close relative or friend infected with HIV or who has died of AIDS? - drug users

	Frequency	Per cent (%)
Yes, a close relative	7	0.9
Yes, a close friend	27	3.5
No	743	95.6
Total	777¹	100

¹ Missing values (N = 13)

5.4.3 Knowledge about HIV transmission

Table 51 shows that drug users' knowledge about HIV was not accurate in a number of areas. While almost all drug users understood that HIV was sexually transmitted, only a third (36.8%) correctly identified that a person could not get HIV from a mosquito bite, a quarter (24.1%) felt that using a condom each time they had sex would not protect them from HIV and nearly half felt that a healthy looking person could not have HIV.

Table 51: Knowledge about HIV transmission and living with HIV - drug users

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	734 (95.1)	15 (1.9)	23 (3.0)	772 (100)
Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	486 (63.5)	184 (24.1)	95 (12.4)	765 (100)
Can a person get the HIV virus from mosquito bites?	338 (43.9)	283 (36.8)	149 (19.4)	770 (100)
Can a woman who has HIV pass on the disease to her unborn child?	665 (86.5)	26 (3.4)	78 (10.1)	769 (100)
Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	410 (53.2)	296 (38.4)	65 (8.4)	771 (100)
Can a person get HIV from a transfusion of blood/blood products?	739 (95.6)	5 (0.6)	29 (3.8)	773 (100)
Do you think that a person infected with HIV can be healthy looking?	229 (29.7)	377 (49.0)	164 (21.3)	770 (100)

Freq = frequency. DK = don't know. ¹The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Missing values varied per question.

5.5 Attitudes towards others with HIV and AIDS

Drug users' attitudes to those with HIV were extremely stigmatising (Table 52). Two-thirds would not be willing to work with an HIV-positive person, 70.5% would not live in the same house with an HIV-positive person and over half did not feel that an HIV-positive student should be allowed

to go to school. However a majority responded positively to the question about caring for a sick relative with HIV.

Table 52: Attitudes towards others with HIV and AIDS - drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Would you be willing to work with someone you knew had HIV?	271 (35.4)	495 (64.6)	766 (100)
Would you agree to live in the same house as someone with HIV?	226 (29.5)	539 (70.5)	765 (100)
If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	501 (65.7)	261 (34.3)	762 (100)
If a student has HIV, but is not sick, should he or she be allowed to continue attending school?	363 (48.6)	384 (51.4)	747 (100)

Freq = frequency. ¹The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Missing values varied per question.

5.6 HIV treatments

Few drug users (18.6%) understood that there were new treatments for those with HIV (Table 53).

Table 53: Awareness of HIV treatments - drug users

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV and AIDS?	143 (18.6)	451 (58.6)	176 (22.9)	770 (100)
In Sri Lanka, can people get treatments for HIV and AIDS other than western drugs?	45 (5.9)	501 (65.2)	222 (28.9)	768 (100)

Freq = frequency. ¹ This analysis includes only those who had ever heard of HIV and AIDS. Missing values varied across the questions.

5.7 HIV testing

Fewer than 10% of drug users had been tested for HIV and, of those who had been tested, 60.5% had been tested voluntarily (Table 54). Table 55 indicates that 87.8% had been tested at a government hospital / STI clinic. Only 30% had had an HIV test in the previous 12 months, with

nearly half having had their test more than four years prior to the survey (Table 56).

Table 54: HIV testing - drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had an HIV test?	47 (9.0)	730 (94.0)	777¹ (100)
	Voluntary Freq (%)	Required Freq (%)	Total (%)
Did you voluntarily have the HIV test or were you required to have it?	26 (60.5)	17 (39.5)	43² (100)

Freq = frequency. ¹ Missing values (N = 2). ² Missing values (N = 4). ²The denominator includes only those who had ever had an HIV test.

Table 55: Where did you get the HIV test? - drug users

	Frequency	Per cent (%)
Government hospital / Special STI clinic	36	87.8
Private clinic	5	12.2
Private hospital	0	0.0
Total	41¹	100

¹ Missing values (N = 6). The denominator includes only those who had ever had an HIV test.

Table 56: When did you have your most recent HIV test? - drug users

	Frequency	Per cent (%)
Within the past 6 months	5	12.5
Between 6 and 12 months ago	7	17.5
Between 1 and 2 years ago	10	25.0
Between 2 and 4 years ago	5	12.5
More than 4 years ago	13	32.5
Total	40¹	100

¹ Missing values (N = 7). ¹The denominator includes only those who had ever had an HIV test.

5.8 Sexually transmitted infections (STIs)

Most drug users knew about STIs, although only 10% had ever experienced symptoms and even fewer in the previous 12 months (Table 57). Only a quarter (25.4%) understood that STIs could be asymptomatic (Table 58).

Table 57: Awareness and experience of STIs - drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever heard of diseases that can be transmitted sexually?	688 (89.5)	81 (10.5)	769 (100)
Have you had a genital discharge in the past 12 months?	20 (2.6)	758 (97.4)	778 (100)
Have you had a genital/ulcer sore in the past 12 months?	21 (2.7)	757 (97.3)	778 (100)
Have you ever had STI symptoms?	81 (10.4)	697 (89.6)	778 (100)

Freq = frequency. Missing values varied across the questions.

Table 58: Is it possible to have an STI without there being any symptoms? - drug users

	Frequency	Per cent (%)
Yes	193	25.4
No	322	42.3
Don't know	246	32.3
Total	761¹	100

¹ Missing values (N = 18)

5.9 Alcohol and non-medically prescribed drug use

The vast majority of drug users had drunk alcohol (Table 59), and their drinking was heavier than that of three-wheel drivers. Over a quarter (27.4%) drank every day, while a further 23.9% drank at least once a week (Table 60). Most drug users smoked tobacco (Table 61).

Table 59: Have you ever had drinks containing alcohol? - drug users

	Frequency	Per cent (%)
Yes	723	92.8
No	56	7.2
Total	779	100

Table 60: In the past four weeks, how often have you had drinks containing alcohol? - drug users

	Frequency	Per cent (%)
I never drink alcohol	65	8.4
Never in the last 4 weeks	143	18.5
Less than once a week	170	21.9
At least once a week	185	23.9
Every day	212	27.4
Total	775¹	100

¹ Missing values (N = 4)

Table 61: Have you ever smoked tobacco? - drug users

	Frequency	Per cent (%)
No, never	8	1.0
Yes, currently	754	97.1
Yes, but stopped	15	1.9
Total	777¹	100

¹ Missing values (N = 2)

Drug users had tried a wide range of drugs (Table 62). The most frequently used drug was heroin, which 94.7% of drug users had tried. This was followed by cannabis (85.1%), opium (27.6%) and hashish (25.9%). Ninety-five per cent of drug users had used drugs in the year prior to the survey (Table 63).

Table 62: Which of the following drugs have you ever tried? - drug users

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Cannabis	662 (85.1)	116 (14.9)	0 (0.0)	778 (100)
Cocaine	52 (6.7)	723 (93.3)	0 (0.0)	775 (100)
Ecstasy	9 (1.2)	766 (98.8)	0 (0.0)	775 (100)
Amphetamines	7 (0.9)	765 (99.1)	0 (0.0)	772 (100)
Opium	213 (27.6)	560 (72.4)	0 (0.0)	773 (100)
Hashish	201 (25.9)	574 (74.1)	0 (0.0)	775 (100)
Pethidine	64 (8.3)	711 (91.7)	0 (0.0)	775 (100)
Codeine	11 (1.4)	763 (98.6)	0 (0.0)	774 (100)
Heroin	736 (94.7)	41 (5.3)	0 (0.0)	777 (100)
Methaqualone	17 (2.2)	756 (97.8)	0 (0.0)	773 (100)
Methadone	101 (13.0)	674 (87.0)	0 (0.0)	775 (100)
Benzodiazepines	5 (0.6)	768 (99.4)	0 (0.0)	773 (100)

Freq = frequency. Missing values varied per question. Responses reported in this table are mutually exclusive.

Table 63: In the previous 12 months, have you taken any drugs? - drug users

	Frequency	Per cent (%)
Yes	745	96.5
No	27	3.5
Total	772¹	100

¹ Missing values (N = 7)

Table 64 indicates that 14% of drug users had ever injected, with 4.4% having injected in the previous 12 months. Additional analyses were conducted to determine whether the 34 injectors were based in the same geographical area (Table 65). The results show that injectors were recruited to the study from many different locations, indicating the unlikelihood that there are large closely-grouped communities of injectors. Instead, there would appear to be smaller pockets of injectors in different locations, which may pose challenges for the delivery of education and other health promotion interventions.

Table 64: Drug injecting - drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever injected drugs?	109 (14.0)	667 (86.0)	776¹ (100)
Have you injected drugs in the previous 12 months?	34 (4.4)	743 (95.6)	777² (100)

Freq = frequency. ¹ Missing values (N = 3). ² Missing values (N = 2).

Table 65: Place of recruitment of those who reported drug injecting in the previous 12 months - drug users

Geographical area	Frequency (%)
Badovita	2 (5.9)
Boralesgamuwa	8 (23.6)
Borella	1 (2.9)
Dehiwela	5 (14.7)
Galle	6 (17.6)
Hikkaduwa	1 (2.9)
Maharagama	4 (11.8)
Maradana	5 (14.7)
Pettah	2 (5.9)
Total	34 (100)

Table 66: Needle sharing on the last occasion of injecting drugs - drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Did you use a needle or syringe that had previously been used by someone else?	44 (42.3)	60 (57.7)	104¹ (100)
Did you give a needle or syringe you used to someone else?	53 (51.0)	51 (49.0)	104¹ (100)

Freq = frequency. ¹ Missing values (N = 5).

Sharing needles appears to be a common practice among those who had ever injected drugs (see Table 66). A little over 40% of injectors had used a needle or syringe that had previously been used by someone else on the most recent occasion that

they injected. An even higher proportion (over 50%) had given the needle or syringe they used to someone else.

Over a quarter of the sample had received treatment for their drug use, while only 2.1% were currently under treatment (see Table 67).

Table 67: Treatment for drug use - drug users

	Frequency	Per cent (%)
Have never received treatment for drug use	537	69.3
Currently under treatment	16	2.1
Was in treatment but not now	222	28.6
Total	775¹	100

¹ Missing values (N = 4)

5.10 Sexual practice and condom use

5.10.1 Male drug user participants (N=750)

Most of the male drug user participants had had sex, and 68.2% had had sexual intercourse in the previous 12 months, mostly with a woman (Table 68).

Table 68: Sexual intercourse - male drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had sexual intercourse?	685 (91.5)	64 (8.5)	749¹ (100)
Have you had sexual intercourse in the previous 12 months?	511 (68.2)	238 (31.8)	749² (100)
Have you had sexual intercourse with a woman in the previous 12 months?	508 (67.7)	242 (32.3)	750 (100)

Freq = frequency. ¹ Missing values (N = 1). ² Missing values (N = 1).

Half of the drug users had regular partners with whom they had had sex in the 12 months prior to the survey (Table 69). Twenty-seven per cent had had casual partners, while 15.6% had had sex with a sex worker in that period. Table 70 shows that regular condom use is almost non-existent with regular partners (91% never used condoms). With casual partners, over half never used condoms but, with sex workers, 47.4% used condoms every time in the previous 12 months and only 19.3% never used them.

Table 69: Sexual intercourse in the previous 12 months with regular, non-regular and commercial female partners - male drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Sexual intercourse with a regular partner of the opposite sex in the previous 12 months	373 (49.7)	377 (50.3)	750 (100)
Sexual intercourse with a non-regular partner of the opposite sex in the previous 12 months	205 (27.3)	545 (72.7)	750 (100)
Sexual intercourse with a commercial partner of the opposite sex in the previous 12 months	117 (15.6)	633 (84.4)	750 (100)

Table 70: Condom use for vaginal intercourse in the previous 12 months with regular, non-regular and commercial female partners - male drug users

	Regular partners Freq (%)	Non-regular partners Freq (%)	Commercial partners Freq (%)
Every time	4 (1.1)	38 (18.8)	54 (47.4)
Almost every time	3 (0.8)	12 (5.9)	10 (8.8)
Sometimes	25 (6.7)	48 (23.8)	28 (24.5)
Never	339 (91.4)	104 (51.5)	22 (19.3)
Total	371¹ (100)	202² (100)	114² (100)

The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months. ¹ Missing values (N = 2); ² Missing values (N = 3).

Table 71: Condom use for vaginal intercourse on the last occasion with regular, non-regular and commercial female partners - male drug users

	Regular partners Freq (%)	Non-regular partners Freq (%)	Commercial partners Freq (%)
Yes, used a condom	7 (1.9)	60 (29.7)	68 (64.2)
No condom was used	362 (98.1)	142 (70.3)	38 (35.8)
Total	369¹ (100)	202² (100)	106³ (100)

The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the past 12 months. ¹ Missing values (N = 4); ² Missing values (N = 3); ³ Missing values (N = 11).

This pattern of condom use is borne out in the data obtained for male drug users' condom use on the most recent occasion; 98.1% did not use a condom with their regular partner, 70.3% did not

use a condom with their casual partner, while only 35.8% did not use a condom with their commercial partner (Table 71).

The mean number of female partners was calculated for male drug users only as the female drug users were too few in number to warrant such analysis. In sheer numbers, there were more non-regular and commercial partners in the previous 12 months (Table 72). When the analysis included as a denominator only those had a partner of the particular type, there were more commercial partners as a proportion of male drug users who had such partners compared with the other two types of partners.

Table 72: Mean number of female partners with whom participants had sexual intercourse in the previous 12 months - male drug users

	Full sample M (SD)	Reduced sample ¹ M (SD)
Mean number of regular female partners	0.5 (0.5) (N=726) ²	1.0 (0.1) (N=373)
Mean number of non-regular female partners	0.7 (2.1) (N=725) ³	2.6 (3.3) (N=205)
Mean number of commercial female partners	0.7 (3.1) (N=722) ⁴	4.4 (6.7) (N=117)

M=mean. SD=standard deviation. N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹ Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ² Missing values (N = 24). ³ Missing values (N = 110). ⁴ Missing values (N = 59).

The data in Table 73 indicate a relatively high level of male-to-male sex; 23.1% of drug users had had sex with a man during their lifetime, with most of those men having had anal sex with a male partner. In the 12 months prior to the survey, 5.8% of drug users had had anal intercourse.

Table 73: Male sexual partners - male drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had any male sexual partners? ¹	173 (23.1)	577 (76.9)	750 (100)
Have you ever had anal intercourse with a male?	153 (20.4)	596 (79.6)	749² (100)
Have you had anal intercourse with a male in the previous 12 months?	43 (5.8)	704 (94.2)	747³ (100)

Freq = frequency. ¹ A male sexual partner was defined broadly to include any male partners with whom the participant had engaged in any type of sex. ² Missing values (N = 1). ³ Missing values (N = 3).

Condom use for anal intercourse with male partners was extremely low. Over 90% of those who had had anal intercourse with a male partner in the previous 12 months had never used a condom (see Table 74). Condom use on the most recent occasion corroborates the low rate of condom use in male-to-male sex (see Table 75).

Table 74: Condom use for anal intercourse with male partners in the previous 12 months - male drug users

	Frequency	Per cent (%)
Every time	0	0.0
Almost every time	1	2.4
Sometimes	3	7.1
Never	38	90.5
Total	42¹	100

The denominator includes those people who reported having had anal intercourse with a male in the previous 12 months. ¹ Missing values (N = 1)

Table 75: Condom use for anal intercourse with male partners on the last occasion - male drug users

	Frequency	Per cent (%)
Yes	1	2.4
No	41	97.6
Total	42¹	100

¹ Missing values (N = 1)

The mean number of male partners among male drug users was calculated for the two types of partners asked about for male to male anal intercourse: regular and non-regular partners. Absolute numbers of both types of partners were very low across the sample (Table 76). Among the small number of men who had sex with non-regular male partners, they averaged 4 partners in the previous 12 months.

Table 76: Mean number of male partners with whom participants had anal intercourse in the previous 12 months - male drug users

	Full sample M (SD)	Reduced sample ¹ M (SD)
Mean number of regular female partners	0.0 (0.3) (N=746) ²	1.8 (1.6) (N=16)
Mean number of non-regular female partners	0.2 (1.1) (N=746) ²	4.1 (3.3) (N=34)

M=mean. SD=standard deviation. N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹ Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ² Missing values (N = 4).

5.10.2 Female drug user participants (N=29)

All of the female drug users had ever had sexual intercourse, with most (89.7%) having had sex in the previous 12 months (Table 77). Table 78 shows that, in the previous 12 months, over half of the female drug users had a regular male partner, while 37.9% had had a casual partner and 15.6% had been paid for sex during that period.

Table 77: Sexual intercourse - female drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had sexual intercourse?	29 (100)	0 (0.0)	29 (100)
Have you had sexual intercourse in the previous 12 months?	26 (89.7)	3 (10.3)	29 (100)
Have you had sexual intercourse with a man in the previous 12 months?	26 (89.7)	3 (10.3)	29 (100)

Freq = frequency.

Table 78: Sexual intercourse in the previous 12 months with regular, non-regular and paying male partners - female drug users

	Yes Freq (%)	No Freq (%)	Total (%)
Sexual intercourse with a regular male partner in the previous 12 months	17 (58.6)	12 (41.4)	29 (100)
Sexual intercourse with a non-regular male partner in the previous 12 months	11 (37.9)	18 (62.1)	29 (100)
Sexual intercourse with a paying male partner in the previous 12 months	10 (15.6)	19 (84.4)	29 (100)

Table 79: Condom use for vaginal intercourse in the previous 12 months with regular, non-regular and paying male partners - female drug users

	Regular partners Freq (%)	Non-regular partners Freq (%)	Paying male partners Freq (%)
Every time	0 (0.0)	1 (9.1)	5 (50.0)
Almost every time	2 (11.8)	2 (18.2)	3 (30.0)
Sometimes	4 (23.5)	1 (9.1)	2 (20.0)
Never	11 (64.7)	7 (63.6)	0 (0.0)
Total	17 (100)	11 (100)	10 (100)

Please note: The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months.

The pattern of condom use in the 12 months prior to the survey was different among female drug users than male drug users depending on the type of sexual partner they had. Table 79 indicates that two-thirds never used condoms for sex with either regular or casual partners, while no female drug user never used a condom with a paying partner.

Table 80: Condom use for vaginal intercourse on the last occasion with regular, non-regular and paying male partners - female drug users

	Regular partners Freq (%)	Non-regular partners Freq (%)	Paying male partners Freq (%)
Yes, used a condom	1 (6.3)	2 (18.2)	9 (90.0)
No condom was used	15 (93.7)	9 (81.8)	1 (10.0)
Total	16¹ (100)	11 (100)	10 (100)

Please note: The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months. ¹ Missing values (N = 1).

On the most recent occasion of sexual intercourse (Table 80), 93.7% of female drug users did not use a condom with their regular partner, 81.8% did not use a condom with their casual partners and 10% did not use a condom with their paying clients.

5.10.3 Geographical location by condom use on the last occasion

This section includes data for men only as there were too few women to conduct meaningful analyses for this group by geographical location.

Although no statistical tests were performed on these analyses, it would appear that male drug users recruited in the Galle district were slightly more likely to use condoms on the last occasion for vaginal intercourse with non-regular female partners (Table 81). Men recruited from both locations however show low rates of condom use with these partners. Somewhat higher rates of condom use were reported for vaginal intercourse with commercial partners across men recruited in both locations. As for non-regular partners, male drug users in Galle appear to be more likely to use condoms with these partners compared with their counterparts in the Colombo district (Table 82).

Table 81: Condom use for vaginal intercourse on the last occasion with non-regular female partners -male drug users

	Colombo Freq (%)	Galle Freq (%)
Yes, used a condom	30 (22.1)	31 (44.9)
No condom was used	106 (77.9)	38 (55.1)
Total	136 (100)	69 (100)

¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a non-regular partner in the previous 12 months.

Table 82: Condom use for vaginal intercourse on the last occasion with commercial female partners - male drug users

	Colombo Freq (%)	Galle Freq (%)
Yes, used a condom	44 (56.4)	24 (85.7)
No condom was used	34 (43.6)	4 (14.3)
Total	78 (100)	28 (100)

¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a commercial partner in the previous 12 months.

6 Results: factory workers from the Free Trade Zone

Sri Lanka was the first South Asian country to change from import substitution, which included protective tariffs, and import controls to an export-orientated economy. Over 100,000 workers are directly employed inside the Free Trade Zones (FTZ) of Sri Lanka. While there does not appear to be any data to support the claim that internal migrant workers are more at risk of HIV transmission than factory-worker residents, it is nonetheless likely to be the case. This is because young men and women who are away from parental supervision may be more prone to experiment sexually and to be influenced by peers. Removal from traditional social structures, such as family and friends, has been shown to foster unsafe sexual practices, such as having multiple sexual partners and engaging in casual and commercial sex, as well as to increase vulnerability of women and girls to sexual abuse (World Bank, 2005).

There would appear to be no study that has reliably measured rates of condom use among factory workers in the Free Trade Zones. However, a large-scale study targeting youth in Sri Lanka, commissioned by UNICEF, found that among 2,245 out-of-school adolescents who were sexually active, only 39% had ever used a condom (UNICEF, 2004). Among 9,860 adolescents who were still at school and were sexually active, 16.7% had used a condom during their most recent sexual act.

6.1 Sample size

Based on 90% power and a 95% significance level, the required sample size to detect a 10 percentage point increase in the primary indicator is 636. After adjusting the sample size to account for the estimated proportion (50%) who would have had a non-regular partner in the previous 12 months, the revised sample size was 1,272 (636×2). Since it was thought that there would be important differences between men and women on key study indicators, a minimum number of 1,272 male and 1,272 female factory workers were set as the target sample sizes across the three Free Trade Zones.

6.2 Sampling

Factory workers were sampled from households in GS divisions immediately surrounding the factories in three Free Trade Zones: Katunayake, Koggala and Seethawaka. This approach to sampling was based on the informed view that recruitment and data collection in factories would be unfeasible. Given this, mapping activities focused on recording: 1) the households that contained factory workers, and 2) the number of factory workers in those households. The latter information enabled probability proportional to size (PPS) sampling to be used. Thus, a two-stage cluster sample design was employed; clusters of households occupied by factory workers were sampled with PPS at the first stage. At the second stage an equal number of participants were sampled from each cluster. This resulted in a self-weighted sample, thus avoiding the need to weight the data at the analysis stage. The target sample of factory workers in each of three areas around the Free Trade Zones was calculated as a relative proportion of the population across the three areas (see Table 72). Within each of the three areas around the Free Trade Zones, the target sample size for each of the GS divisions was calculated as a relative proportion of the population within that area. On this basis, the area around the Katunayake Free Trade Zone had by far the largest number of factory workers living in households and therefore contributed the largest sample size. The GS division with the most participants sampled was Aweriwatta, one of the areas around this zone.

Since not every cluster (household) contained both men and women, it was necessary to separate the list of clusters at each location into those households that contained men and those that contained women. Neither list was entirely exclusive as there were some households containing both men and women that were included in both lists. Men and women were thus sampled from separate lists even though in some cases both men and women were sampled from the same household. Table 83 shows the actual sample sizes achieved in the study. The total sample sizes were exceeded for both men and women.

Table 83: Sampling targets and actual sample size - factory workers from Free Trade Zones

Area	Mapped no. of houses in which factory workers lived	Target sample size		Actual sample size	
		Men	Women	Men	Women
Katunayake					
Katunayake north	169	110	110	210	197
Katunayake south	260	420	420	427	456
Aweriwatta	285	512	512	451	615
Total	714	1,042	1042	1,088	1,268
Koggala					
Katukurunda	66	13	13	32	23
Habaraduwa Add I	128	52	52	32	56
Habaraduwa Add II	146	50	50	35	60
Total	340	115	115	99	139
Seethawaka					
Kudugama	50	25	25	24	34
Ukwatta	24	20	20	26	34
Seetagama	44	30	30	31	42
Agra Place	46	20	20	21	18
Veralupitya	53	20	20	36	28
Total	217	115	115	138	156
TOTAL		1,272¹	1,272¹	1,325	1,563

¹ The target sample size was 2544 (1272 men and 1272 women). Taking into account an estimated 20% level of absentees and refusals, the sampling frame was calculated on approaching 3184 factory workers to arrive at a sample size of about 2544.

6.3 Demographic profile

This group was over-sampled. In total, 2,888 factory workers took part in the survey, of which 1325 (45.9%) were male and 1563 (54.1%) were female. The mean age of men was 24.7 years and of women 23.7 years, with the age range from 17 to 58 years. This was by far the youngest group in the survey and the results may be indicative of young people in general.

Table 84: Level of education - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Completed pre-school	3	0.2	3	0.2
Completed primary	8	0.6	14	0.9
Completed Years 6 to 10	270	20.4	234	15.0
Completed O-level	760	57.4	886	56.7
Completed A-level	280	21.1	422	27.0
Completed diploma	0	0.0	0	0.0
Completed degree	3	0.2	3	0.2
Completed higher degree	0	0.0	0	0.0
Total	1,324¹	100	1,562¹	100

¹ Missing values (N = 1)

Table 84 indicates that the majority of factory workers (both men and women) had completed at least O-level schooling. However, women were slightly better educated than men, with fewer (15% vs. 20.4%) having completed only Year 10 and more having completed A-level schooling (27% vs. 21.1%). Six factory workers (three men and three women) had completed university degrees, which may be explained either by the fact that graduates were experiencing employment difficulties or that these people were employed in managerial positions in the factories.

Table 85: Ethnicity - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Sinhalese	1,301	98.2	1,548	99.1
Sri Lanka Tamil	12	0.9	11	0.7
Indian Tamil	6	0.5	1	0.1
Moor	4	0.3	2	0.1
Burgher	1	0.1	0	0.0
Malay	0	0.0	0	0.0
Total	1,324¹	100	1,562¹	100

¹ Missing values (N = 1)

Table 85 indicates that almost all factory workers were of Sinhala ethnicity. In this respect they differed from three-wheel drivers and drug users, who were more ethnically diverse.

The majority of factory workers were single, with more women (70.4%) than men (63.5%) in this category (Table 86). Very few factory workers cohabited, were separated or divorced, or widowed.

Table 86: Marital status - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Single (never married)	841	63.4	1,100	70.4
Living together but not married	9	0.7	11	0.7
Married	470	35.5	430	27.5
Divorced/Separated	5	0.4	15	1.0
Widowed	0	0.0	7	0.4
Total	1,325	100	1,563	100

Table 87 indicates that the median monthly income for factory workers was between LKR5000 and LKR10,000, with men earning considerably more than women. This rate of pay was the lowest of any group in the study.

Table 87: Monthly income - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
< 5000 LKR	6	0.5	22	1.4
5000 to 10,000 LKR	801	60.5	1,365	87.5
10,001 to 20,000 LKR	489	37.0	171	11.0
20,001 to 30,000 LKR	21	1.6	2	0.1
> 30000 LKR	5	0.4	0	0.0
Total	1,322¹	100	1,560¹	100

¹ Missing values (N = 3)

6.4 Knowledge about HIV and AIDS and its transmission

6.4.1 Awareness of HIV

Almost all factory workers (both men and women) had heard about HIV and AIDS (Table 88).

Table 88: Have you ever heard of HIV or the disease called AIDS? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Yes	1,315	99.3	1,539	98.8
No	9	0.7	19	1.2
Total	1,324¹	100	1,558²	100

¹ Missing values (N = 1). ² Missing values (N = 5).

Table 89: How did you find out about HIV and AIDS? - male factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
School	489 (37.3)	821 (62.7)	1,310¹ (100)
Health services	304 (23.2)	1,005 (76.8)	1,309² (100)
Workplace	316 (24.1)	997 (75.9)	1,313³ (100)
Friends/Family	271 (35.4)	1,040 (64.6)	1,311⁴ (100)
Television	958 (73.0)	355 (27.0)	1,313³ (100)
Newspaper/Magazine	572 (43.6)	740 (56.4)	1,312⁵ (100)
Posters/Billboards	85 (6.5)	1,226 (93.5)	1,311⁴ (100)
Pamphlets/Leaflets	134 (10.2)	1,177 (89.8)	1,311⁴ (100)
Radio	380 (28.9)	933 (71.1)	1,313³ (100)
NGOs	32 (2.4)	1,276 (97.6)	1,308⁶ (100)

Freq = frequency. The denominator for calculating the proportions in this table include only those who had ever heard of HIV and AIDS. ¹ Missing values (N = 5). ² Missing values (N = 6). ³ Missing values (N = 2). ⁴ Missing values (N = 4). ⁵ Missing values (N = 3) ⁶ Missing values (N = 7).

Tables 89 and 90 indicate that both male and female workers had heard about HIV from a number of different sources. The three most cited sources were television (73% of men and 62.2% of women), newspapers (43.6% of men, 43.8% women) and school (37.3% of men, 36.9% of women). That school rates highly as a source of information about HIV among this group more than any other is probably because of their younger age in an era where HIV is discussed.

Table 90: How did you find out about HIV and AIDS? - female factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
School	565 (36.9)	965 (63.1)	1,530¹ (100)
Health services	368 (24.0)	1,165 (76.0)	1,533² (100)
Workplace	452 (29.5)	1,082 (70.5)	1,534³ (100)
Friends/Family	179 (11.7)	1,350 (88.3)	1,529⁴ (100)
Television	953 (62.2)	579 (37.8)	1,532² (100)
Newspaper/Magazine	672 (43.8)	861 (56.2)	1,533² (100)
Posters/Billboards	76 (5.0)	1,455 (95.0)	1,531⁵ (100)
Pamphlets/Leaflets	112 (7.3)	1,419 (92.7)	1,531⁵ (100)
Radio	272 (17.8)	1,259 (82.2)	1,531⁵ (100)
NGOs	43 (2.8)	1,487 (97.2)	1,530¹ (100)

Freq = frequency. The denominator for calculating the proportions in this table include only those who had ever heard of HIV and AIDS. Missing values varied per response. ¹ Missing values (N = 9). ² Missing values (N = 6). ³ Missing values (N = 5). ⁴ Missing values (N = 10). ⁵ Missing values (N = 8).

6.4.2 Closeness to the epidemic

Table 91: Do you know anyone infected with HIV or who has died of AIDS? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Yes	333	25.3	270	17.3
No	985	74.7	1,289	82.7
Total	1,318¹	100	1,559²	100

¹ Missing values (N = 7). ² Missing values (N = 4).

Fewer factory workers (particularly women) than other groups had known anyone with HIV or AIDS, and practically none had friends or family with HIV or who had died of AIDS (Tables 91 and 92).

Table 92: Do you have a close relative or friend infected with HIV or who has died of AIDS? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Yes, a close relative	3	0.2	5	0.3
Yes, a close friend	9	0.7	5	0.3
No	1,309	99.1	1,544	99.4
Total	1,321¹	100	1,554²	100

¹ Missing values (N = 4). ² Missing values (N = 9).

6.4.3 Knowledge about HIV transmission

Table 93: Knowledge about HIV transmission and living with HIV - male factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total Freq (%)
Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	1,264 (96.2)	24 (1.8)	26 (2.0)	1,314¹ (100)
Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	827 (63.0)	324 (24.7)	162 (12.3)	1,313² (100)
Can a person get the HIV virus from mosquito bites?	548 (41.7)	624 (47.5)	142 (10.8)	1,314¹ (100)
Can a woman who has HIV pass on the disease to her unborn child?	1,096 (83.7)	116 (8.9)	97 (7.4)	1,309³ (100)
Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	643 (49.0)	599 (45.7)	70 (5.3)	1,312⁴ (100)
Can a person get HIV from a transfusion of blood/blood products?	1,269 (96.6)	25 (1.9)	20 (1.5)	1,314¹ (100)
Do you think that a person infected with HIV can be healthy looking?	468 (35.8)	599 (45.9)	239 (18.3)	1,306⁵ (100)

Freq = frequency. The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. DK = don't know. ¹ Missing values (N = 1). ² Missing values (N = 2). ³ Missing values (N = 6). ⁴ Missing values (N = 3). ⁵ Missing values (N = 9).

While this group had higher levels of education than any group other than MSM, their knowledge about HIV was surprisingly poor. Tables 93 and 94 indicate that while almost all knew that HIV was transmitted sexually, only 63% of men and 41.3% of women knew that condoms protected them from HIV; 41.7% of men and 45.3% of women thought they could get HIV from mosquito bites and less than half of male and female workers agreed that a person with HIV could look healthy.

Table 94: Knowledge about HIV transmission and living with HIV - female factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total Freq (%)
Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	1,480 (96.4)	21 (1.4)	34 (2.2)	1,535¹ (100)
Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	633 (41.3)	379 (24.8)	520 (33.9)	1,532² (100)
Can a person get the HIV virus from mosquito bites?	695 (45.3)	650 (42.3)	190 (12.4)	1,535¹ (100)
Can a woman who has HIV pass on the disease to her unborn child?	1,271 (82.8)	128 (8.3)	136 (8.9)	1,535¹ (100)
Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	831 (54.3)	511 (33.4)	189 (12.3)	1,531³ (100)
Can a person get HIV from a transfusion of blood/blood products?	1,467 (95.6)	19 (1.2)	48 (3.1)	1,534⁴ (100)
Do you think that a person infected with HIV can be healthy looking?	549 (35.9)	696 (45.5)	285 (18.6)	1,530⁵ (100)

Freq = frequency. The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. DK = don't know. ¹ Missing values (N = 4). ² Missing values (N = 7). ³ Missing values (N = 8). ⁴ Missing values (N = 5). ⁵ Missing values (N = 9).

6.5 Attitudes towards others with HIV and AIDS

As well, attitudes of both male and female factory workers were extremely stigmatising toward those with HIV, with women having more negative attitudes than men. The data in Tables 95 and 96 indicate that 61.3% of men and 74.5% of women would not be willing to work with someone who had HIV, 69.2% of men and 82% of women would not be willing to live in the same house as someone who had HIV and 43.3% of men and

49% of women did not think a student with HIV should be allowed to continue to attend school. However a majority of men and women responded positively to the question about caring for a sick relative with HIV.

Table 95: Attitudes towards others with HIV and AIDS - male factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Would you be willing to work with someone you knew had HIV?	504 (38.7)	798 (61.3)	1,302² (100)
Would you agree to live in the same house as someone with HIV?	402 (30.8)	902 (69.2)	1,304³ (100)
If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	978 (75.2)	322 (24.8)	1,300⁴ (100)
If a student has HIV, but is not sick, should he or she be allowed to continue attending school?	733 (56.7)	559 (43.3)	1,292⁵ (100)

¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Please note: Freq = frequency. ² Missing values (N = 13). ³ Missing values (N = 11). ⁴ Missing values (N = 15). ⁵ Missing values (N = 23).

Table 96: Attitudes towards others with HIV and AIDS - female factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Would you be willing to work with someone you knew had HIV?	387 (25.5)	1,128 (74.5)	1,515² (100)
Would you agree to live in the same house as someone with HIV?	302 (19.8)	1,222 (80.2)	1,524³ (100)
If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	1,036 (69.1)	464 (30.9)	1,500⁴ (100)
If a student has HIV, but is not sick, should he or she be allowed to continue attending school?	758 (51.0)	727 (49.0)	1,485⁵ (100)

¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Please note: Freq = frequency. ² Missing values (N = 24). ³ Missing values (N = 15). ⁴ Missing values (N = 39). ⁵ Missing values (N = 54).

6.6 HIV treatments

Awareness of HIV treatments was low in both male and female factory workers (Tables 97 and 98). Sixty-two per cent of men and 49.8% of women did not know about new drugs to treat HIV.

Table 97: Awareness of HIV treatments - male factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV and AIDS?	361 (27.5)	814 (62.1)	137 (10.4)	1,312² (100)
In Sri Lanka, can people get treatments for HIV and AIDS other than western drugs?	100 (7.6)	927 (70.9)	281 (21.5)	1,308³ (100)

¹ The denominator in these analyses includes only those who had ever heard of HIV and AIDS. Freq = frequency. ² Missing values (N = 3). ³ Missing values (N = 7).

Table 98: Awareness of HIV treatments - female factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV and AIDS?	503 (32.8)	763 (49.8)	266 (17.4)	1,532² (100)
In Sri Lanka, can people get treatments for HIV and AIDS other than western drugs?	200 (13.1)	886 (57.9)	445 (29.0)	1,531³ (100)

¹ The denominator in these analyses includes only those who had ever heard of HIV and AIDS. Freq = frequency. ² Missing values (N = 7). ³ Missing values (N = 8).

6.7 HIV testing

Tables 99 and 100 indicate that almost no factory workers had been tested for HIV (1.4% of men and 0.7% of women).

Table 99: HIV testing - male factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had an HIV test?	18 (1.4)	1,304 (98.6)	1,322¹ (100)
	Voluntary	Required	Total
	Freq (%)	Freq (%)	(%)
Did you voluntarily have the HIV test or were you required to have it?	13 (72.2)	5 (27.8)	18² (100)

Freq = frequency. ¹ Missing values (N = 3). ² The denominator includes only those who had ever had an HIV test.

Table 100: HIV testing - female factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had an HIV test?	11 (0.7)	1,548 (99.3)	1,559¹ (100)
	Voluntary Freq (%)	Required Freq (%)	Total (%)
Did you voluntarily have the HIV test or were you required to have it?	2 (40.0)	3 (60.0)	5² (100)

Freq = frequency. ¹ Missing values (N = 4). ² The denominator includes only those who had ever had an HIV test. ² Missing values (N = 6).

Of the 21 factory workers who had been tested for HIV, most had gone to a government hospital/STI clinic (Table 101). Testing had occurred over a long period of time (Table 102).

Table 101: Where did you get the HIV test? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Government hospital/STI clinic	17	94.5	1	33.3
Private clinic	1	5.6	1	33.3
Private hospital	0	0.0	1	33.3
Total	18	100	3¹	100

The denominator includes only those who had ever had an HIV test. ¹ Missing values (N = 8).

Table 102: When did you have your most recent HIV test? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Within the past 6 months	4	22.2	1	25.0
Between 6 and 12 months ago	1	5.6	0	0.0
Between 1 and 2 years ago	6	33.3	1	25.0
Between 2 and 4 years ago	4	22.2	1	25.0
More than 4 years ago	3	16.7	1	25.0
Total	18	100	4¹	100

The denominator includes only those who had ever had an HIV test. ¹ Missing values (N = 7).

6.8 Sexually transmitted infections (STIs)

Most factory workers had heard of STIs (Tables 103 and 104). However, almost none had had symptoms of STIs in the previous 12 months, and only 5% of men and 2.6% of women had ever had STI symptoms. Table 105 indicates that awareness about asymptomatic STIs is very low (33.7% of men and 22% of women).

Table 103: Awareness and experience of STIs - male factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever heard of diseases that can be transmitted sexually?	1,216 (91.8)	108 (8.2)	1,324¹ (100)
Have you had a genital discharge in the past 12 months?	14 (1.1)	1,308 (98.9)	1,322² (100.0)
Have you had a genital/ulcer sore in the past 12 months?	24 (1.8)	1,300 (98.2)	1,324¹ (100)
Have you ever had STI symptoms?	66 (5.0)	1,256 (95.0)	1,322² (100)

Freq = frequency. ¹ Missing values (N = 1). ² Missing values (N = 3).

Table 104: Awareness and experience of STIs - female factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever heard of diseases that can be transmitted sexually?	1,409 (90.4)	149 (9.6)	1,558¹ (100)
Have you had a genital discharge in the past 12 months?	15 (1.0)	1,546 (99.0)	1,561² (100)
Have you had a genital/ulcer sore in the past 12 months?	12 (0.8)	1,548 (99.2)	1,560³ (100)
Have you ever had STI symptoms?	40 (2.6)	1,519 (97.4)	1,559⁴ (100)

Freq = frequency. ¹ Missing values (N = 5). ² Missing values (N = 2). ³ Missing values (N = 3). ⁴ Missing values (N = 4).

Table 105: Is it possible to have an STI without there being any symptoms? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Yes	444	33.7	341	22.0
No	650	49.3	874	56.4
Don't know	225	17.0	334	21.6
Total	1,319¹	100	1,549²	100

¹ Missing values (N = 6). ² Missing values (N = 14).

6.9 Alcohol and non-medically prescribed drug use

While most men had drunk alcohol (74.3%), only 16.4% of female factory workers had done so (Table 106). Table 107 shows that, of those who did drink, few used alcohol more than once a week (17.2% of men and 0.6% of women).

Table 106: Have you ever had drinks containing alcohol? - factory workers from Free Trade Zones

	Male		Female	
	Frequ ency	Per cent (%)	Frequ ency	Per cent (%)
Yes	984	74.3	255	16.4
No	340	25.7	1,303	83.6
Total	1,324¹	100	1,558²	100

¹ Missing values (N = 1). ² Missing values (N = 5).

Table 107: In the past four weeks, how often have you had drinks containing alcohol? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
I never drink alcohol	358	27.3	1,321	85.8
Never in the past four weeks	575	43.8	204	13.3
Less than once a week	153	11.7	4	0.3
At least once a week	219	16.7	9	0.6
Every day	6	0.5	0	0.0
Total	1,311	100	1,538	100

¹ Missing values (N = 14). ² Missing values (N = 25).

There were similar disparities between male and female factory workers' smoking habits (Table 108). Ninety-eight per cent of women but only 46.5% of men had never smoked.

Table 108: Have you ever smoked tobacco? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
No, never	620	46.9	1,537	98.4
Yes, currently	512	38.7	12	0.8
Yes, but stopped	191	14.4	13	0.8
Total	1,323¹	100	1,562²	100

¹ Missing values (N = 2). ² Missing values (N = 1).

Table 109: Which of the following drugs have you ever tried? - male factory workers from Free Trade Zones

	Yes	No	DK	Total
	Freq (%)	Freq (%)	Freq (%)	(%)
Cannabis	183 (13.8)	1,135 (85.9)	4 (0.3)	1,322¹ (100)
Cocaine	1 (0.1)	1,317 (99.6)	4 (0.3)	1,322¹ (100)
Ecstasy	1 (0.1)	1,317 (99.6)	4 (0.3)	1,322¹ (100)
Amphetamines	0 (0.0)	1,318 (99.7)	4 (0.3)	1,322¹ (100)
Opium	1 (0.1)	1,317 (99.6)	4 (0.3)	1,322¹ (100)
Hashish	0 (0.0)	1,318 (99.7)	4 (0.3)	1,322¹ (100)
Pethidine	0 (0.0)	1,318 (99.7)	4 (0.3)	1,322¹ (100)
Codeine	0 (0.0)	1,318 (99.7)	4 (0.3)	1,322¹ (100)
Heroin	2 (0.2)	1,316 (99.5)	4 (0.3)	1,322¹ (100)
Methaqualone	0 (0.0)	1,318 (99.7)	4 (0.3)	1,322¹ (100)
Methadone	0 (0.0)	1,317 (99.7)	4 (0.3)	1,321² (100)
Benzodiazepines	0 (0.0)	1,317 (99.7)	4 (0.3)	1,321² (100)

Freq = frequency. DK = Don't know. Responses reported in this table are mutually exclusive. ¹ Missing values (N = 3). ² Missing values (N = 4).

Table 110: Which of the following drugs have you ever tried? - female factory workers from Free Trade Zones

	Yes	No	DK	Total
	Freq (%)	Freq (%)	Freq (%)	(%)
Cannabis	0 (0.0)	1,545 (99.0)	15 (1.0)	1,560¹ (100)
Cocaine	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Ecstasy	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Amphetamines	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Opium	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Hashish	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Pethidine	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Codeine	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Heroin	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Methaqualone	0 (0.0)	1,546 (99.0)	15 (1.0)	1,561² (100)
Methadone	0 (0.0)	1,545 (99.0)	15 (1.0)	1,560¹ (100)
Benzodiazepines	0 (0.0)	1,547 (99.0)	15 (1.0)	1,562³ (100)

Freq = frequency. DK = Don't know. Responses reported in this table are mutually exclusive. ¹ Missing values (N = 3). ² Missing values (N = 2). ³ Missing values (N = 1).

Unsurprisingly, non-medically prescribed drug use was extremely low in both male and female factory workers (Tables 109 and 110). The only drug that more than two male participants had used was cannabis (13.8%) and only one woman had used any drug (opium).

No women and only 5.5% of men had used drugs in the previous 12 months (Table 111), and no factory worker had ever injected drugs (Tables 112 and 113).

Table 111: In the previous 12 months, have you taken any drugs? - factory workers from Free Trade Zones

	Male		Female	
	Freq	Per cent (%)	Freq	Per cent (%)
Yes	73	5.5	0	0.0
No	1,244	94.5	1,562	100.0
Total	1,317¹	100	1,562²	100

¹ Missing values (N = 8). ² Missing values (N = 1).

Table 112: Drug injecting - male factory workers from Free Trade Zones

	Yes	No	Total
	Freq (%)	Freq (%)	Freq (%)
Have you ever injected drugs?	0 (0.0)	1,319 (100)	1,319¹ (100)
Have you injected drugs in the previous 12 months?	0 (0.0)	1,319 (100)	1,319¹ (100)

Freq = frequency. ¹ Missing values (N = 6).

Table 113: Drug injecting - female factory workers from Free Trade Zones

	Yes	No	Total
	Freq (%)	Freq (%)	Freq (%)
Have you ever injected drugs?	0 (0.0)	1,562 (100)	1,562¹ (100)
Have you injected drugs in the previous 12 months?	0 (0.0)	1,562 (100)	1,562¹ (100)

Freq = frequency. ¹ Missing values (N = 1).

6.10 Sexual practice and condom use

6.10.1 Male participants

The level of sexual activity among male factory workers was relatively low; just over half (58.3%) of the men had ever had sex. Of those who had had sex, most had engaged in sexual intercourse in the 12 months prior to the survey and all had had sex with a woman (Table 114).

Table 114: Sexual intercourse - male factory workers from Free Trade Zones

	Yes	No	Total
	Freq (%)	Freq (%)	Freq (%)
Have you ever had sexual intercourse?	770 (58.3)	550 (41.7)	1,320¹ (100)
Have you had sexual intercourse in the previous 12 months?	652 (49.3)	671 (50.7)	1,323² (100)
Have you had sexual intercourse with a woman in the previous 12 months?	652 (49.2)	673 (50.8)	1,325 (100)

Freq = frequency. ¹ Missing values (N = 5). ² Missing values (N = 2).

Table 115: Sexual intercourse in the previous 12 months with regular, non-regular and commercial female partners - male factory workers from Free Trade Zones

	Yes	No	Total
	Freq (%)	Freq (%)	Freq (%)
Sexual intercourse with a regular partner of the opposite sex in the previous 12 months	612 (46.2)	713 (53.8)	1,325 (100)
Sexual intercourse with a non-regular partner of the opposite sex in the previous 12 months	101 (7.6)	1,224 (92.4)	1,325 (100)
Sexual intercourse with a commercial partner of the opposite sex in the previous 12 months	14 (1.1)	1,311 (98.9)	1,325 (100)

The data displayed in Table 115 indicates that, in the previous 12 months, 46.2% of male factory workers had had sexual intercourse with a regular female partner, 7.6% had had sex with a casual partner and 1.1% had engaged in sex with a sex worker. Rates of condom use with regular partners in the previous 12 months was extremely low (4.4% always used a condom) and rose with casual partners (28.3% always used a condom) and commercial sex partners (81.8% always used a condom) (Table 116). On the most recent occasion of having sex, 7.8% of male factory workers used a condom with their regular partner, 33% with a casual partner and 80% with a commercial partner (Table 117).

Table 116: Condom use for vaginal intercourse in the previous 12 months with regular, non-regular and commercial female partners - male factory workers from Free Trade Zones

	Regular partners Freq (%)	Non-regular partners Freq (%)	Commercial partners Freq (%)
Every time	27 (4.4)	28 (28.3)	9 (81.8)
Almost every time	8 (1.3)	6 (6.1)	0 (0.0)
Sometimes	126 (20.7)	18 (18.2)	0 (0.0)
Never	449 (73.6)	47 (47.4)	2 (18.2)
Total	610¹ (100)	99¹ (100)	11² (100)

Freq = frequency. The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months. ¹Missing values (N = 2); ²Missing values (N = 3).

Table 117: Condom use for vaginal intercourse on the last occasion with regular, non-regular and commercial female partners - male factory workers from Free Trade Zones

	Regular partners Freq (%)	Non-regular partners Freq (%)	Commercial partners Freq (%)
Yes, used a condom	47 (7.8)	32 (33.3)	8 (80.0)
No condom was used	555 (92.2)	64 (66.7)	2 (20.0)
Total	602¹ (100)	96² (100)	10³ (100)

Freq = frequency. The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the past 12 months. ¹Missing values (N = 10); ²Missing values (N = 5); ³Missing values (N = 4).

The data show that 5.5% of male factory workers had ever had sex with a man. However, only 1.2% had had anal sex and less than 1% had had anal sex in the previous 12-month period (Table 118). Due to the small numbers of men who had had male sexual partners, condom use for male-to-male sex is not reported.

Table 118: Male sexual partners - male factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had any male sexual partners? ¹	72 (5.5)	1,236 (94.5)	1,308² (100)
Have you ever had anal intercourse with a male?	16 (1.2)	1,308 (98.8)	1,324³ (100)
Have you had anal intercourse with a male in the previous 12 months?	2 (0.2)	1,322 (99.8)	1,324³ (100)

Freq = frequency. ¹A male sexual partner was defined broadly to include any male partners with whom the participant had engaged in any type of sex. ²Missing values (N = 17). ³Missing values (N = 1).

Among male factory workers, the mean numbers of all three types of partners was low given that most of the men were unmarried (Table 119). The mean number of partners among only those who had such partners was also low.

Table 119: Mean number of female partners with whom participants had sexual intercourse in the previous 12 months - male factory workers from Free Trade Zones

	Full sample M (SD)	Reduced sample ¹ M (SD)
Mean number of regular female partners	0.5 (0.5) (N=1,284) ²	1.0 (0.1) (N=612)
Mean number of non-regular female partners	0.13 (0.5) (N=1,270) ³	1.6 (1.1) (N=101)
Mean number of commercial female partners	0.2 (0.2) (N=1,266) ⁴	1.9 (1.0) (N=14)

M=mean. SD=standard deviation. N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ²Missing values (N = 41). ³Missing values (N = 55). ⁴Missing values (N = 59).

6.10.2 Female participants

Table 120: Sexual intercourse - female factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had sexual intercourse?	482 (31.2)	1,062 (68.8)	1,544¹ (100)
Have you had sexual intercourse in the previous 12 months?	456 (29.2)	1,107 (70.8)	1,563 (100)
Have you had sexual intercourse with a man in the previous 12 months?	454 (29.0)	1,109 (71.0)	1,563 (100)

Freq = frequency. ¹Missing values (N = 19).

Two-thirds of female factory workers surveyed had never had sexual intercourse and only 29.2% had had sexual intercourse in the previous 12 months (Table 120). Table 121 indicates that 28.9% had had sex with a regular partner. Only seven (0.4%) female factory workers had had sex with a casual partner in that period and only one had sold sex.

Table 121: Sexual intercourse in the previous 12 months with regular, non-regular and paying male partners - female factory workers from Free Trade Zones

	Yes Freq (%)	No Freq (%)	Total (%)
Sexual intercourse with a regular male partner in the previous 12 months	451 (28.9)	1,112 (71.1)	1,563 (100)
Sexual intercourse with a non-regular male partner in the previous 12 months	7 (0.4)	1,556 (99.6)	1,563 (100)
Sexual intercourse with a paying male partner in the previous 12 months	1 (0.1)	1,562 (99.9)	1,563 (100)

Table 122: Condom use for vaginal intercourse in the previous 12 months with regular, non-regular and paying male partners - female factory workers from Free Trade Zones

	Regular partners Freq (%)	Non-regular partners Freq (%)	Paying male partners Freq (%)
Every time	9 (2.0)	1	0
Almost every time	3 (0.7)	0	0
Sometimes	72 (16.0)	1	0
Never	366 (81.3)	4	0
Total	450¹ (100)	6¹ (100)	0¹ (100)

Freq = frequency. The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months. ¹ Missing values (N = 1).

The level of condom use for sex in the previous 12 months was low among female factory workers. With regular partners, 81.3% had never used a condom and with casual partners 67% had not (Table 122). Table 123 shows that 4.9% of female factory workers had used a condom at the most recent sexual occasion with a regular partner and 16.7% had used a condom with a casual partner.

Table 123: Condom use for vaginal intercourse on the last occasion with regular, non-regular and paying male partners - female factory workers from Free Trade Zones

	Regular partners Freq (%)	Non-regular partners Freq (%)	Paying male partners Freq (%)
Yes, used a condom	22 (4.9)	1 (16.7)	0
No condom was used	424 (95.1)	5 (83.3)	0
Total	446¹ (100)	6² (100)	0² (100)

Freq = frequency. The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months. ¹ Missing values (N = 5). ² Missing values (N = 1).

Female factory workers had very few sexual partners during the 12 months preceding their interview (see Table 124).

Table 124: Mean number of female partners with whom participants had sexual intercourse in the previous 12 months - male factory workers from Free Trade Zones

	Full sample M (SD)	Reduced sample ¹ M (SD)
Mean number of regular female partners	0.3 (0.5) (N=1,560) ²	1.0 (0.0) (N=451)
Mean number of non-regular female partners	0.01 (0.1) (N=1,552) ³	1.1 (0.4) (N=7)
Mean number of commercial female partners	0.0 (0.0) (N=1,552) ³	1.0 (1.0) (N=1)

M=mean. SD=standard deviation. N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹ Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ² Missing values (N = 3). ³ Missing values (N = 11). ⁴ Missing values (N = 59).

6.10.3 Geographical location by condom use on the last occasion

Analysing condom use by geographical location was only done for male drugs users as female drug users reported too few non-regular sexual partners to warrant such analysis. Condom use was very low for vaginal intercourse with non-regular partners and it varied little by district (Table 125). There was much higher usage of condoms for vaginal intercourse with commercial partners in Katanayake. In the other two locations the percentages are unavailable as there were too few men who had had vaginal intercourse with commercial partners (Table 126).

Table 125: Condom use for vaginal intercourse on the last occasion with non-regular female partners - male factory workers from Free Trade Zones

	Katunayake Freq (%)	Koggala Freq (%)	Seethawaka Freq (%)
Yes, used a condom	117 (9.1)	1 (2.4)	3 (5.9)
No condom was used	1,167 (90.9)	41 (97.6)	48 (94.1)
Total	1,284 (100)	42 (100)	51 (100)

¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a non-regular partner in the previous 12 months.

Table 126: Condom use for vaginal intercourse on the last occasion with commercial female partners - male factory workers from Free Trade Zones

	Katunayake	Koggala	Seethawaka
	Freq (%)	Freq (%)	Freq (%)
Yes, used a condom	121 (76.6)	0 (100.0)	1 (100.0)
No condom was used	37 (23.4)	0 (0.0)	0 (0.0)
Total	158 (100)	0 (100)	1 (100)

Please note that some of the percentages have been calculated on very small numbers and as such should not be considered reliable. ¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a commercial partner in the previous 12 months.

7 Results: beach boys

The term ‘beach boys’ refers to young men who work near or on the beaches, typically tourist beaches, and who offer sexual services in exchange for some form of payment. These young men may also work as tourist guides and may not all identify as ‘beach boys’. Beach boys may also be working in restaurants, hotels, guest houses and boat-related tourism (Buddhakorala, 1996).

Ratnapala (1999) estimates that 7% of tourists come to Sri Lanka for sex, mostly with young men. UNDP estimates there to be 30,000 beach boys in tourist resorts (UNDP, 2006), although they admit that some may have lost their lives during the 2005 tsunami. However, our mapping activities revealed that the ‘beach boy’ sub-population was considerably smaller than indicated by previous studies. It is unclear whether previous studies overestimated the size of this sub-population or whether an event such as the tsunami has resulted in fewer beach boys due to a downturn in tourists to Sri Lanka and to deaths directly related to the tsunami.

In a study of 452 beach boys aged 15 to 49 and working in the Hikkaduwa area, 255 had ever had casual sexual intercourse, among whom 34.9% had used a condom during their most recent act of sexual intercourse with a non-regular partner (Buddhakorala, 1996). Community Development Services (2005) carried out consultations with beach boys that revealed that most engage in unprotected activities and are unaware of sexually transmitted infections. They contend that a low rate of condom use also results from the non-availability of condoms and the unwillingness of partners to use condoms, making beach boys particularly at risk (World Bank, 2002).

7.1 Sample size

Based on 90% power and a 95% significance level, the sample size required to detect a 10 percentage point increase in the primary indicator is 636. Given that the figure of 636 exceeds the sample size of 300 agreed to at the Inception Workshop, power was recalculated for a sample of 300. With a 95% significance level, a sample size of 300 equates to being able to detect a 10 percentage point increase with 80% power. However, the sample size was increased further to account for the fact that not all beach boys would have had sex with a non-regular partner in the previous 12 months.

Keeping the level of adjustment consistent with the other study groups, a 50% proportion was assumed. The adjusted sample size was therefore 600.

7.2 Sampling

Although beach boys are visible in some beach locations, the mapping activities showed that beach boys are also a relatively ‘hidden’ group. Thus, the mapping activities focused on identifying areas where there were known populations of beach boys and identifying key informants who would be the ‘seeds’ to enable a respondent-driven sampling (RDS) approach.

In the same way that RDS was used for sampling drug users, six seed participants (i.e. key informant participants who were known by many in the beach boy communities in particular areas) were interviewed across the study locations. Following the interview, seeds were each provided with four referral and four payment coupons. Each subsequent new recruit was also given four referral and four payment coupons to recruit new people into the study. Reimbursement for participation was 100 LKR for each participant and 50 LKR for every additional person they recruited who matched the eligibility criteria, up to a maximum of four people. This meant that the RDS method worked well.

Table 127 provides a summary of the target sample sizes by location and the actual sample sizes. The sample size fell just short of the target sample size. Location of recruitment also varied slightly the sampling plan. This was necessary as very few beach boys were in Negombo (Gampaha). As such, recruitment included an additional district – Kalutara – so as to come close to achieving the target sample size (Table 127).

Table 127: Target and actual sample sizes - beach boys

Districts	Intended sample size	Actual sample size
Gampaha	200	38
Colombo	100	114
Kalutara	-	119
Galle	300	282
Total	600*	553

* At least 750 participants were approached to participate in order to obtain a sample size of 600, taking into account a 20% level of absentees and refusals.

7.3 Demographic profile

In total, 553 beach boys were recruited in various locations (Table 127). Interestingly, their mean age was 25.7 years, with an age range from 17 to 56, which may lessen fears about large-scale exploitation of very young boys. Almost all the beach boys had completed secondary education, with 61.1% having either O- or A-level qualifications (Table 128).

Table 128: Level of education - beach boys

	Frequency	Per cent (%)
Completed pre-school	0	0.0
Completed primary	17	3.1
Completed Years 6 to 10	197	35.7
Completed O-level	287	52.0
Completed A-level	50	9.0
Completed diploma	0	0.0
Completed degree	1	0.2
Completed higher degree	0	0.0
Total	552¹	100

¹ Missing values ($N = 1$).

Table 129 shows that the vast majority of beach boys were Sinhalese (93.1%).

Table 129: Ethnicity - beach boys

	Frequency	Per cent (%)
Sinhalese	513	93.1
Sri Lanka Tamil	20	3.6
Indian Tamil	0	0.0
Moor	9	1.6
Burgher	8	1.5
Malay	1	0.2
Other	0	0.0
Total	551¹	100

¹ Missing values ($N = 2$).

Nearly three-quarters of the beach boys were single (71.9%); the other quarter were married. Few were divorced/separated, cohabiting or widowed (Table 130).

Table 130: Marital status - beach boys

	Frequency	Per cent (%)
Single (never married)	397	71.9
Living together but not married	5	0.9
Married	144	26.1
Divorced/Separated	5	0.9
Widowed	1	0.2
Total	552¹	100

¹ Missing values ($N = 1$).

The median income earned by beach boys was between LKR10,000 and 20,000, with 13.4%

earning over LKR30,000 (Table 131). This makes beach boys, on average, better paid than factory workers, three-wheel drivers and drug users.

Table 131: Monthly income - beach boys

	Frequency	Per cent (%)
< 5000 LKR	3	0.5
5000 to 10,000 LKR	76	13.9
10,001 to 20,000 LKR	248	45.0
20,001 to 30,000 LKR	150	27.2
> 30,000 LKR	74	13.4
Total	551¹	100

¹ Missing values ($N = 2$).

7.4 Knowledge about HIV and AIDS and its transmission

7.4.1 Awareness of HIV

Table 132: Have you ever heard of HIV or the disease called AIDS? - beach boys

	Frequency	Per cent (%)
Yes	547	99.5
No	3	0.5
Total	550¹	100

¹ Missing values ($N = 3$).

Table 133: How did you find out about HIV and AIDS? - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
School	134 (24.9)	405 (75.1)	539 (100)
Health services	256 (47.1)	287 (52.9)	543 (100)
Workplace	121 (22.2)	423 (77.8)	544 (100)
Friends/Family	196 (36.2)	345 (63.8)	541 (100)
Television	398 (73.2)	146 (26.8)	544 (100)
Newspaper/Magazine	199 (36.8)	342 (63.2)	541 (100)
Posters/Billboards	51 (9.4)	490 (90.6)	541 (100)
Pamphlets/Leaflets	125 (23.1)	416 (76.9)	541 (100)
Radio	123 (22.7)	418 (77.3)	541 (100)
NGOs	73 (13.5)	469 (86.5)	542 (100)

¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Missing values varied per response. Freq = frequency.

Almost all the beach boys had heard about HIV (Table 132). They had found out about it from TV (73.2%), health services (47.1%), newspapers (36.8%) and friends and family (35.8%) (Table 133).

7.4.2 Closeness to the epidemic

Table 134 reveals that 28.4% of beach boys knew someone who had HIV or who had died from AIDS; however, only 3.6% had a close friend or family member with HIV (Table 135).

Table 134: Do you know anyone infected with HIV or who has died of AIDS? - beach boys

	Frequency	Per cent (%)
Yes	156	28.4
No	394	71.6
Total	550¹	100

¹ Missing values (N = 3).

Table 135: Do you have a close relative or friend infected with HIV or who has died of AIDS? - beach boys

	Frequency	Per cent (%)
Yes, a close relative	5	0.9
Yes, a close friend	15	2.7
No	531	96.4
Total	551¹	100

¹ Missing values (N = 2).

7.4.3 Knowledge about HIV transmission

Beach boys had a slightly better understanding of methods of HIV transmission than did other groups in the survey, but, even so, their knowledge was quite poor in some respects. Almost all understood that HIV was transmitted sexually; however, 34% believed that you could get HIV from mosquito bites, 20.3% believed that condoms would not protect you from HIV and 32.7% that a person with HIV could not look healthy (Table 136).

Table 136: Knowledge about HIV transmission and living with HIV - beach boys

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	541 (99.3)	2 (0.4)	2 (0.4)	545 (100)
Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	409 (74.9)	111 (20.3)	26 (4.8)	546 (100)
Can a person get the HIV virus from mosquito bites?	190 (34.7)	299 (54.7)	58 (10.6)	547 (100)
Can a woman who has HIV pass on the disease to her unborn child?	502 (91.9)	18 (3.3)	26 (4.8)	546 (100)
Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	273 (49.9)	245 (44.8)	29 (5.3)	547 (100)
Can a person get HIV from a transfusion of blood/blood products?	524 (95.8)	5 (0.9)	18 (3.3)	547 (100)
Do you think that a person infected with HIV can be healthy looking?	241 (44.2)	178 (32.7)	126 (23.1)	545 (100)

Freq = frequency. DK = don't know. ¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Missing values varied per response.

7.5 Attitudes towards others with HIV and AIDS

Attitudes towards people with HIV were negative. Just over half the beach boys would not be willing to work with someone with HIV, 70.4% would not live in the same house as an HIV-positive person and a third (34.3%) did not believe that a student with HIV should be allowed to continue at school (Table 137). However a majority responded positively to the question about caring for a sick relative with HIV.

Table 137: Attitudes towards others with HIV and AIDS - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
Would you be willing to work with someone you knew had HIV?	255 (47.1)	286 (52.9)	541 (100)
Would you agree to live in the same house as someone with HIV?	161 (29.6)	383 (70.4)	544 (100)
If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	385 (71.3)	155 (28.7)	540 (100)
If a student has HIV, but is not sick, should he or she be allowed to continue attending school?	351 (65.7)	183 (34.3)	534 (100)

Freq = frequency. ¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Missing values varied per response.

7.6 HIV treatments

Awareness of HIV was poor, with 67.3% not knowing about new drugs to treat HIV (Table 138).

Table 138: Awareness of HIV treatments - beach boys

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV and AIDS?	112 (20.5)	368 (67.3)	67 (12.2)	547 (100)
In Sri Lanka, can people get treatments for HIV and AIDS other than western drugs?	44 (8.1)	386 (70.8)	115 (21.1)	545² (100)

¹ This analysis includes only those who had ever heard of HIV and AIDS. ² Missing values (N = 2). Freq = frequency.

7.7 HIV testing

A higher proportion of beach boys than all other groups apart from sex workers had been tested for HIV. This was probably due to increased risk through sexual behaviour (Table 139). Most were tested at STI clinics in government hospitals (56.9% while 38.9) tested at private clinics (Table 140).

Table 139: HIV testing - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had an HIV test?	97 (17.6)	455 (82.4)	552¹ (100)
	Voluntary Freq (%)	Required Freq (%)	Total (%)
Did you voluntarily have the HIV test or were you required to have it?	75 (78.9)	20 (21.1)	95² (100)

Freq = frequency. ¹ Missing values (N = 1). ² The denominator includes only those who had ever had an HIV test. Missing values (N = 2).

Table 140: Where did you get the HIV test? - beach boys

	Frequency	Per cent (%)
Government hospital/Special STI clinic	54	56.9
Private clinic	37	38.9
Private hospital	4	4.2
Total	95¹	100

¹ The denominator includes only those who had ever had an HIV test. Missing values (N = 2).

Of those who had been tested, over half (54.1%) had been tested during the previous year, with only 5.2% having been tested more than four years ago (Table 141).

Table 141: When did you have your most recent HIV test? - beach boys

	Frequency	Per cent (%)
Within the past 6 months	25	26.0
Between 6 and 12 months ago	27	28.1
Between 1 and 2 years ago	22	23.0
Between 2 and 4 years ago	17	17.7
More than 4 years ago	5	5.2
Total	96¹	100

¹ The denominator includes only those who had ever had an HIV test. Missing values (N = 1).

7.8 Sexually transmitted infections (STIs)

Almost all of the beach boys had heard of STIs and, while few had had symptoms in the previous 12 months, 16.4% had at some stage had STI symptoms (Table 142). However, as Table 143 indicates, the level of knowledge about asymptomatic STIs was low.

Table 142: Awareness and experience of STIs - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever heard of diseases that can be transmitted sexually?	499 (92.6)	40 (7.4)	539¹ (100)
Have you had a genital discharge in the past 12 months?	28 (5.1)	525 (94.9)	553 (100)
Have you had a genital/ulcer sore in the past 12 months?	34 (6.1)	519 (93.9)	553 (100)
Have you ever had STI symptoms?	90 (16.4)	459 (83.6)	549² (100)

Freq = frequency. ¹ Missing values (N = 14). ² Missing values (N = 4).

Table 143: Is it possible to have an STI without there being any symptoms? - beach boys

	Frequency	Per cent (%)
Yes	258	46.7
No	213	38.6
Don't know	81	14.7
Total	552¹	100

¹ Missing values (N = 1).

7.9 Alcohol and non-medically prescribed drug use

Most of the beach boys had tried alcohol (Table 144) and 54.4% had had alcohol within the previous week; 14% drank on a daily basis (Table 145).

Table 144: Have you ever had drinks containing alcohol? - beach boys

	Frequency	Per cent (%)
Yes	514	93.3
No	37	6.7
Total	551¹	100

¹ Missing values (N = 3).

Table 145: In the past four weeks how often have you had drinks containing alcohol? - beach boys

	Frequency	Per cent (%)
I never drink alcohol	36	6.5
Never in the last 4 weeks	77	14.0
Less than once a week	117	21.3
At least once a week	222	40.4
Every day	98	17.8
Total	550¹	100

¹ Missing values (N = 3).

Three-quarters of the beach boys smoked tobacco at the time of the survey, with only 14.2% never having smoked (Table 146).

Table 146: Have you ever smoked tobacco? - beach boys

	Frequency	Per cent (%)
No, never	78	14.2
Yes, currently	427	77.9
Yes, but stopped	43	7.9
Total	548¹	100

¹ Missing values (N = 5).

Table 147 shows that the majority of beach boys (63.8%) had tried cannabis. The next most popular drugs were heroin (18%) and hashish (12.2%). Half (48.5%) of all beach boys had taken drugs in the previous year (Table 148).

Table 147: Which of the following drugs have you ever tried? - beach boys

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Cannabis	353 (63.8)	200 (36.2)	0 (0.0)	553 (100)
Cocaine	15 (2.7)	535 (97.3)	0 (0.0)	550¹ (100)
Ecstasy	6 (1.1)	544 (98.9)	0 (0.0)	550¹ (100)
Amphetamines	2 (0.4)	547 (99.6)	0 (0.0)	549² (100)
Opium	40 (7.3)	509 (92.7)	0 (0.0)	549² (100)
Hashish	67 (12.2)	483 (87.8)	0 (0.0)	550¹ (100)
Pethidine	13 (2.4)	537 (97.6)	0 (0.0)	550¹ (100)
Codeine	9 (1.6)	541 (98.4)	0 (0.0)	550¹ (100)
Heroin	99 (18.0)	451 (82.0)	0 (0.0)	550¹ (100)
Methaqualone	6 (1.1)	543 (98.7)	1 (0.2)	550¹ (100)
Methadone	15 (2.7)	535 (97.3)	0 (0.0)	550¹ (100)
Benzodiazepines	2 (0.4)	547 (99.5)	1 (0.2)	550¹ (100)

Freq = frequency. DK = Don't know. Responses reported in this table are mutually exclusive. ¹ Missing values (N = 3). ² Missing values (N = 4).

Table 148: In the previous 12 months, have you taken any drugs? - beach boys

	Frequency	Per cent (%)
Yes	266	48.5
No	283	51.5
Total	549¹	100

¹ Missing values (*N* = 4).

A small number of beach boys had ever injected heroin, with an even smaller proportion having done so in the previous 12 months (Table 149).

Table 149: Drug injecting - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever injected drugs?	13 (2.4)	533 (97.6)	546¹ (100)
Have you injected drugs in the previous 12 months?	9 (1.6)	539 (98.4)	548² (100)

Freq = frequency. ¹ Missing values (*N* = 7). ² Missing values (*N* = 5).

7.10 Sexual practice and condom use

Almost all the beach boys had had sexual intercourse (92.7%), with 85.3% having had sex in the previous 12 months, and most with women (Table 150).

7.10.1 Female sexual partners

Table 150: Sexual intercourse - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had sexual intercourse?	508 (92.7)	40 (7.3)	548¹ (100)
Have you had sexual intercourse in the previous 12 months?	458 (85.3)	79 (14.7)	537² (100)
Have you had sexual intercourse with a woman in the previous 12 months?	436 (80.6)	105 (19.4)	541³ (100)

Freq = frequency. ¹ Missing values (*N* = 5). ² Missing values (*N* = 16). ³ Missing values (*N* = 12).

Table 151 indicates that, in the 12 months prior to the study, more beach boys had had casual female sexual partners (70.7%) than regular partners (53.3%).

Table 151: Sexual intercourse in the previous 12 months with regular and non-regular female partners - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
Sexual intercourse with a regular female partner in the previous 12 months	295 (53.3)	258 (46.7)	553 (100)
Sexual intercourse with a non-regular female partner in the previous 12 months	391 (70.7)	162 (29.3)	553 (100)

Freq = frequency.

Table 152: Condom use for vaginal intercourse in the previous 12 months with regular and non-regular female partners - beach boys

	Regular female partners Freq (%)	Non-regular female partners Freq (%)
Every time	14 (4.8)	184 (47.2)
Almost every time	11 (3.9)	60 (15.4)
Sometimes	50 (17.2)	114 (29.2)
Never	215 (74.1)	32 (8.2)
Total	290¹ (100)	390² (100)

Freq = frequency. The denominator in each of the analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the past 12 months. ¹ Missing values (*N* = 5). ² Missing values (*N* = 1).

Table 153: Condom use for vaginal intercourse on the last occasion with regular and non-regular female partners - beach boys

	Regular female partners Freq (%)	Non-regular female partners Freq (%)
Yes, used a condom	32 (11.3)	275 (71.4)
No condom was used	252 (88.7)	110 (28.6)
Total	284¹ (100)	385² (100)

Freq = frequency. The denominator in each of the analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the past 12 months. ¹ Missing values (*N* = 11). ² Missing values (*N* = 6).

The level of condom use was low in the previous 12 months for sex with regular female partners (74.1% never used a condom), but relatively high with casual partners (Table 152). Only 8.2% had never used a condom with a casual partner.

Condom use on the most recent occasion of sex with a female partner showed a similar pattern (Table 153); 11.3% used a condom with a regular partner, while 71.4% used a condom with casual partners.

Across the sample Beach Boys had sexual intercourse with more non-regular female partners than regular (Table 154). They also had more sexual intercourse with 'foreign' than 'local' female partners.

Table 154: Mean number of female partners with whom participants had sexual intercourse (vaginal or anal) in the previous 12 months - beach boys

	Full sample M (SD)	Reduced sample ¹ M (SD)
Mean number of 'foreign' female partners	3.1 (4.2) (N=550) ²	4.4 (4.4) (N=391)
Mean number of 'local' female partners	1.2 (1.7) (N=550) ²	1.8 (1.8) (N=363)
Mean number of regular female partners	0.7 (0.9) (N=544) ³	1.2 (0.9) (N=295)
Mean number of non-regular female partners	3.6 (5.0) (N=549) ⁴	5.0 (5.3) (N=391)

M=mean. SD=standard deviation. N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ²Missing values (N = 3). ³Missing values (N = 9). ⁴Missing values (N = 13). ²Missing values (N = 4).

7.10.2 Male sexual partners

There were high levels of male-male anal intercourse amongst beach boys. Two-thirds had ever had male sexual partners (Table 155), with 60% (almost all those who had had sex with a man) having had anal intercourse. Forty-five per cent had had anal intercourse with a man in the 12 months prior to the survey.

Table 155: Male sexual partners - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had any male sexual partners? ¹	362 (65.5)	191 (34.5)	553 (100)
Have you ever had anal intercourse with a male?	332 (60.0)	221 (40.0)	553 (100)
Have you had anal intercourse with a male in the previous 12 months?	249 (45.4)	300 (54.6)	549 ² (100)

Freq = frequency. ¹A male sexual partner was defined broadly to include any male partners with whom the participant had engaged in any type of sex. ²Missing values (N = 4).

Table 156 indicates that most of the anal intercourse in the previous 12 months was with non-regular male partners (41%), and most with foreign men (45.5%). Less than a fifth of beach boys had a regular male partner or had had anal sex with a local man.

Table 156: Anal intercourse in the previous 12 months with regular, non-regular, 'foreign' and 'local' male partners - beach boys

	Yes Freq (%)	No Freq (%)	Total (%)
Anal intercourse with a regular male partner in the previous 12 months	102 (18.7)	443 (81.3)	545 ¹ (100)
Anal intercourse with a non-regular male partner in the previous 12 months	226 (41.0)	325 (59.0)	551 ² (100)
Anal intercourse with a 'foreign' male partner in the previous 12 months	245 (44.5)	306 (55.5)	551 ³ (100)
Anal intercourse with a 'local' male partner in the previous 12 months	103 (18.9)	443 (81.1)	546 ⁴ (100)

Freq = frequency. Questions in this table are not mutually exclusive. ¹Missing values (N = 8). ²Missing values (N = 2). ³Missing values (N = 2). ⁴Missing values (N = 7).

The incidence of condom use for anal sex is patchy. Only a fifth (21.6%) of the beach boys had used condoms every time with a regular male partner and less than half (45.9%) had used condoms with a casual partner in the previous 12 months (Table 157). This shows a high level of risk for HIV among this group, given that the majority of beach boys have sex with foreign men who may come from countries where HIV prevalence is high among men who have sex with men.

Table 157: Condom use for anal intercourse in the previous 12 months with regular and non-regular male partners - beach boys

	Regular male partners Freq (%)	Non-regular male partners Freq (%)
Every time	22 (21.6)	100 (45.9)
Almost every time	9 (8.8)	39 (17.9)
Sometimes	39 (38.2)	55 (25.2)
Never	32 (31.4)	24 (11.0)
Total	102 (100)	218¹ (100)

Freq = frequency. The denominator in the analyses in this table are those people who reported having had anal intercourse with a partner of that type in the previous 12 months. ¹Missing values (N = 8).

The data in Table 158 indicate that on the most recent occasion of anal sex, 39.6% of beach boys used condoms with a regular partner and 68.5% used condoms with a casual partner.

Table 158: Condom use for anal intercourse on the last occasion with regular and non-regular male partners - beach boys

	Regular male partners Freq (%)	Non-regular male partners Freq (%)
Yes, used a condom	40 (39.6)	146 (68.5)
No condom was used	61 (60.4)	67 (31.5)
Total	101¹ (100)	213² (100)

Freq = frequency. The denominator in each of the analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months. ¹ Missing values (N = 1). ² Missing values (N = 13).

There was much similarity between the number of male partners with whom participants had anal intercourse and the number of female partners reported earlier (Table 159). Men reported more partners with whom they had receptive than insertive anal intercourse. They also had more 'foreign' compared with 'local' male partners and more non-regular than regular male partners.

Table 159: Mean number of male partners with whom participants had anal intercourse in the previous 12 months - beach boys

	Full sample M (SD)	Reduced sample ¹ M (SD)
Mean number of male partners with whom participants had insertive anal intercourse	1.3 (3.5) (N=550) ²	4.8 (5.2) (N=152)
Mean number of male partners with whom participants had receptive anal intercourse	3.1 (6.0) (N=550) ²	7.1 (7.3) (N=239)
Mean number of 'foreign' male partners	2.0 (3.6) (N=551) ³	4.4 (4.4) (N=245)
Mean number of 'local' male partners	0.6 (1.8) (N=546) ²	3.3 (2.8) (N=103)
Mean number of regular male partners	0.2 (0.6) (N=545) ⁴	1.3 (0.8) (N=102)
Mean number of non-regular male partners	2.2 (4.3) (N=551) ³	5.4 (5.2) (N=226)

M=mean. SD=standard deviation. N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹ Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ² Missing values (N = 3). ³ Missing values (N = 2). ⁴ Missing values (N = 8).

7.10.3 Geographical location by condom use on the last occasion

Condom use was extremely low for vaginal intercourse with regular female partners, particularly in the context of low rates of condom use with other types of partners (Table 160). There does not appear to be any difference by geographical location. Condom use with non-regular female partners was higher than for non-regular partners. Men in Colombo seemed less likely than men in the other three districts to use condoms with non-regular female partners (Table 161).

Table 160: Condom use for vaginal intercourse on the last occasion with a regular female partner - beach boys

	Gampaha Freq (%)	Colombo Freq (%)	Kalutara Freq (%)	Galle Freq (%)
Yes, used a condom	1 (6.7)	3 (7.0)	11 (13.1)	17 (12.0)
No condom was used	14 (93.3)	40 (93.0)	73 (86.9)	125 (88.0)
Total	15 (100)	43 (100)	84 (100)	142 (100)

¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a regular female partner in the previous 12 months.

Table 161: Condom use for vaginal intercourse on the last occasion with a non-regular female partner - beach boys

	Gampaha Freq (%)	Colombo Freq (%)	Kalutara Freq (%)	Galle Freq (%)
Yes, used a condom	13 (68.4)	21 (44.7)	68 (73.1)	173 (76.5)
No condom was used	6 (31.6)	26 (55.3)	25 (26.9)	53 (23.5)
Total	19 (100)	47 (100)	93 (100)	226 (100)

¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a non-regular partner in the previous 12 months.

Condom use for anal intercourse with men is generally at quite low levels given the risk of HIV transmission. Condom use for anal intercourse with regular male partners was around the 40% mark, with there being no difference across the four districts (Table 162). Condom use for anal intercourse with non-regular partners appears to be highest among Beach Boys in Kalutara (Table 163).

Table 162: Condom use for anal intercourse on the last occasion with a regular male partner - beach boys

	Gampaha	Colombo	Kalutara	Galle
	Freq (%)	Freq (%)	Freq (%)	Freq (%)
Yes, used a condom	2 (40.0)	14 (37.8)	15 (45.5)	9 (34.6)
No condom was used	3 (60.0)	23 (62.2)	18 (54.5)	17 (65.4)
Total	5 (100)	37 (100)	33 (100)	26 (100)

¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a regular female partner in the previous 12 months.

Table 163: Condom use for anal intercourse on the last occasion with a non-regular male partner - beach boys

	Gampaha	Colombo	Kalutara	Galle
	Freq (%)	Freq (%)	Freq (%)	Freq (%)
Yes, used a condom	5 (41.7)	57 (69.5)	34 (81.0)	50 (64.9)
No condom was used	7 (58.3)	25 (30.5)	8 (19.0)	27 (35.1)
Total	12 (100)	82 (100)	42 (100)	77 (100)

The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a non-regular partner in the previous 12 months.

8 Results: men who have sex with men (MSM)

According to the National Strategic Plan for Prevention and Control of HIV/AIDS 2002–2006, the first few cases of HIV reported in Sri Lanka were among men who have sex with men (MSM). Twenty per cent of the reported AIDS cases and 11% of the reported HIV infections were due to homosexual transmission.

The number of MSM in Sri Lanka is not known and homosexuality is illegal. However, homosexual behaviour is common in Sri Lanka. For example, in a survey carried out among male university students, 50% reported that their first sexual experience had been with another man (Silva et al., 1997).

The Sri Lanka National Strategic Plan for HIV/AIDS 2002–2006 has identified MSM as a key vulnerable population for HIV. UNAIDS data from 2001 indicates that 96.2% of homosexually active males in Colombo sampled by the NSACP had had anal sex with more than one male partner in the previous 12 months (UNAIDS, 2002). The NSACP figures do not indicate whether the anal sex was protected or unprotected, nor is information available on the subjects' age range, occupations, or marital and socio-economic status.

8.1 Sample size

Based on 90% power and a 95% significance level, the sample size required to detect a 10 percentage point increase in the primary indicator is 825. Since the recruitment of 825 MSM is beyond the scope of the study in Round 1, power was calculated on the Inception Workshop sample size of 200. Reducing power to 80% and keeping the significance level at 95%, a sample of 200 corresponds with being able to detect a 17 percentage point increase or more in the primary indicator. The figure of 200 was adjusted to account for the fact that not all MSM will have had a non-regular partner in the 12 months prior to the survey. Assuming that 50% of MSM had a non-regular partner in the preceding 12 months, the sample size was upwardly adjusted to 400.

8.2 Sampling

It is acknowledged that there will be a group of MSM who, because of their desire to keep their sexual practices 'hidden', will be difficult to recruit. This may be particularly true of MSM who do not identify as 'gay' or homosexual and/or who are

married. Notwithstanding these difficulties, and after consultation with key MSM stakeholders, it was decided that recruitment would be best achieved by utilising the networks and regular scheduled events of the following individuals and organisations: Companions on a Journey (COJ), MSM Databases, and Equal Ground. Each of these organisations had expressed a willingness to help the study recruit MSM. Recruitment through these organisations would result in a purposive convenience sample based around regular dance parties and meetings.

Several factors led to a re-evaluation of the way in which a convenience sample was achieved. First, COJ conducted a KAP Survey (knowledge, attitudes and practices in relation to HIV/AIDS) immediately prior to the commencement of the BSS data collection, which to some extent undermined recruitment of MSM in the BSS. Specifically it meant that COJ were unwilling to assist in the BSS recruitment until a certain period of time after their KAP survey had finished. This meant that COJ assistance occurred towards the end of the BSS recruitment and in a less pronounced way than had earlier been anticipated. Another development involved the absence of the person who managed the databases of email addresses and phone numbers of those who attended regular dance parties. Although the person who managed these databases gave them to someone else during the time he was away from Sri Lanka, recruitment via this method led to only a handful of interviews. Equal Ground also had some interruptions during the period of BSS data collection. As such, recruitment did not occur directly through Equal Ground.

The most effective recruitment method, even though it was still relatively unsatisfactory, was attending regular dance party events organised by a well-known person in the MSM community. At these events, BSS interview staff approached attendees and invited them to take part in the survey. Interviews then took place in separate rooms or quiet and more private areas of the party space. Most of the dance parties were held in the Mt Lavinia area and attracted MSM from locations throughout Colombo. As shown in Table 164, which identifies the target and actual sample sizes, the achieved sample size fell slightly short of the target sample size. The method of sampling MSM in the first round of the survey may need re-evaluation for the second round.

Table 164: Target and actual sample sizes - men who have sex with men

Districts and recruitment sources	Number of MSM in contact with these NGOs	Target sample size	Actual sample sizes
Colombo			
Companions on a Journey			
MSM database	1,200	192	
Equal Ground	1,000	160	
Dance parties	300	48	
			302
Total	2,500	400*	302

* At least 520 participants needed to be approached to participate in order to obtain a sample size of 400, taking into account a 20% level of absentees and refusals.

8.3 Demographic profile

Three hundred and two men took part in the survey. It was predominantly a young sample: the mean age of those surveyed was 25.6 years, with an age range from 16 to 48. This group was the most highly educated of all those we surveyed. Over 85% had O- or A-level qualifications and 8.2% had tertiary qualifications (Table 165).

Table 165: Level of education - men who have sex with men

	Frequency	Per cent (%)
Completed pre-school	0	0.0
Completed primary	2	0.7
Completed Years 6 to 10	12	4.0
Completed O-level	122	40.4
Completed A-level	141	46.7
Completed diploma	4	1.3
Completed degree	20	6.6
Completed higher degree	1	0.3
Total	302	100

The vast majority of respondents (92.4%) were Sinhalese (Table 166).

Table 166: Ethnicity - men who have sex with men

	Frequency	Per cent (%)
Sinhalese	278	93.6
Sri Lanka Tamil	9	3.0
Indian Tamil	4	1.3
Moor	6	2.0
Burgher	0	0.0
Malay	0	0.0
Other	0	0.0
Total	297¹	100

¹ Missing values (N = 5).

Marriage was not common in this group: 86.1% of the MSM were single, 7.6% married and a further 3.3% divorced or separated (Table 167).

Table 167: Marital status - men who have sex with men

	Frequency	Per cent (%)
Single (never married)	260	86.1
Living together but not married	8	2.6
Married	23	7.6
Divorced/Separated	10	3.3
Widowed	1	0.3
Total	302	100

Table 168 shows that their median monthly income was between LKR10,000 and 20,000, but 43.4% earned over LKR20,000. This indicates that this group is also the most highly paid of all our respondents apart from sex workers.

Table 168: Monthly income - men who have sex with men

	Frequency	Per cent (%)
< 5000 LKR	3	1.1
5000 to 10,000 LKR	25	8.8
10,001 to 20,000 LKR	130	45.5
20,001 to 30,000 LKR	80	28.1
> 30,000 LKR	47	16.5
Total	285¹	100

¹ Missing values (N = 17).

8.4 Knowledge about HIV and AIDS and its transmission

8.4.1 Awareness of HIV

All the MSM had heard of HIV and AIDS (Table 169) and from a large range of sources. The four most often cited were television (82.3%), newspapers (44.5%), health services (40.1%) and school (41.1%) (Table 170).

Table 169: Have you ever heard of HIV or the disease called AIDS? - men who have sex with men

	Frequency	Per cent (%)
Yes	302	100.0
No	0	0.0
Total	302	100

Table 170: How did you find out about HIV and AIDS? - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
School	123 (41.1)	176 (58.9)	299¹ (100)
Health services	120 (40.1)	179 (59.9)	299¹ (100)
Workplace	38 (12.7)	261 (87.3)	299¹ (100)
Friends/Family	100 (33.2)	201 (66.8)	301² (100)
Television	246 (82.3)	53 (17.7)	299¹ (100)
Newspaper/Magazine	133 (44.5)	166 (55.5)	299¹ (100)
Posters/Billboards	61 (20.5)	237 (79.5)	298³ (100)
Pamphlets/Leaflets	88 (29.4)	211 (70.6)	299¹ (100)
Radio	72 (24.1)	227 (75.9)	299¹ (100)
NGOs	18 (6.0)	281 (94.0)	299¹ (100)

Freq = frequency. ¹ Missing values (N = 3). ² Missing values (N = 1). ³ Missing values (N = 4).

8.4.2 Proximity to the epidemic

A third of MSM (31.3%) had known someone with HIV or AIDS (Table 171) but very few (3.9%) had a family member or close friend with HIV or who had died of AIDS (Table 172).

Table 171: Do you know anyone infected with HIV or who has died of AIDS? - men who have sex with men

	Frequency	Per cent (%)
Yes	100	33.1
No	202	66.9
Total	302	100

Table 172: Do you have a close relative or friend infected with HIV or who has died of AIDS? - men who have sex with men

	Frequency	Per cent (%)
Yes, a close relative	1	0.3
Yes, a close friend	11	3.6
No	290	96.1
Total	302	100

8.4.3 Knowledge about HIV transmission

Even though MSM were the most highly educated of all the groups we surveyed, their knowledge about HIV was not very accurate (Table 173). While 99% correctly identified HIV as a sexually transmitted disease, only 66% knew that they could protect themselves from HIV by using a condom, 32.2% believed you could get HIV from a mosquito bite and 34.9% believed that a person with HIV could not look healthy.

Table 173: Knowledge about HIV transmission and living with HIV - men who have sex with men

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	289 (99.0)	3 (1.0)	0 (0.0)	292¹ (100)
Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	198 (66.0)	92 (30.7)	10 (3.3)	300² (100)
Can a person get the HIV virus from mosquito bites?	96 (32.2)	186 (62.4)	16 (5.4)	298³ (100)
Can a woman who has HIV pass on the disease to her unborn child?	273 (91.6)	15 (5.0)	10 (3.4)	298³ (100)
Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	104 (34.7)	191 (63.7)	5 (1.7)	300² (100)
Can a person get HIV from a transfusion of blood/blood products?	279 (93.0)	20 (6.7)	1 (0.3)	300² (100)
Do you think that a person infected with HIV can be healthy looking?	154 (51.7)	104 (34.9)	40 (13.4)	298³ (100)

Freq = frequency. DK = don't know. ¹ Missing values (N = 10). ² Missing values (N = 2). ³ Missing values (N = 4).

8.5 Attitudes towards others with HIV and AIDS

As well, the attitudes of MSM to those with HIV were quite stigmatising: 39.7% would not work with someone who had HIV, 50.2% would not live in the same house as an HIV-positive person and only 75.5% said that a healthy student with HIV should be allowed to continue their schooling (Table 174). However a majority responded positively to the question about caring for a sick relative with HIV.

Table 174: Attitudes towards others with HIV and AIDS - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
Would you be willing to work with someone you knew had HIV?	178 (60.3)	117 (39.7)	295¹ (100)
Would you agree to live in the same house as someone with HIV?	149 (49.8)	150 (50.2)	299² (100)
If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	225 (76.5)	69 (23.5)	294³ (100)
If a student has HIV, but is not sick, should he or she be allowed to continue attending school?	213 (75.5)	69 (24.5)	282⁴ (100)

Freq = frequency. ¹Missing values (N = 7). ²Missing values (N = 3). ³Missing values (N = 8). ⁴Missing values (N = 20).

8.6 HIV treatments

Among our survey participants, MSM showed the highest level of awareness of new treatments for HIV; 67.3% knew about them (Table 175).

Table 175: Awareness of HIV treatments - men who have sex with men

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV and AIDS?	66 (22.4)	204 (69.4)	24 (8.2)	294¹ (100)
In Sri Lanka, can people get treatments for HIV and AIDS other than western drugs?	25 (8.4)	234 (78.8)	38 (12.8)	297² (100)

Freq = frequency. ¹Missing values (N = 8). ²Missing values (N = 5).

8.7 HIV testing

Only a fifth (20.9%) of the MSM had been tested for HIV (Table 176). Of those, almost all had volunteered to be tested. MSM most often went for HIV testing at special STI clinics at government hospitals (62.9) and private clinics (27.4%) (Table 177).

Table 176: HIV testing - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had an HIV test?	63 (20.9)	239 (79.1)	302 (100)
Did you voluntarily have the HIV test or were you required to have it?	59 (95.2)	3 (4.8)	62¹ (100)

Freq = frequency ¹ The denominator includes only those who had ever had an HIV test. Missing values (N = 1).

Table 177: Where did you get the HIV test? - men who have sex with men

	Frequency	Per cent (%)
Government hospital / Special STI clinic	39	62.9
Private clinic	17	27.4
Private hospital	6	9.7
Total	62¹	100

¹ The denominator includes only those who had ever had an HIV test. Missing values (N = 1).

Of those who had been tested, half had been tested in the six months prior to the survey; another 38.7% had been tested within the previous two years ago (Table 178).

Table 178: When did you have your most recent HIV test? - men who have sex with men

	Frequency	Per cent (%)
Within the past 6 months	32	51.6
Between 6 and 12 months ago	9	14.5
Between 1 and 2 years ago	15	24.2
Between 2 and 4 years ago	5	8.1
More than 4 years ago	1	1.6
Total	62¹	100

¹ The denominator includes only those who had ever had an HIV test. Missing values (N = 1).

8.8 Sexually transmitted infections (STIs)

Almost all the MSM (93.1%) had heard of STIs (Table 179). They had experienced low levels of symptomatic STIs in the previous 12 months; only 8.9% of MSM had ever had STI symptoms (Table 179). Just over a half (53.9%) knew STIs could be asymptomatic (Table 180).

Table 179: Awareness and experience of STIs - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever heard of diseases that can be transmitted sexually?	270 (93.1)	20 (6.9)	290¹ (100)
Have you had a genital discharge in the past 12 months?	5 (1.7)	297 (98.3)	302 (100)
Have you had a genital/ulcer sore in the past 12 months?	3 (1.0)	299 (99.0)	302 (100)
Have you ever had STI symptoms?	27 (8.9)	275 (91.1)	302 (100)

Freq = frequency. ¹ Missing values (N = 12).

Table 180: Is it possible to have an STI without there being any symptoms? - men who have sex with men

	Frequency	Per cent (%)
Yes	165	53.9
No	110	37.5
Don't know	27	8.5
Total	302	100

8.9 Alcohol and non-medically prescribed drug use

Three-quarters of MSM had ever drunk alcohol but only a quarter had had a drink in the previous week and only 4.4% had had a drink every day (Tables 181 and 182).

Table 181: Have you ever had drinks containing alcohol? - men who have sex with men

	Frequency	Per cent (%)
Yes	230	76.7
No	70	23.3
Total	300¹	100

¹ Missing values (N = 2).

Table 182: In the past four weeks, how often have you had drinks containing alcohol? - men who have sex with men

	Frequency	Per cent (%)
I never drink alcohol	71	23.9
Never in the last four weeks	51	17.2
Less than once a week	99	33.3
At least once a week	63	21.2
Every day	13	4.4
Total	297¹	100

¹ Missing values (N = 5).

Less than half the MSM smoked tobacco at the time of the survey; 44.0% had never smoked (Table 183).

Table 183: Have you ever smoked tobacco? - men who have sex with men

	Frequency	Per cent (%)
No, never	132	44.0
Yes, currently	138	46.0
Yes, but stopped	30	10.0
Total	300¹	100

¹ Missing values (N = 2).

Table 184: Which of the following drugs have you ever tried? - men who have sex with men

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Cannabis	88 (29.5)	210 (70.5)	0 (0.0)	298¹ (100)
Cocaine	3 (1.0)	295 (99.0)	0 (0.0)	298¹ (100)
Ecstasy	0 (0.0)	298 (100.0)	0 (0.0)	298¹ (100)
Amphetamines	0 (0.0)	298 (100.0)	0 (0.0)	298¹ (100)
Opium	9 (3.0)	289 (97.0)	0 (0.0)	298¹ (100)
Hashish	12 (4.0)	286 (96.0)	0 (0.0)	298¹ (100)
Pethidine	3 (1.0)	295 (99.0)	0 (0.0)	298¹ (100)
Codeine	1 (0.3)	297 (99.7)	0 (0.0)	298¹ (100)
Heroin	16 (5.4)	282 (94.6)	0 (0.0)	298¹ (100)
Methaqualone	0 (0.0)	298 (100.0)	0 (0.0)	298¹ (100)
Methadone	6 (2.0)	292 (98.0)	0 (0.0)	298¹ (100)
Benzodiazepines	0 (0.0)	298 (100.0)	0 (0.0)	298¹ (100)

Responses reported in this table are not mutually exclusive. Freq = frequency. DK = Don't know. ¹ Missing values (N = 4).

Table 184 shows that 29.5% of MSM had ever used cannabis and only a few had used drugs other than cannabis. Only 14.4% had used drugs in the previous 12 months (Table 185). Only one man had ever injected and not in the previous year (Table 186).

Table 185: In the previous 12 months, have you taken any drugs? - men who have sex with men

	Frequency	Per cent (%)
Yes	42	14.4
No	249	85.6
Total	291¹	100

¹ Missing values (N = 11).

Table 186: Drug injecting - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever injected drugs?	1 (0.3)	299 (99.7)	300¹ (100)
Have you injected drugs in the previous 12 months?	0 (0.0)	302 (100)	302 (100)

Freq = frequency. ¹ Missing values (N = 2).

8.10 Sexual practice and condom use

Almost all (95.7%) of the MSM surveyed had had sexual intercourse, and most (91.2%) in the previous 12 months (Table 187). Almost a quarter of the men (23.0%) had had sex with a woman in that period.

Table 187: Sexual intercourse - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had sexual intercourse?	289 (95.7)	13 (4.3)	302 (100)
Have you had sexual intercourse in the previous 12 months?	260 (91.2)	25 (8.8)	285¹ (100)
Have you had sexual intercourse with a woman in the previous 12 months?	69 (23.0)	231 (77.0)	300² (100)

Freq = frequency. ¹ Missing values (N = 17). ² Missing values (N = 2).

Table 188 indicates that 14.7% of MSM had engaged in sex with a regular female partner in the 12 months prior to the survey and 12.2% had had sex with a casual female partner. The level of condom use 'every time' over the previous 12 months was low with both regular (18.2%) and

casual (36.1%) female partners (Table 189), but slightly higher for the most recent occasion of sex with a women (29.5% with regular partners and 61.1% with casual partners) (Table 190).

Table 188: Sexual intercourse in the previous 12 months with regular and non-regular female partners - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
Sexual intercourse with a regular female partner in the previous 12 months	44 (14.7)	256 (85.3)	300¹ (100)
Sexual intercourse with a non-regular female partner in the previous 12 months	36 (12.2)	260 (87.8)	296² (100)

Freq = frequency. ¹ Missing values (N = 2). ² Missing values (N = 6).

Table 189: Condom use for vaginal intercourse in the previous 12 months with regular and non-regular female partners - men who have sex with men

	Regular female partners Freq (%)	Non-regular female partners Freq (%)
Every time	8 (18.2)	13 (36.0)
Almost every time	2 (4.5)	2 (5.6)
Sometimes	8 (18.2)	11 (30.6)
Never	26 (59.1)	10 (27.8)
Total	44 (100)	36 (100)

The denominators in both analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months.

Table 190: Condom use for vaginal intercourse on the last occasion with regular and non-regular female partners - men who have sex with men

	Regular female partners Freq (%)	Non-regular female partners Freq (%)
Yes, used a condom	13 (29.5)	22 (61.1)
No condom was used	31 (70.5)	14 (38.9)
Total	44 (100)	36 (100)

The denominator in each of the three analyses in this table are those people who reported having had sexual intercourse with a partner of that type in the previous 12 months.

Mean number of female partners was expected to be low across the MSM sample and this was certainly the case (Table 191).

Table 191: Mean number of female partners with whom participants had sexual intercourse (vaginal or anal) in the previous 12 months - men who have sex with men

	Full sample M (SD) (N=300) ²	Reduced sample ¹ M (SD) (N=44)
Mean number of regular female partners	0.2 (0.4)	1.00 (0.0)
Mean number of non-regular female partners	0.3 (1.1)	2.6 (2.1)

M=mean, SD=standard deviation, N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹ Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ² Missing values (N = 2). ³ Missing values (N = 5).

8.10.1 Male sexual partners

Almost all MSM (95.2%) had had sex with a man in the 12 months prior to the survey (Table 192). Most had had anal intercourse in that period (92.4%); 67.5% with a regular partner and 80.9% had had anal intercourse with a casual male partner (Table 193).

Table 192: Male sexual partners in the previous 12 months - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
Have you had any male sexual partners in the previous 12 months? ¹	280 (95.2)	14 (4.8)	294² (100)
Have you had anal intercourse with a male in the previous 12 months?	279 (92.4)	23 (7.6)	302 (100)

Freq = frequency. ¹ A male sexual partner was defined broadly to include any male partners with whom the participant had engaged in any type of sex. ² Missing values (N = 8).

Table 193: Anal intercourse in the previous 12 months with regular and non-regular, male partners - men who have sex with men

	Yes Freq (%)	No Freq (%)	Total (%)
Anal intercourse with a regular male partner in the previous 12 months	195 (67.5)	94 (32.5)	289¹ (100)
Anal intercourse with a non-regular male partner in the previous 12 months	233 (80.9)	55 (19.1)	288² (100)

Freq = frequency. Categories in this table are not mutually exclusive. ¹ Missing values (N = 13). ² Missing values (N = 14).

Table 194 shows that the level of condom use was low for anal sex in the previous 12 months with both regular and casual male partners (27.5% and 47.7% respectively), which indicates a high level of HIV risk for MSM. Data on the most recent occasion of anal sex showed a slightly higher level of condom use: 36% used a condom with a regular partner and 64.1% used condoms with casual partners (Table 195).

Table 194: Condom use for anal intercourse in the previous 12 months with regular and non-regular male partners - men who have sex with men

	Regular male partners Freq (%)	Non-regular male partners Freq (%)
Every time	50 (25.9)	106 (46.5)
Almost every time	12 (6.2)	11 (4.8)
Sometimes	53 (27.5)	75 (32.9)
Never	78 (40.4)	36 (15.8)
Total	193¹ (100)	228² (100)

Freq = frequency. The denominator in the analyses in this table are those people who reported having had anal intercourse with a partner of that type in the previous 12 months. ¹ Missing values (N = 2). ² Missing values (N = 5).

Table 195: Condom use for anal intercourse on the last occasion with regular and non-regular male partners - men who have sex with men

	Regular male partners Freq (%)	Non-regular male partners Freq (%)
Yes, used a condom	66 (34.9)	142 (63.7)
No condom was used	123 (65.1)	81 (36.3)
Total	189¹ (100)	223² (100)

Freq = frequency. The denominator in the analyses in this table are those people who reported having had anal intercourse with a partner of that type in the previous 12 months. ¹ Missing values (N = 6). ² Missing values (N = 10).

While the mean number of regular male partners was relatively low for an MSM sample, the number of non-regular partners with whom participants had had anal intercourse was the highest across all the groups in the study (Table 196). Similar to the results for Beach Boys, men appear to have had slightly more male partners with whom they had receptive rather than insertive anal intercourse (Table 196).

Table 196: Mean number of male partners with whom participants had anal intercourse in the previous 12 months - men who have sex with men

	Full sample M (SD)	Reduced sample ¹ M (SD)
Mean number of male partners with whom participants had insertive anal intercourse	7.5 (17.0) (N=281) ²	11.7 (20.1) (N=180)
Mean number of male partners with whom participants had receptive anal intercourse	10.0 (22.8) (N=293) ³	12.5 (24.8) (N=236)
Mean number of regular male partners	0.9 (0.9) (N=289) ⁴	1.4 (7.3) (N=195)
Mean number of non-regular male partners	8.8 (18.9) (N=288) ⁵	10.9 (20.4) (N=233)

M=mean. SD=standard deviation. N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹ Only includes those who had sexual intercourse with that type of partner in the previous 12 months. ² Missing values (N = 21). ³ Missing values (N = 9). ⁴ Missing values (N = 13). ⁵ Missing values (N = 14).

9 Results: female sex workers

Sri Lankan sex workers work at a range of venues: there are street workers, those who work in brothels or from home, and workers in massage parlours, casinos, karaoke bars and hotels. According to a World Bank report, the risk of HIV spreading among sex workers is heightened by low levels of condom use and high prevalence of sexually transmitted infections. 'In one study, 45% of female sex workers had experienced multiple STIs, and 70% of male patients at STI clinics had reported frequenting sex workers' (World Bank, 2005, p. 2). Sri Lankan female sex workers are also vulnerable to HIV because they often lack the power to negotiate condom use. HIV prevalence has been estimated to be between 1% and 4% among this group of women (UNAIDS, 2004).

Ratnapula (1999) estimated that there were 3,500 female street sex workers and 4500 brothel workers in Colombo alone. In 1988 Weeramunde identified 68 brothels in Colombo city. Priyadharshani's survey identified that the most prevalent risky sexual act was unprotected vaginal sex involving female sex workers. Brothel workers had between 7 to 14 clients per week. Thirty-eight per cent of brothel and street sex workers and 19% of clients reported consistent condom use (Priyadharshani, 2002). Three Sri-Lankan-based studies have collected data on consistent condom use among female sex workers attending the STD clinic in Colombo. The respective proportions who had engaged in consistent condom use, reported by these studies, were 23.8% ($N=199$) (Rajapaksa, 1995), 34% ($N = 253$) (Samarakoon, 1991) and 38% ($N = 334$) (Saravanapavanathan, 2002).

Three categories of female sex workers were surveyed for the BSS: (i) brothel-based, (ii) street-based and (iii) 'other' sex workers (i.e., those based at massage parlours, karaoke bars and casinos⁵). Brothel-based sex workers included women operating from brothels as well as houses.

9.1 Sample sizes

Based on 90% power and a 95% significance level, the sample size required to detect a 10

⁵ Hotel-based sex workers were not included in this category due to the difficulties involved in contacting these women.

percentage point increase in the primary indicator is 836. As such, the target sample for female sex workers was a total of 836 across the three categories of sex workers.

9.2 Sampling

The mapping phase focused on recording the exact locations of brothels, massage parlours, karaoke bars and casinos, and the preferred locations on the streets, as well as the number of women working in these locations. The mapping results showed that there were too few sex workers to sample 836 from each group. Indeed, the mapping phase indicated that sex-worker populations were generally smaller than indicated by previous reports and studies. This situation led to a re-evaluation of the sampling methods employed for each sex worker group.

Rather than sample from female sex workers in brothels, massage-parlours and street locations, a take-all approach was adopted for these three sex-worker sub-groups, thus providing more of a census than a sample. For the recruitment of hard-to-reach sex workers in karaoke bars and casinos, respondent-driven sampling (RDS) was the intended method of sampling.

All sex workers in brothels, massage-parlours and in street locations were invited to participate in the first survey roll-out. Street-based sex workers were sampled at their street locations. Based on the mapping activities, it would appear that sexual services are not offered in all karaoke bars. However, women do exchange telephone numbers with attendees of the karaoke bars for the purpose of arranging subsequent meetings outside the karaoke bar environment. Similar ambiguity exists for women working in massage parlours that front as places where ayurvedic massage is offered. However, most of the women working in these establishments are in contact with men who sexual services.

The following three tables (Tables 197 to 200) show the target sample sizes as well as the actual achieved sample sizes for each of the three sex-worker groups. Recruitment of sex workers in brothels, street locations, karaoke bars and casinos achieved the target sample sizes. However, sampling massage-parlour-based sex workers fell slightly short of the target.

Changes in the sampling method during the survey itself were necessary for recruiting sex workers in karaoke bars and casinos. Although RDS was the intended sampling strategy for these two groups, the method failed to provide an adequate number of recruited sex workers. The likely reason for this was that the amount of money offered to the women for their participation, and as a reward for recruiting other women, was too small. This situation led to a re-evaluation of the sampling method for these two groups, resulting in a convenience sampling method. The convenience method involved the survey consultants approaching the management of karaoke bars and casinos to obtain approval to invite women to participate in the study. Upon agreement from management, the survey staff would attend the particular venue prior to the peak periods in the evening and conduct interviews with consenting women during that time. Sex workers were sampled from 12 karaoke bars and three casinos. The 12 karaoke bars were located in the following suburbs: Mount Lavinia, Bambalapitiya, Thummulla, Battaramulla, and Havelock Town. Casinos in Colombo are found in predominantly two suburbs—Kollupitiya and Bambalapitiya—which is where the three casinos from which sampling occurred were located.

Table 197: Target and actual sample sizes - brothel-based sex workers

Districts	Number of brothels/houses	Target sample/population size	Actual sample size
Colombo	37	236	216
Anuradhapura	05	13	26
Polonnaruwa	01	05	7
Kandy	07	28	32
Matale	04	23	22
Total	54	305	303

Table 198: Target and actual sample sizes - street-based sex workers

Districts	Number of street locations	Target sample/population size	Actual sample size
Colombo	90	347	373
Anuradhapura	24	85	43
Polonnaruwa	01	10	8
Kandy	08	43	43
Matale	04	20	30
Total	127	505	497

Table 199: Target and actual sample sizes - female sex workers in massage parlours, karaoke bars and casinos

Districts	Number of venues	Number of sex workers	Target sample size	Actual sample size
Colombo				
Massage parlours	25	257	257	179
Karaoke bars	13	390 ¹	80	74
Casinos	09	72 ²	15	40
Total	47	719	352	293

9.3 Sampling

One thousand and ninety-four sex workers were surveyed. The mean age of sex workers was 31.7 years, with an age range from 16 to 55. Table 200 shows the number of each type of sex worker recruited.

Table 200: Type of sex worker and place of recruitment

	Frequency	Per cent (%)
Brothel	303	27.7
Massage parlour	179	16.3
Street	498	45.5
Karaoke bar	74	6.8
Casino	40	3.7
Total	1,094	100

In comparison with some other groups we surveyed, sex workers had low levels of education. Only a quarter had completed primary schooling and the majority had only completed schooling to Grade 10 (Table 201).

Table 201: Level of education - female sex workers

	Frequency	Per cent (%)
Completed pre-school	27	2.5
Completed primary	225	21.1
Completed Years 6 to 10	488	45.8
Completed O-level	264	24.7
Completed A-level	61	5.7
Completed diploma	0	0.0
Completed degree	2	0.2
Completed higher degree	0	0.0
Total	1,067¹	100

¹ Missing values (N = 27).

The majority (87.3%) of sex workers were Sinhalese; nearly 10% were Tamil (Table 202). Almost half (48.5%) were single or had divorced or separated from their husbands and about a fifth were widowed (Table 203).

Table 202: Ethnicity - female sex workers

	Frequency	Per cent (%)
Sinhalese	954	87.3
Sri Lanka Tamil	90	8.2
Indian Tamil	15	1.4
Moor	24	2.2
Burgher	9	0.8
Malay	1	0.1
Total	1,093¹	100

¹ Missing values (N = 1).

Table 203: Marital status - female sex workers

	Frequency	Per cent (%)
Single (never married)	242	22.1
Living together but not married	34	3.1
Married	329	30.1
Divorced/Separated	288	26.3
Widowed	201	18.4
Total	1,094	100

Table 204 indicates that sex workers' monthly income was far higher than those of female factory workers. They were the highest paid group in our survey, with half (50.0%) earning more than LKR 20,000 per month.

Table 204: Monthly income - female sex workers

	Frequency	Per cent (%)
< 5000 LKR	11	1.0
5000 to 10,000 LKR	96	8.8
10,001 to 20,000 LKR	437	40.2
20,001 to 30,000 LKR	350	32.2
> 30,000 LKR	194	17.8
Total	1,088¹	100

¹ Missing values (N = 6)

9.4 Knowledge about HIV and AIDS and its transmission

9.4.1 Awareness of HIV

Almost all had heard about HIV and AIDS (Table 205), mostly from TV (65.1%) and health services (62.5%), with newspapers (29.8%) and friends and family (26.6%) playing a smaller role (Table 206).

Table 205: Have you ever heard of HIV or the disease called AIDS? - female sex workers

	Frequency	Per cent (%)
Yes	1,090	99.8
No	2	0.2
Total	1,092²	100

¹ Missing values (N = 2).

Table 206: How did you find out about HIV and AIDS? - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
School	94 (8.7)	985 (91.3)	1,079¹ (100)
Health services	677 (62.5)	407 (37.5)	1,084² (100)
Workplace	97 (9.0)	982 (91.0)	1,079¹ (100)
Friends/Family	288 (26.6)	794 (73.4)	1,082³ (100)
Television	708 (65.1)	379 (34.9)	1,087⁴ (100)
Newspaper/Magazine	323 (29.8)	760 (70.2)	1,083⁵ (100)
Posters/Billboards	115 (10.6)	967 (89.4)	1,082³ (100)
Pamphlets/Leaflets	133 (12.2)	953 (87.8)	1,086⁶ (100)
Radio	280 (25.9)	803 (74.1)	1,083⁵ (100)
NGOs	81 (7.5)	999 (92.5)	1,080⁷ (100)

Freq = frequency. The denominator for calculating the proportions in this table include only those who had ever heard of HIV and AIDS. ¹ Missing values (N = 11). ² Missing values (N = 6). ³ Missing values (N = 8). ⁴ Missing values (N = 3). ⁵ Missing values (N = 7). ⁶ Missing values (N = 4). ⁷ Missing values (N = 10).

9.4.2 Closeness to the epidemic

Just over a quarter of female sex workers knew someone who had HIV or who had died of AIDS (Table 207) but a very small proportion (2.4%) had friends or family who were HIV-positive or who had died of AIDS (Tables 208).

Table 207: Do you know anyone infected with HIV or who has died of AIDS? - female sex workers

	Frequency	Per cent (%)
Yes	295	27.1
No	792	72.9
Total	1,087¹	100

The denominator for calculating the proportions in this table include only those who had ever heard of HIV and AIDS. ¹ Missing values (N = 3).

Table 208: Do you have a close relative or friend infected with HIV or who has died of AIDS? - female sex workers

	Frequency	Per cent (%)
Yes, a close relative	5	0.5
Yes, a close friend	21	1.9
No	1,061	97.6
Total	1,087¹	100

¹ Missing values (N = 3).

9.4.3 Knowledge about HIV transmission

Sex workers knew that HIV was transmitted sexually but only 71.1% correctly recognised that you could protect yourself from HIV by using a condom, a third (35.4%) thought that you could get HIV from mosquito bites, and nearly half (45.3%) believed that a person with HIV could not look healthy (Table 209).

Table 209: Knowledge about HIV transmission and living with HIV - female sex workers

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	1,038 (95.6)	16 (1.5)	32 (2.9)	1,086¹ (100)
Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	770 (71.1)	224 (20.7)	89 (8.2)	1,083² (100)
Can a person get the HIV virus from mosquito bites?	385 (35.4)	533 (49.0)	169 (15.5)	1,087³ (100)
Can a woman who has HIV pass on the disease to her unborn child?	1,021 (94.1)	18 (1.7)	46 (4.2)	1,085⁴ (100)
Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	586 (54.4)	403 (37.4)	89 (8.2)	1,078⁵ (100)
Can a person get HIV from a transfusion of blood/ blood products?	1,043 (95.9)	22 (2.0)	23 (2.1)	1,088⁶ (100)
Do you think that a person infected with HIV can be healthy looking?	371 (34.5)	487 (45.3)	217 (20.2)	1,075⁷ (100)

The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Freq = frequency. DK = don't know. ¹Missing values (N = 4). ²Missing values (N = 7). ³Missing values (N = 3). ⁴Missing values (N = 5). ⁵Missing values (N = 12). ⁶Missing values (N = 2). ⁷Missing values (N = 15).

9.5 Attitudes towards others with HIV and AIDS

In addition, sex workers had the most negative and stigmatising attitudes of all the groups surveyed towards those with HIV and AIDS (Table 210). Seventy-six per cent would not be willing to work with someone who was HIV-

positive, 80.3% would not live in the same house as someone with HIV and over half (52.2%) did not think that a student with HIV should be allowed to continue at school. Although a majority responded positively to the question about caring for a sick relative with HIV, it was a smaller proportion compared with other groups in the study.

Table 210: Attitudes towards others with HIV and AIDS - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Would you be willing to work with someone you knew had HIV?	255 (23.7)	822 (76.3)	1,077¹ (100)
Would you agree to live in the same house as someone with HIV?	213 (19.7)	868 (80.3)	1,081² (100)
If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	645 (59.9)	431 (40.1)	1,076³ (100)
If a student has HIV, but is not sick, should he or she be allowed to continue attending school?	506 (47.8)	553 (52.2)	1,059⁴ (100)

¹ The denominator for calculating the proportions includes only those who had ever heard of HIV and AIDS. Please note: Freq = frequency. ¹Missing values (N = 13). ²Missing values (N = 9). ³Missing values (N = 14). ⁴Missing values (N = 31).

9.6 HIV treatments

Table 211: Awareness of HIV treatments - female sex workers

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV and AIDS?	230 (21.2)	618 (57.0)	236 (21.8)	1084¹ (100)
In Sri Lanka, can people get treatments for HIV and AIDS other than western drugs?	47 (4.4)	642 (59.9)	383 (35.7)	1072² (100)

¹ This analysis includes only those who had ever heard of HIV and AIDS. Freq = frequency. ¹Missing values (N = 6). ²Missing values (N = 18).

Knowledge about HIV treatments was poor, with only 21.2% knowing that there were new treatments available (Table 211).

9.7 HIV testing

Table 212 indicates that over half (53.4%) of the sex workers we surveyed had been tested for HIV—making this the group with by far the highest rate of testing in our survey—and most had done so voluntarily. Almost all had been tested at a government hospital clinic (Table 213).

Table 212: HIV testing - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever had an HIV test?	583 (53.4)	509 (46.6)	1,092¹ (100)
	Voluntary Freq (%)	Required Freq (%)	Total (%)
Did you voluntarily have the HIV test or were you required to have it?	392 (67.5)	189 (32.5)	581² (100)

Freq = frequency. ¹ Missing values ($N = 2$). ² The denominator includes only those who had ever had an HIV test. Missing values ($N = 2$).

Table 213: Where did you get the HIV test? - female sex workers

	Frequency	Per cent (%)
Government hospital/ Special STI clinic	523	92.2
Private clinic	31	5.5
Private hospital	13	2.3
Total	567¹	100

¹ Missing values ($N = 16$). The denominator includes only those who had ever had an HIV test.

Table 214: When did you have your most recent HIV test? - female sex workers

	Frequency	Per cent (%)
Within the past 6 months	353	60.7
Between 6 and 12 months ago	128	22.0
Between 1 and 2 years ago	78	13.4
Between 2 and 4 years ago	17	2.9
More than 4 years ago	6	1.0
Total	582¹	100

The denominator includes only those who had ever had an HIV test. ¹ Missing values ($N = 1$).

The majority of sex workers (82.7%) had had their most recent HIV test within the past year (Table 214) and only 1.0% had last been tested more than four years ago.

9.8 Sexually transmitted infections (STIs)

Most of the sex workers (94.1%) had heard of STIs and they had the highest levels of STIs of any group surveyed, although only 17.9% had ever had STI symptoms (Table 215). Only slightly over a third knew that it was possible to have asymptomatic STIs (Table 216).

Table 215: Awareness and experience of STIs - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever heard of diseases that can be transmitted sexually?	1,024 (94.1)	64 (5.9)	1,088¹ (100)
Have you had a genital discharge in the past 12 months?	65 (5.9)	1028 (94.1)	1,093² (100)
Have you had a genital/ulcer sore in the past 12 months?	51 (4.7)	1040 (95.3)	1,091³ (100)
Have you ever had STI symptoms?	195 (17.9)	897 (82.1)	1,092⁴ (100)

Freq = frequency. ¹ Missing values ($N = 6$). ² Missing values ($N = 1$). ³ Missing values ($N = 3$). ⁴ Missing values ($N = 2$).

Table 216: Is it possible to have an STI without there being any symptoms? - female sex workers

	Frequency	Per cent (%)
Yes	399	36.6
No	384	35.3
Don't know	306	28.1
Total	1,089¹	100

¹ Missing values ($N = 5$).

9.9 Alcohol and non-medically prescribed drug use

Alcohol use was not high among sex workers, with only 58.5% ever having had a drink (Table 217) and only 20.6% having had a drink in the previous week (Table 218). However, they drank alcohol much more frequently than did female factory workers.

Table 217: Have you ever had drinks containing alcohol? - female sex workers

	Frequency	Per cent (%)
Yes	639	58.5
No	454	41.5
Total	1,093¹	100

¹ Missing values (N = 1).

Table 218: In the past four weeks, how often have you had drinks containing alcohol? - female sex workers

	Frequency	Per cent (%)
I never drink alcohol	465	42.7
Never in the last 4 weeks	258	23.7
Less than once a week	140	12.9
At least once a week	143	13.2
Every day	82	7.5
Total	1,088¹	100

¹ Missing values (N = 6).

Two-thirds of sex workers had never smoked tobacco; only 19.4% smoked at the time of the survey (Table 219).

Table 219: Have you ever smoked tobacco? - female sex workers

	Frequency	Per cent (%)
No, never	737	67.5
Yes, currently	212	19.4
Yes, but stopped	143	13.1
Total	1,092¹	100

¹ Missing values (N = 2).

As Table 220 indicates, sex workers were not heavy non-medically prescribed drug users; only 12.9% had tried cannabis and 7.4% had tried heroin.

Table 220: Which of the following drugs have you ever tried? - female sex workers

	Yes Freq (%)	No Freq (%)	DK Freq (%)	Total (%)
Cannabis	140 (12.9)	943 (87.0)	1 (0.1)	1,084¹ (100)
Cocaine	2 (0.2)	1,060 (98.0)	20 (1.8)	1,082² (100)
Ecstasy	0 (0.0)	1,055 (97.4)	28 (2.6)	1,083³ (100)
Amphetamines	3 (0.3)	1,051 (97.0)	29 (2.7)	1,083³ (100)
Opium	2 (0.2)	1,064 (98.3)	16 (1.5)	1,082² (100)
Hashish	8 (0.7)	1,054 (97.4)	20 (1.9)	1,082² (100)
Pethidine	0 (0.0)	1,052 (97.2)	30 (2.8)	1,082² (100)
Codeine	0 (0.0)	1,051 (97.1)	31 (2.9)	1,082² (100)
Heroin	80 (7.4)	995 (91.8)	9 (0.8)	1,084¹ (100)
Methaqualone	0 (0.0)	1,051 (97.0)	32 (3.0)	1,083³ (100)
Methadone	1 (0.1)	1,050 (97.0)	32 (2.9)	1,083³ (100)
Benzodiazepines	0 (0.0)	1,052 (97.0)	32 (3.0)	1,084¹ (100)

Responses reported in this table are not mutually exclusive. Freq = frequency. ¹ Missing values (N = 10). ² Missing values (N = 12). ³ Missing values (N = 11).

In the previous 12 months, only 10.5% of sex workers had tried drugs (Table 221) and only two had ever injected drugs, both in the previous 12 months (Table 222).

Table 221: In the previous 12 months, have you taken any drugs? - female sex workers

	Frequency	Per cent (%)
Yes	113	10.5
No	967	89.5
Total	1,080¹	100

¹ Missing values (N = 14).

Table 222: Drug injecting - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Have you ever injected drugs?	2 (0.2)	1,081 (99.8)	1,083¹ (100)
Have you injected drugs in the previous 12 months?	2 (0.2)	1,081 (99.8)	1,083¹ (100)

Freq = frequency. ¹ Missing values (N = 11).

9.10 Sexual practice and condom use

(Please note that, in this section, except where indicated, the results are reported separately for each category of sex worker). Surprisingly, not all sex workers had ever had sexual intercourse (Table 223). Only 86.0% of massage parlour, 94.6% of karaoke and 92.5% of casino workers had ever had sex.

Table 223: Have you ever had sexual Intercourse? - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Brothel	303 (100)	0 (0.0)	303 (100)
Massage parlour	154 (86.0)	25 (14.0)	179 (100)
Street	498 (100)	0 (0.0)	498 (100)
Karaoke bar	70 (94.6)	4 (5.4)	74 (100)
Casino	37 (92.5)	3 (7.5)	40 (100)
Total	1,062 (97.1)	32 (2.9)	1,094 (100)

Freq = frequency.

Almost all the brothel and street workers, and slightly fewer karaoke and casino workers, had had sexual intercourse in the previous 12 months (Table 224). However, only 72.1% of massage parlour workers had done so, the lowest level recorded in the survey.

Table 224: Have you had sexual intercourse in the previous 12 months? - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Brothel	298 (99.3)	2 (0.7)	300¹ (100)
Massage parlour	129 (72.1)	50 (27.9)	179 (100)
Street	492 (99.0)	5 (1.0)	497² (100)
Karaoke bar	63 (85.1)	11 (14.9)	74 (100)
Casino	35 (87.5)	5 (12.5)	40 (100)
Total	1,017 (93.3)	73 (6.7)	1,090 (100)

Freq = frequency. ¹Missing values (N = 3). ²Missing values (N = 1).

9.10.1 Sex with paying partners in the previous 12 months

All the street workers and 99.7% of the brothel workers had had either vaginal or anal sex with paying clients in the previous 12 months (Table 225). Eighty-five per cent of casino workers and 75.7% of karaoke workers had done so, but only 15.1% of massage parlour workers.

Table 225: Have you had sexual intercourse (vaginal or anal) with a paying client in the past 12 months? - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Brothel	302 (99.7)	1 (0.3)	303 (100)
Massage parlour	27 (15.1)	152 (84.9)	179 (100)
Street	498 (100)	0 (0.0)	498 (100)
Karaoke bar	56 (75.7)	18 (24.3)	74 (100)
Casino	34 (85.0)	6 (15.0)	40 (100)
Total	917 (83.8)	177 (16.2)	1,094 (100)

Freq = frequency.

Whether or not a woman had used a condom 'every time' during sex with paying clients in the previous 12 months depended on the type of sex work the woman did (Table 226). The proportion ranged from 39.4% of casino workers to 62.9% of brothel and karaoke workers, to 70.4% of massage parlour workers and 81.9% of street workers.

Table 226: In the past 12 months, how often did you and your paying clients use a condom for vaginal intercourse? - female sex workers

	Every time Freq (%)	Almost every time Freq (%)	Some- times Freq (%)	Never Freq (%)	Total Freq (%)
Brothel	190 (62.9)	58 (19.2)	45 (14.9)	9 (3.0)	302 (100)
Massage parlour	19 (70.4)	3 (11.1)	2 (7.4)	3 (11.1)	27 (100)
Street	407 (81.8)	42 (8.5)	47 (9.5)	1 (0.2)	497² (100)
Karaoke bar	35 (62.5)	2 (3.6)	18 (32.1)	1 (1.8)	56 (100)
Casino	13 (39.4)	3 (9.1)	16 (48.5)	1 (3.0)	33² (100)
Total	664 (72.6)	108 (11.8)	128 (14.0)	15 (1.6)	915¹ (100)

Freq = frequency. ¹The denominator used to calculate the proportions in this table includes only those women who reported having had sexual intercourse with a paying client in the previous 12 months. ²Missing values (N = 1).

Table 227: In the past 12 months, how often did you find it difficult to get your clients to wear a condom for vaginal intercourse? - female sex workers

	None of the time	A little of the time/ Some of the time	A lot of the time	All of the time	Total
	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)
Brothel	74 (26.2)	190 (67.4)	17 (6.0)	1 (0.4)	282² (100)
Massage parlour	7 (29.2)	12 (50.0)	5 (20.8)	0 (0.0)	24³ (100)
Street	111 (22.5)	327 (66.4)	52 (10.5)	3 (0.6)	493³ (100)
Karaoke bar	21 (42.0)	28 (56.0)	1 (2.0)	0 (0.0)	50⁴ (100)
Casino	12 (40.0)	18 (60.0)	0 (0.0)	0 (0.0)	30⁵ (100)
Total	225 (25.6)	575 (65.4)	75 (8.5)	4 (0.5)	879¹ (100)

Freq = frequency. ¹ The denominator used to calculate the proportions in this table includes only those women who reported having had sexual intercourse with a paying client in the previous 12 months. ²Missing values (N = 17). ³Missing values (N = 3). ⁴Missing values (N = 6). ⁵Missing values (N = 4).

The majority of the sex workers had difficulty getting their clients to use condoms 'a little of the time' or 'some of the time' (Table 227).

9.10.2 Condom use on the most recent sexual occasion with a paying client

Condom use on the most recent occasion with a paying client varied only slightly, depending on the type of sex work. The majority of sex workers had used condoms (overall 90.5%) and almost all street workers had done so (Table 228).

Table 228: The last time you had vaginal intercourse with a paying client, did you and your client use a condom? - female sex workers

	Yes	No	Total
	Freq (%)	Freq (%)	(%)
Brothel	261 (86.4)	41 (13.6)	302 (100)
Massage parlour	19 (76.0)	6 (24.0)	25² (100)
Street	471 (95.0)	25 (5.0)	496² (100)
Karaoke bar	44 (84.6)	8 (15.4)	52³ (100)
Casino	24 (80.0)	6 (20.0)	30³ (100)
Total	819 (90.5)	86 (9.5)	905¹ (100)

Freq = frequency. ¹ The denominator used to calculate the proportions in this table includes only those women who reported having had sexual intercourse with a paying client in the previous 12 months. ²Missing values (N = 2). ³Missing values (N = 4).

Table 229: Why didn't you and your client use a condom on the last occasion that you had vaginal intercourse? (data on all groups combined) - female sex workers

	Yes	No	Total
	Freq (%)	Freq (%)	(%)
Partner objected	50 (63.3)	29 (36.7)	79² (100)
Don't like condoms	13 (16.7)	65 (83.3)	78³ (100)
Used other contraceptive	10 (12.8)	68 (87.2)	78³ (100)
Used other prevention method	8 (10.3)	70 (89.7)	78³ (100)
Partner was a 'faithful' client	13 (16.5)	66 (83.5)	79² (100)
Partner was a regular client	9 (11.4)	70 (88.6)	79² (100)

Freq = frequency. ¹ The denominator used to calculate the proportions in this table includes only those women who reported not having used a condom on the most recent occasion of vaginal intercourse with a paying client. Data on the five groups of female sex workers have been combined in this table due to small numbers. ²Missing values (N = 8). ³Missing values (N = 9).

The major reason for sex workers not having used a condom on the most recent occasion with a paying client was that the client objected (63.3%) (Table 229). Other reasons included not liking condoms (16.7%), or believing that their client was 'faithful' (16.5%).

Table 230: Mean number of paying male clients on the last day worked - female sex workers

	Full sample M (SD)	Reduced sample ¹ M (SD)
Brothel	3.3 (1.8) (N=302) ²	3.4 (1.8) (N=298)
Massage parlour	2.4 (1.7) (N=178) ²	3.0 (1.4) (N=144)
Street	2.3 (1.2) (N=498)	2.3 (1.2) (N=498)
Karaoke bar	1.6 (1.5) (N=74)	2.1 (1.3) (N=58)
Casino	1.7 (1.2) (N=40)	2.0 (1.1) (N=34)

M=mean, SD=standard deviation, N=number of participants in the analysis. Categories in this table are not mutually exclusive. ¹ Only includes those who had paying clients in the previous 12 months. ²Missing values (N = 1).

Brothel workers reported having the highest average number of partners on the last day they worked. Women working in karaoke bars in casinos reported the least number of partners (Table 230).

9.10.3 Sex with non-paying partners in the previous 12 months

Table 231: Sex with non-paying partners in the previous 12 months - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Brothel	154 (50.8)	149 (49.2)	303 (100)
Massage parlour	122 (68.5)	56 (31.5)	178² (100)
Street	224 (45.4)	269 (54.6)	493³ (100)
Karaoke bar	43 (58.1)	31 (41.9)	74 (100)
Casino	22 (55.0)	18 (45.0)	40 (100)
Total	565 (51.9)	523 (48.1)	1,088¹ (100)

Freq = frequency. ¹ The denominator used to calculate the proportions in this table includes only those women who reported having had sexual intercourse with a non-paying partner in the previous 12 months. ² Missing values (N=1). ³ Missing values (N=4).

We were interested in the relationship between sexual behaviour and condom use with paying and non-paying clients. Around half of all sex workers had had sex with a non-paying partner (Table 231): the proportion of people in any particular group who had had sex with a non-paying partner ranged from 45.4% of street workers to 68.5% of massage parlour workers.

Table 232: In the past 12 months, how often did you and your non-paying partners use a condom for vaginal intercourse? - female sex workers

	Every time Freq (%)	Almost every time Freq (%)	Some- times Freq (%)	Never Freq (%)	Total Freq (%)
Brothel	15 (9.8)	5 (3.3)	51 (33.3)	82 (53.6)	153² (100)
Massage parlour	5 (4.2)	0 (0.0)	27 (22.5)	88 (73.3)	120³ (100)
Street	26 (11.7)	9 (4.1)	58 (26.1)	129 (58.1)	222³ (100)
Karaoke bar	1 (2.4)	1 (2.4)	12 (28.6)	28 (66.6)	42² (100)
Casino	1 (4.8)	1 (4.8)	4 (19.0)	15 (71.4%)	21² (100)
Total	48 (8.6)	16 (2.9)	152 (27.2)	342 (61.3)	558¹ (100)

Freq = frequency. ¹ The denominator used to calculate the proportions in this table includes only those women who reported having had sexual intercourse with a non-paying client in the previous 12 months. ² Missing values (N = 1). ³ Missing values (N = 2).

Condom use with non-paying partners was low; 61.3% of all female sex workers never used a condom. Again there were differences between the different groups. Massage parlour workers used condoms least with non-paying partners (73.3% never used a condom) and street workers most (58.1% never used a condom with a regular partner) (Table 232).

9.10.4 Involuntary sexual relations

A minority of female sex workers had experienced forced sex in the previous 12 months with any type of sexual partner (over all groups, 11.0% of workers). The highest level was among massage parlour workers (of whom 10.9% had been forced to have sex) and the lowest among karaoke workers (4.8%) Any instances of forced sex are too many (Table 233).

Table 233: In the past 12 months, did any of your sexual partners force you to have sex with them? - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Brothel	31 (10.5)	263 (89.5)	294² (100)
Massage parlour	14 (10.9)	114 (89.1)	128⁵ (100)
Street	60 (12.4)	424 (87.6)	484³ (100)
Karaoke bar	3 (4.8)	60 (95.2)	63 (100)
Casino	2 (6.1)	31 (93.9)	33⁴ (100)
Total	110 (11.0)	892 (89.0)	1,002¹ (100)

Freq = frequency. ¹ The denominator used to calculate the proportions in this table includes only those women who reported having had sexual intercourse in the previous 12 months. ² Missing values (N = 4). ³ Missing values (N = 6). ⁴ Missing values (N = 2). ⁵ Missing values (N = 1).

9.10.5 Carrying condoms

Street workers faced the most harassment for carrying condoms; 33.2% had been harassed by police in the previous 12 months (Table 234). Brothel workers had also been harassed (9%), but no karaoke or casino workers reported any police harassment for carrying condoms.

Table 234: In the past 12 months, have you ever been harassed by police for carrying condoms? - female sex workers

	Yes Freq (%)	No Freq (%)	Total (%)
Brothel	26 (9.0)	262 (91.0)	288² (100)
Massage parlour	1 (1.4)	68 (98.6)	69³ (100)
Street	162 (33.2)	326 (66.8)	488⁴ (100)
Karaoke bar	0 (0.0)	53 (100)	53⁵ (100)
Casino	0 (0.0)	29 (100)	29⁶ (100)
Total	189 (20.4)	738 (79.6)	927¹ (100)

Freq = frequency. ¹ The denominator used to calculate the proportions in this table includes only those women who reported having had sexual intercourse in the previous 12 months. ² Missing values (N = 10). ³ Missing values (N = 59). ⁴ Missing values (N = 4). ⁵ Missing values (N = 10). ⁶ Missing values (N = 6).

9.10.6 Geographical location by condom use on the last occasion

Since only two of the female sex worker groups were recruited outside of Colombo, geographical comparisons can only include these two groups: brothel workers and street workers. Even among these two groups, low numbers of participants restrict what sort of conclusions can be made about condom use as a function of geographic location. It would appear however that geographic location had little relationship with condom use with paying partners on the last occasion (Table 235). Condom rates were lower with non-paying partners and once again low numbers make any comparison by location problematic (Table 236). Additional analyses showed that among the 433 women who reported vaginal intercourse with both paying and non-paying partners in the 12 months before their interview, there were 50 women (11.5%) who did not use condoms on the last occasion with both types of partner.

Table 235: Condom use for vaginal intercourse on the last occasion with a paying partner - female sex workers

	Colombo Freq (%)	Kandy Freq (%)	Anuradhapura Freq (%)	Matale Freq (%)	Polonaruwa Freq (%)
Brothel					
Yes, used a condom	182 (84.3)	29 (90.6)	26 (100.0)	18 (81.8)	7 (100.0)
No condom was used	34 (15.7)	3 (9.4)	0 (0.0)	4 (18.2)	0 (0.0)
Total	216 (100)	32 (100)	26 (100)	22 (100)	7 (100)
Massage Parlour²					
Yes, used a condom	21 (77.8)	N/A	N/A	N/A	N/A
No condom was used	6 (22.2)	N/A	N/A	N/A	N/A
Total	27 (100)				
Street					
Yes, used a condom	357 (96.2)	34 (79.1)	43 (100.0)	28 (93.3)	8 (100.0)
No condom was used	14 (3.8)	9 (20.9)	0 (0.0)	2 (6.7)	0 (0.0)
Total	371 (100)	43 (100)	43 (100)	30 (100)	8 (100)
Karaoke					
Yes, used a condom	46 (83.6)	N/A	N/A	N/A	N/A
No condom was used	9 (16.4)	N/A	N/A	N/A	N/A
Total	55 (100)				
Casino					
Yes, used a condom	24 (80.0)	N/A	N/A	N/A	N/A
No condom was used	6 (20.0)	N/A	N/A	N/A	N/A
Total	30 (100)				

NA=not applicable. Please note that some of the percentages have been calculated on very small numbers and as such should not be considered reliable. ¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a paying partner in the previous 12 months. ²Massage parlour, Karaoke and Casino participants were only recruited in Colombo.

Table 236: Condom use for vaginal intercourse on the last occasion with a non-paying partner - female sex workers

Brothel	Colombo Freq (%)	Kandy Freq (%)	Anuradhapura Freq (%)	Matale Freq (%)	Polonaruwa Freq (%)
Yes, used a condom	28 (24.6)	4 (25.0)	1 (8.3)	1 (14.3)	1 (33.3)
No condom was used	86 (75.4)	12 (75.0)	11 (91.7)	6 (85.7)	2 (66.7)
Total	114 (100)	16 (100)	12 (100)	7 (100)	3 (100)
Massage Parlour²					
Yes, used a condom	6 (5.0)	N/A	N/A	N/A	N/A
No condom was used	113 (95.0)	N/A	N/A	N/A	N/A
Total	119 (100)				
Street					
Yes, used a condom	29 (17.3)	4 (22.2)	9 (42.9)	0 (0.0)	1 (100.0)
No condom was used	139 (82.7)	14 (77.8)	12 (57.1)	7 (100)	0 (0.0)
Total	168 (100)	18 (100)	21 (100)	7 (100)	1 (100)
Karaoke					
Yes, used a condom	9 (22.0)	N/A	N/A	N/A	N/A
No condom was used	32 (78.0)	N/A	N/A	N/A	N/A
Total	41 (100)				
Casino					
Yes, used a condom	1 (4.8)	N/A	N/A	N/A	N/A
No condom was used	20 (95.2)	N/A	N/A	N/A	N/A
Total	21 (100)				

NA=not applicable. Please note that some of the percentages have been calculated on very small numbers and as such should not be considered reliable. ¹The denominator for calculating proportions in this table includes only those people who reported having sexual intercourse with a non-paying partner in the previous 12 months. ²Massage parlour, Karaoke and Casino participants were only recruited in Colombo.

10 Recommendations

The following recommendations are reported in two sections: 1) **in general** recommendations that are relevant for all the groups surveyed and indeed most likely relevant for the general population, and 2) **Specific group** recommendations addressing HIV-related issues that are pertinent for specific groups included in the survey.

10.1 In general

- Among all sampled groups there is evidence of a widespread misunderstanding about the role of mosquitoes in HIV transmission. This misunderstanding may need to be explored further through qualitative analysis. This belief it is at odds with the low HIV prevalence level in Sri Lanka and the highly stigmatising attitudes that were evident in the study. Therefore it is unclear how this belief is being maintained. It may have public health benefits to correct this misunderstanding as an individual's focus on mosquitos may distract him or her from using effective prevention methods that may be more within their control, such as safe sex methods including abstinence, sex with a single faithful partner and condoms for sexual intercourse and clean needles for drug injecting. What is needed is a mass media campaign targeting the general population that corrects the belief that a mosquito bite can transmit HIV and provides accurate information about how HIV is transmitted.
- Common to all groups sampled in the study is an extensive misunderstanding that a person with HIV can look healthy. This misunderstanding is important to correct because it has implications for HIV prevention, the outlook of people who are newly diagnosed with HIV, as well as for stigmatising attitudes. For HIV prevention, the belief that healthy-looking people do not have HIV may be linked with non-practicing of safer sex methods including lower rates of condom use. This is because some people may assume that having unprotected sex with someone who is healthy looking carries no risk of HIV transmission. The relevance of this misunderstanding for those with HIV is that if the misunderstanding is corrected it will encourage those who are newly diagnosed with HIV to develop a more optimistic sense of their future. The optimism will be based on the view that it is possible, particularly with proper treatment, to look healthy and live a relatively 'normal' life with HIV. Having a more optimistic future may also contribute to better overall health, quality of life, and to adherence to a regimen of combination antiretrovirals. In the general community, stigmatising attitudes towards those with HIV may subside if it were widely known that someone with HIV can look healthy and live relatively well. The misunderstanding can be corrected through a mass media campaign that is careful not to further stigmatise people with HIV who are unwell.
- Many of the participants in the study did not understand that the correct use of condoms will prevent the transmission of HIV. This level of knowledge or belief places sexually active people at greater risk of HIV transmission, with the possible exception of those in long-term monogamous relationships who are HIV negative. Providing education about condom use for the prevention of HIV and other sexually transmissible infections will help enable people to lead healthy sexual lives. This type of education may be most effectively delivered through targeted interventions to the risk groups and if it forms part of sex education in schools, as one of the safer sex methods. Education messages may also be effectively delivered through mass media campaigns.
- Many of the participants in the study had stigmatising attitudes toward those with HIV. Among those with the most stigmatising attitudes were female sex workers who themselves are a highly stigmatised group. Stigmatising attitudes reflect prejudices that can manifest in discrimination against those with HIV. Prejudices may at least partly be caused by incorrect knowledge and misperceptions about HIV. As such, attitudes towards those with HIV may improve as a result of education messages that focus on: a) the importance of treating people with HIV with dignity; b) providing education about how HIV is transmitted; and, c) correcting erroneous beliefs that HIV cannot be contracted through living, going to school or working with someone who is HIV-positive.

10.2 Specific groups

10.2.1 Factory workers & Three-wheel drivers

The study results show that factory workers in free trade zones and three-wheel drivers are not at high risk of HIV at this stage in the epidemic. However, mass media campaigns focussing on behaviour development, methods of safer sex, including the use of condoms would be helpful for both these groups.

10.2.2 Men who have sex with men

Rates of condom use among the MSM sample was low compared with other MSM groups in many developed countries. Since MSM reported a relatively high number of sexual partners in the twelve months preceding their interviews, this group is at risk of HIV and other sexually transmissible infections. Indeed, if HIV rates were higher among this group of men, HIV could spread quickly through the MSM community. There is a need for targeted campaigns and peer education work emphasising the importance of condoms and lubrication for anal intercourse.

10.2.3 Beach Boys

High levels of partner change with both male (local and foreign) and female casual partners and very low levels of condom use for anal and vaginal intercourse, as well as relatively high levels of regular female partners puts this group and their partners at high risk of HIV and other sexually transmissible infections. There needs to be a specifically targeted HIV-prevention program for this group which focuses on these risks and promotes condom use for vaginal and anal intercourse.

10.2.4 Female Sex Workers

Condom use is particularly low for female sex workers in casinos (many of whom are from countries where HIV has a higher prevalence than Sri Lanka). Although not asked in the survey, anecdotal evidence indicated that the clients of casino workers are often foreign men from countries such as China with a higher HIV prevalence rate. Female sex workers in casinos need to be targeted in HIV prevention programs.

There also needs to be work done with the police to stop police harassment of female sex workers who carry condoms – particularly those women working on the street and in brothels. This work

could focus on informing police of the public health benefits associated with female sex workers using condoms.

10.2.5 Drug Users

There were very few injectors among those who took non-medically prescribed drugs. However, of those who did inject drugs, needle-sharing was common and condom use was low. As such, there is a risk that HIV could be transmitted very quickly through injecting drug user groups. Targeted interventions for drug users should emphasise the importance of practising safe sex, as well as safe drug using practices in preventing HIV transmission. Education focussed on methods of safe sex, including the use and provision of condoms, should be a priority. Harm reduction programmes for those who inject drugs may be an important option to consider. Continuous checks on the drug using behaviours of this population are a priority.

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Annex 1

Sample Questionnaire Female sex workers

SECTION A: BACKGROUND CHARACTERISTICS

Questionnaire ID number: FSW _____
 RDS Coupon number: FSW _____

Sri Lanka HIV/AIDS Behavioural Surveillance Survey 2006-2008

Location code (region, city, site) _____
 Date ____/____/____ Interviewer: Code _____ Name: _____

THIS SURVEY IS FOR WOMEN WHO ARE CURRENTLY INVOLVED IN SEX WORK (I.E., SELLING SEXUAL SERVICES).

Introduction

"My name is... I'm working for MG Consultants in Sri Lanka in collaboration with the University of New South Wales in Australia. This study is being undertaken by the National HIV/AIDS Prevention Project in the Ministry of Health, Sri Lanka, and is funded by the World Bank. We are interviewing people here in [name of city, region or site] in order to find out about your knowledge of HIV and how you might use that knowledge in your sexual behaviour. Have you been interviewed in the past few weeks for this study?"

If the respondent has been interviewed before do not interview this person again. Tell them you cannot interview them a second time, thank them, and end the interview. If they have not been interviewed before, continue:

Consent

"I'm going to ask you some very personal questions that some people find difficult to answer. Your answers are completely confidential. Your name will not be written on this form and will never be used in connection with any of the information you tell me. You do not have to answer any questions that you do not want to answer, and you may end this interview at any time you want to. However, your honest answers to these questions will help us better understand what people think, say and do about certain kinds of behaviours. We would greatly appreciate your help in responding to this survey. The survey will take about 30 minutes. Would you be willing to participate?"

.....
(Signature of interviewer certifying that informed consent has been given verbally by respondent)

- SECTION A: Background characteristics SECTION E: STIs
- SECTION B: Alcohol & drug use SECTION F: Knowledge & attitudes about HIV/AIDS
- SECTION C: Sexual history SECTION G: Access to services
- SECTION D: Male condom SECTION H: Income & expenditure

A1	How old were you at your last birthday? ESTIMATE BEST ANSWER	AGE IN COMPLETED YEARS [_ _] DON'T KNOW 88 NO RESPONSE 99	
A2	Have you ever attended school? CIRCLE ONE	YES (BUT NOT STILL IN SCHOOL) 1 YES (STILL IN SCHOOL) 2 NO 3 NO RESPONSE 99	
A3	What is the highest level of education you completed? (READ OUT) CIRCLE ONE	COMPLETED PRE-SCHOOL 1 COMPLETED PRIMARY 2 COMPLETED YEARS 6 TO 10 3 COMPLETED O-LEVEL 4 COMPLETED A-LEVEL 5 COMPLETED DIPLOMA 6 COMPLETED DEGREE 7 COMPLETED HIGHER DEGREE 8 OTHER _____ NO RESPONSE 99	
A4	Can you read and write?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
A5	What religion are you? CIRCLE ONE	NO RELIGION 0 BUDDHIST 1 ROMAN CATHOLIC 2 OTHER CHRISTIAN 3 ISLAM 4 HINDU 5 OTHER _____ DON'T KNOW 88 NO RESPONSE 99	
A6	To which ethnic group do you belong? CIRCLE ONE	SINHALESE 1 SRI LANKA TAMIL 2 INDIAN TAMIL 3 MOOR 4 BURGHER 5 MALAY 6 OTHER _____ DON'T KNOW 88 NO RESPONSE 99	

A7	In which district have you mostly lived in the past five years? CIRCLE ONE OF THE DISTRICTS	AMPARA 1 ANURADHAPURA 2 BADULLA 3 BATTICALOA 4 COLOMBO 5 GALLE 6 GAMPAHA 7 HAMBANTOTA 8 JAFFNA 9 KALUTARA 10 KANDY 11 KEGALLE 12 KILINOCHCHI 13 KURUNEGALA 14 MANNAR 15 MATARA 16 MONARAGALA 17 MATALE 18 MULLAITTU 19 NUWARA – ELIYA 20 POLONNARUWA 21 PUTTALAM 22 RATNAPURA 23 TRINCOMALEE 24 VAVUNIYA 25 OTHER _____ DON'T KNOW 88 NO RESPONSE 99																																																																																																				
A8	What is your current marital status? CIRCLE ONE	SINGLE (NEVER MARRIED) 1 LIVING TOGETHER BUT NOT MARRIED 2 MARRIED 3 DIVORCED / SEPARATED 4 WIDOWED 5 DON'T KNOW 88 NO RESPONSE 99																																																																																																				
A9	Who do you live with? CIRCLE A RESPONSE FOR EACH OPTION	<table border="0"> <tr> <td></td> <td>YES</td> <td>NO</td> <td>DK</td> <td>NR</td> </tr> <tr> <td>HUSBAND / WIFE</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>OTHER SEXUAL PARTNER</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>PARENTS</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>SIBLINGS</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>CHILDREN</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>OTHER RELATIVES</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>FRIENDS</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>LIVE ALONE</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>CO-WORKERS</td> <td>1</td> <td>2</td> <td>88</td> <td>99</td> </tr> <tr> <td>OTHER _____</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TEMPORARY SHELTER</td> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>BOARDING HOUSE</td> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>PARENTS HOME</td> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MY HOME</td> <td>4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>LODGING</td> <td>5</td> <td></td> <td></td> <td></td> </tr> <tr> <td>LIVE ON THE STREET</td> <td>6</td> <td></td> <td></td> <td></td> </tr> <tr> <td>OTHER _____</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DON'T KNOW</td> <td>88</td> <td></td> <td></td> <td></td> </tr> <tr> <td>NO RESPONSE</td> <td>99</td> <td></td> <td></td> <td></td> </tr> </table>		YES	NO	DK	NR	HUSBAND / WIFE	1	2	88	99	OTHER SEXUAL PARTNER	1	2	88	99	PARENTS	1	2	88	99	SIBLINGS	1	2	88	99	CHILDREN	1	2	88	99	OTHER RELATIVES	1	2	88	99	FRIENDS	1	2	88	99	LIVE ALONE	1	2	88	99	CO-WORKERS	1	2	88	99	OTHER _____					TEMPORARY SHELTER	1				BOARDING HOUSE	2				PARENTS HOME	3				MY HOME	4				LODGING	5				LIVE ON THE STREET	6				OTHER _____					DON'T KNOW	88				NO RESPONSE	99			
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A10	How would you describe where you live? CIRCLE ONE	TEMPORARY SHELTER 1 BOARDING HOUSE 2 PARENTS HOME 3 MY HOME 4 LODGING 5 LIVE ON THE STREET 6 OTHER _____ DON'T KNOW 88 NO RESPONSE 99																																																																																																				

A11	How often in the past month did you listen to the RADIO?	NEVER 0 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99
A12	Which RADIO STATIONS do you mostly listen to?	LIST RADIO STATIONS LISTENED TO: _____ DON'T KNOW 88 NO RESPONSE 99
A13	How often in the past month did you watch TELEVISION?	NEVER 0 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99
A14	Which TELEVISION STATIONS do you mostly watch?	LIST TELEVISION STATIONS WATCHED: _____ DON'T KNOW 88 NO RESPONSE 99
A15	How often in the past month did you read a NEWSPAPER?	NEVER 0 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99
A16	Which NEWSPAPERS do you mostly read?	LIST NEWSPAPERS READ: _____ DON'T KNOW 88 NO RESPONSE 99
A17	How often in the past month did you read a MAGAZINE?	NEVER 0 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99

C7	READ OUT THE LIST How often do you work... In a brothel (in house) In a brothel (takeaway/broker based) In a Nightclub In a Hotel In a Casino In a Karaoke bar On the street, park, bus or train station In a Massage or beauty parlour As a Call-girl Other _____	Always Mostly Occasionally Never DK NR 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99
C8	MULTIPLE ANSWERS POSSIBLE How many of your friends work in any of the following ways... In a brothel (in house) In a brothel (takeaway/broker based) In a Nightclub In a Hotel In a Casino In a Karaoke bar On the street, park, bus or train station In a Massage or beauty parlour As a Call-girl Other _____	All Most Some None DK NR 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99 1 2 3 4 88 99

PAYING PARTNERS, PAST TWELVE MONTHS

C9	Now I'd like to ask you some questions about your sexual partners in the last twelve months. Please think about your <u>paying clients</u> , that is, the partners you had sex with in exchange for money. In the past twelve months, have you had sexual intercourse (vaginal or anal) with a paying client (i.e., someone who paid you for sex)?	YES 1 NO 2 <input type="checkbox"/> C17 DON'T KNOW 88 NO RESPONSE 99
C10	In the past twelve months, how often did you and your clients use a condom for <u>vaginal intercourse</u> ? Would you say... READ LIST	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99 NO VAGINAL INTERCOURSE 0 <input type="checkbox"/> C13

B10	How long after you first started taking drugs did you try injecting? IF LESS THAN 1 MONTH, RECORD 01 IN '# MONTHS'	# YEARS [] [] PLUS # MONTHS [] [] HAVE NEVER INJECTED DRUGS 0 DON'T KNOW 88 NO RESPONSE 99
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SECTION C: SEXUAL HISTORY

Now I am going to ask you some personal questions about sex.		
C1	Have you ever had sexual intercourse? (For the purposes of this survey, 'sexual intercourse' is defined as vaginal or anal penetrative sexual intercourse).	YES 1 NO 2 <input type="checkbox"/> C6
C2	At what age did you first have sexual intercourse?	DON'T KNOW 88 NO RESPONSE 99 AGE IN YEARS [] []
C3	Was a condom used during the first time you had sexual intercourse? (I mean a rubber object that is put on a man's penis before sex.) SHOW PICTURE OR SAMPLE OF ONE.	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
C4	What was the age of the person with whom you first had sexual intercourse? IF PARTICIPANT IS UNSURE, ASK HER TO GIVE HER BEST GUESS	AGE IN YEARS [] [] DON'T KNOW 88 NO RESPONSE 99
C5	Have you had sexual intercourse in the past twelve months?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
C6	At what age did you first receive money for sex?	AGE IN YEARS [] [] DON'T KNOW 88 NO RESPONSE 99

PAYING PARTNERS - LAST OCCASION

C20	Please think about your paying clients, that is, the partners you had sex with in exchange for money... On the last day you worked, how many clients did you have?	NEVER HAD A PAYING CLIENT 0 NUMBER OF CLIENTS _ _ _ _ DON'T KNOW 88 NO RESPONSE 99 RUPEES DON'T KNOW 88 NO RESPONSE 99 PIMP/TOUT 1 OWNER OF THE BUSINESS (E.G. BROTHEL) 2 I DECIDE 3 THE CLIENT DECIDES 4 OTHER _____ DON'T KNOW 88 NO RESPONSE 99	<input type="checkbox"/> C32
C21	The last time you had sex with a client, how much money did you receive?		
C22	Who decides how much the client pays? CIRCLE ONE		
C23	The last time you had sex with a client, what type of sex did you have? MULTIPLE ANSWERS POSSIBLE	Y N DK NR 'HANDSHAKE' (YOU MASTURBATED HIM) 1 2 88 99 ORAL SEX (YOU SUCKED HIS PENIS) 1 2 88 99 ORAL SEX (CLIENT LICKED YOUR VAGINA) 1 2 88 99 INTERCRURAL SEX (HIGH SEX) 1 2 88 99 VAGINAL INTERCOURSE 1 2 88 99 ANAL INTERCOURSE 1 2 88 99 OTHER _____ NO VAGINAL INTERCOURSE WITH CLIENTS 0 YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99 NO VAGINAL INTERCOURSE WITH CLIENTS 0 MYSELF 1 THE CLIENT 2 JOINT DECISION 3 OWNER OF THE PLACE 4 OTHER _____ DON'T KNOW 88 NO RESPONSE 99	<input type="checkbox"/> C27
C24	The last time you had vaginal intercourse with a client did you and your client use a condom?		<input type="checkbox"/> C26
C25	Who suggested condom use that time? CIRCLE ONE		<input type="checkbox"/> C27

C26	Why didn't you and your client use a condom that time? CIRCLE ALL ANSWERS MENTIONED	Y N DK NR NEVER HEARD OF CONDOMS 1 2 88 99 I DON'T KNOW HOW TO OBTAIN A CONDOM 1 2 88 99 I DIDN'T THINK IT WAS NECESSARY 1 2 88 99 DIDN'T THINK OF IT 1 2 88 99 NOT AVAILABLE 1 2 88 99 TOO EXPENSIVE 1 2 88 99 PARTNER OBJECTED 1 2 88 99 DON'T LIKE THEM 1 2 88 99 USED OTHER CONTRACEPTIVE 1 2 88 99 USED OTHER PREVENTION METHODS 1 2 88 99 PARTNER WAS A 'FAITHFUL' CLIENT 1 2 88 99 PARTNER WAS A REGULAR CLIENT 1 2 88 99 CONDOMS TAKE AWAY PLEASURE 1 2 88 99 OTHER _____	<input type="checkbox"/> C30
C27	The last time you had anal intercourse with a client did you and your client use a condom?	NO ANAL INTERCOURSE WITH CLIENTS 0 YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	<input type="checkbox"/> C29
C28	Who suggested condom use that time? CIRCLE ONE ONLY	NO ANAL INTERCOURSE WITH CLIENTS 0 MYSELF 1 THE CLIENT 2 JOINT DECISION 3 OWNER OF THE PLACE 4 OTHER _____ DON'T KNOW 88 NO RESPONSE 99	<input type="checkbox"/> C30
C29	Why didn't you and your client use a condom that time? CIRCLE ALL ANSWERS MENTIONED	Y N DK NR NEVER HEARD OF CONDOMS 1 2 88 99 I DON'T KNOW HOW TO OBTAIN A CONDOM 1 2 88 99 I DIDN'T THINK IT WAS NECESSARY 1 2 88 99 DIDN'T THINK OF IT 1 2 88 99 NOT AVAILABLE 1 2 88 99 TOO EXPENSIVE 1 2 88 99 PARTNER OBJECTED 1 2 88 99 DON'T LIKE THEM 1 2 88 99 USED OTHER PREVENTION METHODS 1 2 88 99 PARTNER WAS A 'FAITHFUL' CLIENT 1 2 88 99 PARTNER WAS A REGULAR CLIENT 1 2 88 99 CONDOMS TAKE AWAY PLEASURE 1 2 88 99 OTHER _____	<input type="checkbox"/> C30

C34	The last time you had vaginal intercourse with a non-paying partner, did you use a condom?	NO NON-PAYING PARTNERS -9 NO VAGINAL INTERCOURSE WITH PARTNERS 0	<input type="checkbox"/> C39 <input type="checkbox"/> C35
		YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
C35	In the past twelve months, how often did you and your non-paying partners use a condom for anal intercourse? Would you say... READ LIST	NO NON-PAYING PARTNERS -9 NO ANAL INTERCOURSE WITH PARTNERS 0	<input type="checkbox"/> C39 <input type="checkbox"/> C38
		EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	
C36	Those times that you and your non-paying partners didn't use a condom for anal intercourse, why didn't you use a condom? CIRCLE ALL ANSWERS MENTIONED	Y N DK NR NEVER HEARD OF CONDOMS 1 2 88 99 DON'T KNOW HOW TO OBTAIN A CONDOM 1 2 88 99 I DIDN'T THINK IT WAS NECESSARY 1 2 88 99 DIDN'T THINK OF IT 1 2 88 99 NOT AVAILABLE 1 2 88 99 TOO EXPENSIVE 1 2 88 99 PARTNER OBJECTED 1 2 88 99 DON'T LIKE THEM 1 2 88 99 USED OTHER CONTRACEPTIVE 1 2 88 99 USED OTHER PREVENTION METHODS 1 2 88 99 PARTNERS WERE 'FAITHFUL' 1 2 88 99 CONDOMS TAKE AWAY PLEASURE 1 2 88 99 OTHER _____	
C37	The last time you had anal intercourse with a non-paying partner, did you use a condom?	NO NON-PAYING PARTNERS -9 NO ANAL INTERCOURSE WITH PARTNERS 0	<input type="checkbox"/> C39
		YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	
C38	The last time you performed oral sex on a non-paying male partner (i.e. you sucked your partner's penis), did you use a condom?	NO NON-PAYING PARTNERS -9 DID NOT PERFORM ORAL SEX ON PARTNER 0	
		YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 9	

C30	The last time you performed oral sex on a male client (i.e. you sucked your partner's penis), did you use a condom?	DID NOT PERFORM ORAL SEX ON CLIENT 0 YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
C31	Have you ever had sexual intercourse (i.e. vaginal or anal intercourse) with a client without a condom because the client paid extra money so that the condom would not be used?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99

NON PAYING PARTNERS, LAST TWELVE MONTHS

	IF PARTICIPANT HAS HAD NO NON-PAYING PARTNERS IN THE LAST TWELVE MONTHS, GO STRAIGHT TO QUESTION C39. Now please think about your other partner/s, those who do not give you money in exchange for sex, such as your SPOUSE or BOYFRIEND or 'KEEP' STABLE PARTNER or CASUAL PARTNERS ...	NO NON-PAYING PARTNERS -9 NO VAGINAL INTERCOURSE WITH PARTNERS 0	<input type="checkbox"/> C39 <input type="checkbox"/> C35
C32	In the past twelve months, how often did you and your non-paying partners use a condom for vaginal intercourse? Would you say... READ LIST	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	
C33	Those times that you and your non-paying partners didn't use a condom for vaginal intercourse, why didn't you use a condom? CIRCLE ALL ANSWERS MENTIONED	Y N DK NR NEVER HEARD OF CONDOMS 1 2 88 99 I DON'T KNOW HOW TO OBTAIN A CONDOM 1 2 88 99 I DIDN'T THINK IT WAS NECESSARY 1 2 88 99 DIDN'T THINK OF IT 1 2 88 99 NOT AVAILABLE 1 2 88 99 TOO EXPENSIVE 1 2 88 99 PARTNER OBJECTED 1 2 88 99 DON'T LIKE THEM 1 2 88 99 USED OTHER CONTRACEPTIVE 1 2 88 99 USED OTHER PREVENTION METHODS 1 2 88 99 PARTNERS WERE 'FAITHFUL' 1 2 88 99 CONDOMS TAKE AWAY PLEASURE 1 2 88 99 OTHER _____	

F4	Now please think again about all of the partners that you have had sex with, both regular and non regular partners. Have you ever discussed HIV or AIDS with any of these partners?	YES, ALL 1 YES, SOME 2 NO, NONE 3 DON'T KNOW 88 NO RESPONSE: 99
F5	Have any of these partners ever told you their HIV status?	YES, ALL 1 YES, SOME 2 NO, NONE 3 DON'T KNOW 88 NO RESPONSE: 99
F6	Do you know anyone who is infected with HIV or who has died of AIDS?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE: 99 F8
F7	Do you have a close relative or close friend who is infected with HIV or has died of AIDS?	YES, A CLOSE RELATIVE 1 YES, A CLOSE FRIEND 2 NO 3 DON'T KNOW 88 NO RESPONSE: 99
F8	How likely do you think it is that you yourself will contract HIV/AIDS? Would you say there is no risk you will get HIV, a small risk, a moderate risk or a high risk of you getting HIV?	NO RISK 1 SMALL RISK 2 MODERATE RISK 3 HIGH RISK 4 DON'T KNOW 88 NO RESPONSE: 99 F10 F10
F9	Why do you think you are at risk of contracting HIV? MULTIPLE ANSWERS POSSIBLE	Y N DK NR have had many partners 1 2 88 99 do not always use condoms 1 2 88 99 have used intravenous drugs 1 2 88 99 partner has other partners 1 2 88 99 blood transfusions/unsafe injection 1 2 88 99 have had sex with persons who i think has HIV 1 2 88 99 have been in contact with persons with HIV 1 2 88 99 F11 F11 F11 F11 F11 F11 F11
F10	Why do you think you have little risk or no risk of contracting HIV? MULTIPLE ANSWERS POSSIBLE	Y N DK NR not sexually active 1 2 88 99 have only one partner 1 2 88 99 trust my partner 1 2 88 99 always use condoms 1 2 88 99 do not use condoms with people i don't know well 1 2 88 99 do not use intravenous drugs 1 2 88 99 partner is faithful 1 2 88 99 no blood transfusions / unsafe injections 1 2 88 99 only those with many partners are at risk 1 2 88 99 have not been in contact with persons with hiv 1 2 88 99 F11 F11 F11 F11 F11 F11 F11 F11 F11 F11

E8	The last time you had STI symptoms what did you do? MULTIPLE ANSWERS POSSIBLE	Y N DK NR DID NOTHING 1 2 88 99 TALKED TO FRIEND 1 2 88 99 VISITED GENERAL PRACTITIONER 1 2 88 99 VISITED TRADITIONAL PRACTITIONER 1 2 88 99 VISITED HEALTH CARE WORKER 1 2 88 99 VISITED STD CLINIC 1 2 88 99 VISITED GOVERNMENT HOSPITAL 1 2 88 99 CONSULTED SPECIALIST 1 2 88 99 GOT MEDICINE FROM PHARMACY 1 2 88 99 OTHER
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SECTION F: KNOWLEDGE AND ATTITUDES ABOUT HIV/AIDS

F1	Have you ever heard of HIV or the disease called AIDS?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE: 99 G1
F2	How did you find out about HIV/AIDS? MULTIPLE ANSWERS POSSIBLE	Y N DK NR SCHOOL 1 2 88 99 HEALTH SERVICES 1 2 88 99 WORKPLACE 1 2 88 99 FRIENDS/FAMILY 1 2 88 99 TELEVISION 1 2 88 99 NEWSPAPER/ MAGAZINE 1 2 88 99 POSTERS/ BILLBOARD 1 2 88 99 PAMPHLET/ LEAFLETS 1 2 88 99 RADIO 1 2 88 99 NGOs 1 2 88 99 OTHER
F3	From which ONE source of information did you acquire the most thorough understanding of HIV/AIDS? CHOOSE ONE ANSWER ONLY	SCHOOL 01 HEALTH SERVICES 02 WORKPLACE 03 FRIENDS/FAMILY 04 TELEVISION 05 NEWSPAPER/ MAGAZINE 06 POSTERS/ BILLBOARD 07 PAMPHLET/ LEAFLETS 08 RADIO 09 NGOs 10 OTHER DON'T KNOW 88 NO RESPONSE: 99

F21	Do you think that a person infected with HIV can be healthy-looking?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
F22	Would you be willing to work with someone you knew had HIV?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
F23	Would you agree to live in the same house as someone with HIV?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
F24	If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
F25	If a student has HIV but is not sick, should he or she be allowed to continue attending school?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
F26	If you knew a shopkeeper or food seller had HIV, would you buy food from them?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
F27	If a member of your family had HIV, would you want it to remain secret?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
F28	In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV/AIDS?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
F29	In Sri Lanka, can people get treatments for HIV/AIDS other than western drugs?	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99

I am now going to ask you some questions about your knowledge and attitudes about HIV/AIDS		YES 1 NO 2
F11	Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	DON'T KNOW 88 NO RESPONSE 99
F12	Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	YES 1 NO 2
F13	Can a person get the HIV virus from mosquito bites?	DON'T KNOW 88 NO RESPONSE 99
F14	Can a woman who has HIV pass on the disease to her unborn child?	YES 1 NO 2
F15	Can a woman who has HIV pass on the disease to her newborn child through breastfeeding?	DON'T KNOW 88 NO RESPONSE 99
F16	Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	YES 1 NO 2
F17	Can a person get HIV by sharing a meal with someone who is infected?	DON'T KNOW 88 NO RESPONSE 99
F18	Can a person get HIV by getting injections with a needle that was already used by someone else?	YES 1 NO 2
F19	Can a person get HIV from a transfusion of blood / blood products?	DON'T KNOW 88 NO RESPONSE 99
F20	Can a person get HIV by using the same toilet as someone who is HIV-positive?	YES 1 NO 2

SECTION G: ACCESS TO SERVICES

G1	Is it possible for you or someone in your community to get a confidential test to find out if you (they) are infected with HIV? By confidential, I mean that no one will know the result if you don't want them to know it.	YES 1 NO 2	DON'T KNOW 88 NO RESPONSE 99
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G9	Are you aware of any HIV/AIDS services available at your workplace?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
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SECTION H: INCOME & EXPENDITURE

H1	According to the following scale, Could you please tell me, approximately what is your monthly PERSONAL income? SHOW CARD	< 5,000 Rupees 1 5,000 – 10,000 Rupees 2 10,001 – 20,000 Rupees 3 20,001 – 30,000 Rupees 4 > 30,000 Rupees 5 DON'T KNOW 88 NO RESPONSE 99
H2	How many people are you supporting with your income?	NUMBER [] [] []
H3	What is your DAILY personal expenditure?	AMOUNT: _____ Rupees

SECTION I: NETWORK SIZE

I1	How many women do you know who offer sexual services in exchange for money, who know you, you have seen them in the past 4 weeks, and they also live in this area?	NUMBER OF WOMEN SEX WORKERS KNOWN [] [] [] [] []
----	--	---

**That is the end of our questionnaire.
Thank you very much for taking time to answer these questions.
We appreciate your help.**

G2	I don't want to know the result, but have you ever had an HIV test?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
G3	Did you voluntarily undergo the HIV test, or were you required to have the test?	VOLUNTARY 1 REQUIRED 2 OTHER _____
G4	Where did you get the HIV test?	DON'T KNOW 88 NO RESPONSE 99 SPECIAL STI CLINIC 1 GOVERNMENT HOSPITAL 2 PRIVATE CLINIC 3 PRIVATE HOSPITAL 4 OTHER _____
G5	Please do not tell me the result, but did you find out the result of your test?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
G6	When did you have your most recent HIV test?	WITHIN PAST 6 MONTHS 1 BETWEEN 6-12 MONTHS 2 BETWEEN 1-2 YEARS 2 BETWEEN 2-4 YEARS 3 MORE THAN 4 YEARS AGO 4 DON'T KNOW 88 NO RESPONSE 99
G7	If someone in your community has a sexually transmitted infection, where can they get confidential advice and treatment?	Y N DK NR AYURVEDIC PHYSICIAN 1 2 88 99 PHARMACY 1 2 88 99 PRIVATE CLINIC 1 2 88 99 GOVERNMENT HOSPITAL 1 2 88 99 SPECIAL STI CLINIC 1 2 88 99 OTHER _____
G8	If you needed help for a sexually transmitted infection, where would you prefer to go?	Y N DK NR AYURVEDIC PHYSICIAN 1 2 88 99 PHARMACY 1 2 88 99 PRIVATE CLINIC 1 2 88 99 GOVERNMENT HOSPITAL 1 2 88 99 SPECIAL STI CLINIC 1 2 88 99 OTHER _____

Annex 2

**Sample Questionnaire
Men who have sex with men**

Questionnaire ID number: MSM

Sri Lanka HIV/AIDS Behavioural Surveillance Survey 2006-2008

Location code (region, city, site)

Date ____/____/____

Interviewer: Code ____ Name: _____

THIS SURVEY IS FOR MEN WHO HAVE HAD SEX WITH AT LEAST ONE OTHER MAN IN THE PREVIOUS TWELVE MONTHS.

Introduction

"My name is... I'm working for MG Consultants in Sri Lanka in collaboration with the University of New South Wales in Australia. This study is being undertaken by the National HIV/AIDS Prevention Project in the Ministry of Health, Sri Lanka, and is funded by the World Bank. We are interviewing people here in [name of city, region or site] in order to find out about your knowledge of HIV and how you might use that knowledge in your sexual behaviour. Have you been interviewed in the past few weeks for this study?"

If the respondent has been interviewed before do not interview this person again. Tell them you cannot interview them a second time, thank them, and end the interview. If they have not been interviewed before, continue:

Consent

"I'm going to ask you some very personal questions that some people find difficult to answer. Your answers are completely confidential. Your name will not be written on this form and will never be used in connection with any of the information you tell me. You do not have to answer any questions that you do not want to answer, and you may end this interview at any time you want to. However, your honest answers to these questions will help us better understand what people think, say and do about certain kinds of behaviours. We would greatly appreciate your help in responding to this survey. The survey will take about 30 minutes. Would you be willing to participate?"

.....
(Signature of interviewer certifying that informed consent has been given verbally by respondent)

SECTION A: Background characteristics	SECTION E: STIs
SECTION B: Alcohol & drug use	SECTION F: Knowledge & attitudes about HIV/AIDS
SECTION C: Sexual history	SECTION G: Access to services
SECTION D: Male condom	SECTION H: Income & expenditure

SECTION A: BACKGROUND CHARACTERISTICS

A1	How old were you at your last birthday? IF PARTICIPANT IS UNSURE, ESTIMATE BEST ANSWER	AGE IN COMPLETED YEARS [_ _] DON'T KNOW 88 NO RESPONSE 99
A2	Have you ever attended school?	YES (BUT NOT STILL IN SCHOOL) 1 YES (STILL IN SCHOOL) 2 NO 3 NO RESPONSE 99
A3	What is the highest level of education you completed? (READ OUT) CIRCLE ONE	COMPLETED PRE-SCHOOL 1 COMPLETED PRIMARY 2 COMPLETED YEARS 6 TO 10 3 COMPLETED O-LEVEL 4 COMPLETED A-LEVEL 5 COMPLETED DIPLOMA 6 COMPLETED DEGREE 7 COMPLETED HIGHER DEGREE 8 OTHER _____
A4	Can you read and write?	NO RESPONSE 99 YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
A5	What religion are you? CIRCLE ONE	NO RELIGION 0 BUDDHIST 1 ROMAN CATHOLIC 2 OTHER CHRISTIAN 3 ISLAM 4 HINDU 5 OTHER _____
A6	To which ethnic group do you belong? CIRCLE ONE	DON'T KNOW 88 NO RESPONSE 99 SINHALESE 1 SRI LANKA TAMIL 2 INDIAN TAMIL 3 MOOR 4 BURGHER 5 MALAY 6 OTHER _____

A13	How would you describe where you live?	LIVE ALONE 1 2 88 99 CO-WORKERS 1 2 88 99 OTHER _____ TEMPORARY SHELTER 1 BOARDING HOUSE 2 PARENTS HOME 3 MY HOME 4 LODGING 5 LIVE ON THE STREET 6 OTHER _____ DON'T KNOW 88 NO RESPONSE 99
A14	How often in the past month did you listen to the RADIO?	NEVER 0 <input type="checkbox"/> A16 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99
A15	Which RADIO STATIONS do you mostly listen to?	LIST RADIO STATIONS LISTENED TO: _____ DON'T KNOW 88 NO RESPONSE 99
A16	How often in the past month did you watch TELEVISION?	NEVER 0 <input type="checkbox"/> A18 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99
A17	Which TELEVISION STATIONS do you mostly watch?	LIST TELEVISION STATIONS WATCHED: _____ DON'T KNOW 88 NO RESPONSE 99
A18	How often in the past month did you read a NEWSPAPER?	NEVER 0 <input type="checkbox"/> A20 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99

A7	In which district have you mostly lived in the past five years? CIRCLE ONE OF THE DISTRICTS	NO RESPONSE 99 AMPARA 1 ANURADHAPURA 2 BADULLA 3 BAITTCALOA 4 COLOMBO 5 GALLE 6 GAMPAHA 7 HAMBANTOTA 8 JAFFNA 9 KALUTARA 10 KANDY 11 KEGALLE 12 KILINOCHCHI 13 KURUNEGALA 14 MANNAR 15 MATARA 16 MONARAGALA 17 MATALE 18 MULLAHTIVU 19 NUWARA - ELIYA 20 POLONNARUWA 21 PUTTALAM 22 RATNAPURA 23 TRINCOMALEE 24 VAVUNIYA 25 OTHER _____ DON'T KNOW 88 NO RESPONSE 99
A8	Are you currently employed?	NOT EMPLOYED 0 PART TIME OR CASUAL EMPLOYED 1 FULL TIME EMPLOYED 2 DON'T KNOW 88 NO RESPONSE 99
A9	What is your occupation?	WRITE OCCUPATION HERE _____ DON'T KNOW 88 NO RESPONSE 99
A10	Have you ever been in a regular sexual relationship with a woman?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
A11	What is your current marital status? CIRCLE ONE	SINGLE (NEVER MARRIED) 1 LIVING TOGETHER BUT NOT MARRIED 2 MARRIED 3 DIVORCED / SEPARATED 4 WIDOWED 5 DON'T KNOW 88 NO RESPONSE 99
A12	Who do you live with? CIRCLE A RESPONSE FOR EACH OPTION	YES NO DK NR HUSBAND / WIFE 1 2 88 99 OTHER SEXUAL PARTNER 1 2 88 99 PARENTS 1 2 88 99 SIBLINGS 1 2 88 99 CHILDREN 1 2 88 99 OTHER RELATIVES 1 2 88 99 FRIENDS 1 2 88 99

B4	Some people have tried a range of different types of drugs. Which of the following, if any, have you tried? READ LIST	YES NO DK NR 1 2 88 99 Cannabis 1 2 88 99 Cocaine 1 2 88 99 Ecstasy 1 2 88 99 Amphetamines 1 2 88 99 Opium 1 2 88 99 Hashish 1 2 88 99 Pethidine 1 2 88 99 Codeine 1 2 88 99 Heroin 1 2 88 99 Methaqualone 1 2 88 99 Methadone 1 2 88 99 Benzodiazapines 1 2 88 99 Other	DON'T KNOW 88 NO RESPONSE 99
B5	In the past twelve months, have you taken any drugs (other than for the purpose of medical treatments)?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99	IF PARTICIPANT HAS NEVER USED ANY OF THESE DRUGS: <input type="checkbox"/> C1
B6	In the past twelve months, what drugs have you taken (other than for the purpose of medical treatments)? READ LIST	YES NO DK NR 1 2 88 99 Cannabis 1 2 88 99 Cocaine 1 2 88 99 Ecstasy 1 2 88 99 Amphetamines 1 2 88 99 Opium 1 2 88 99 Hashish 1 2 88 99 Pethidine 1 2 88 99 Codeine 1 2 88 99 Heroin 1 2 88 99 Methaqualone 1 2 88 99 Methadone 1 2 88 99 Benzodiazapines 1 2 88 99 Other	DON'T KNOW 88 NO RESPONSE 99

A19	Which NEWSPAPERS do you mostly read?	LIST NEWSPAPERS READ: _____ DON'T KNOW 88 NO RESPONSE 99
A20	How often in the past month did you read a MAGAZINE?	NEVER 0 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99
A21	Which MAGAZINES do you mostly read?	LIST MAGAZINES READ: _____ DON'T KNOW 88 NO RESPONSE 99
A22	How often in the past month did you use the INTERNET?	NEVER 0 ABOUT ONCE DURING THE MONTH 1 ABOUT ONCE A WEEK 2 ON MOST DAYS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99
A23	Which INTERNET SITES do you mostly visit?	LIST INTERNET SITES VISITED: _____ DON'T KNOW 88 NO RESPONSE 99

SECTION B: ALCOHOL & DRUG USE

B1	Have you ever had drinks containing alcohol?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
B2	In the past four weeks, how often have you had drinks containing alcohol? Would you say READ OUT	I NEVER DRINK ALCOHOL 0 AT LEAST ONCE A WEEK 1 LESS THAN ONCE A WEEK 2 NEVER IN THE LAST 4 WEEKS 3 EVERY DAY 4 DON'T KNOW 88 NO RESPONSE 99
B3	Have you ever smoked tobacco?	NO, NEVER 0 YES, CURRENTLY 1 YES, BUT STOPPED 2

C2	At what age did you first have sexual intercourse?	AGE IN YEARS [_ _]
C3	Was a condom used during the first time you had sexual intercourse? (1 mean a rubber object that is put on a man's penis before sex.) SHOW PICTURE OR SAMPLE OF ONE	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
C4	What was the age of the person with whom you first had sexual intercourse? IF PARTICIPANT IS UNSURE, ASK HER TO GIVE HER BEST GUESS	AGE IN YEARS [_ _]
C5	Have you had sexual intercourse in the past twelve months?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99

SEX WITH MEN

C6	In the past twelve months, have you had any sexual contact with another man, that is, have you done any of the following: oral sex, anal sex, or have you touched the penis of another man, or had another man touch your penis for sexual arousal or have you had thigh sex?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
C7	In the past twelve months, the last time you had sex with a male partner, what type of sex did you have? MULTIPLE ANSWERS POSSIBLE	OTHER Y N DK NR 'HANDSHAKE' (YOU MASTURBATED HIM) 1 2 88 99 'HANDSHAKE' (HE MASTURBATED YOU) 1 2 88 99 ORAL SEX (YOU SUCKED HIS PENIS) 1 2 88 99 ORAL SEX (HE SUCKED YOUR PENIS) 1 2 88 99 INTERCURAL SEX (HIS PENIS BETWEEN YOUR THIGHS) 1 2 88 99 INTERCURAL SEX (YOUR PENIS BETWEEN HIS THIGHS) 1 2 88 99 ANAL INTERCOURSE (YOUR PENIS INSIDE HIS ANUS) 1 2 88 99 ANAL INTERCOURSE (HIS PENIS INSIDE YOUR ANUS) 1 2 88 99

ANAL SEX WITH MEN

C8	Now please think about how many different men you have had anal intercourse with. That is, both the number where you have been the insertive partner (i.e. your penis inside your partner's anus) and the number where you have been the receptive partner (i.e. his penis inside your anus) in the past twelve months. READ OUT: Please take time to think about your answer to this question so that we can get the most accurate information possible. Remember this information is strictly confidential.	NUMBER WHERE INSERTIVE [_ _ _]
	How many men have you had anal intercourse with in the past twelve months where you were the insertive partner (i.e. your penis inside your partner's anus)?	

B7	Some people have tried injecting drugs using a syringe. Have you ever injected drugs (other than for the purpose of medical treatments)?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
B8	In the past twelve months have you injected drugs (other than for the purpose of medical treatments)?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
B9	In the past twelve months, what drugs have you injected (other than for the purpose of medical treatments)? READ LIST	HAVE NEVER INJECTED DRUGS 0 DON'T KNOW 88 NO RESPONSE 99
	READ LIST	
	Cannabis	YES NO DK NR
	Cocaine	1 2 88 99
	Ecstasy	1 2 88 99
	Amphetamines	1 2 88 99
	Opium	1 2 88 99
	Hashish	1 2 88 99
	Pethidine	1 2 88 99
	Codaine	1 2 88 99
	Heroin	1 2 88 99
	Methaqualone	1 2 88 99
	Methadone	1 2 88 99
	Benzodiazapines	1 2 88 99
	Other	
B10	How long after you first started taking drugs did you try injecting? IF LESS THAN 1 MONTH, RECORD 01 IN '# MONTHS'	# YEARS [_ _] PLUS # MONTHS [_ _] HAVE NEVER INJECTED DRUGS 0 DON'T KNOW 88 NO RESPONSE 99

SECTION C: SEXUAL HISTORY

	Now I am going to ask you some personal questions about sex	
C1	Have you ever had sexual intercourse? (For the purposes of this survey, 'sexual intercourse' is defined as vaginal or anal penetrative sexual intercourse).	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99

C12	The last time you had anal intercourse with your regular MALE partner, did you use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99 NO REGULAR MALE PARTNER -9 NO ANAL INTERCOURSE 0	<input type="checkbox"/> C15
C13	The last time your regular male partner performed oral sex on you (i.e. your partner sucked your penis), did you use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99 NO REGULAR MALE PARTNER -9 PARTNER DID NOT PERFORM ORAL SEX ON ME 0	<input type="checkbox"/> C15
C14	The last time you performed oral sex on your regular male partner (i.e. you sucked your partner's penis), did you use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99 NO REGULAR MALE PARTNER -9 DID NOT PERFORM ORAL SEX ON PARTNER 0	

NON-REGULAR MALE PARTNERS – PAST TWELVE MONTHS

IF PARTICIPANT INDICATED NO SEXUAL INTERCOURSE WITH NON-REGULAR PARTNERS IN C9, GO STRAIGHT TO QUESTION C18.	
Think about the male partners that you have had <u>anal intercourse</u> with, who were <u>not</u> your regular partners	
C15	In the past twelve months, how often did you use a condom for anal intercourse with those non-regular MALE partners? Would you say... READ LIST
	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99 NO NON-REGULAR MALE PARTNER -9 NO ANAL INTERCOURSE 0

C9	And how many where you were the <u>receptive partner</u> (i.e. his penis inside your anus)?	DON'T KNOW 88 NO RESPONSE 99 NUMBER WHERE RECEPTIVE --- --- --- --- DON'T KNOW 88 NO RESPONSE 99 NUMBER OF REGULAR PARTNERS --- --- --- --- DON'T KNOW 88 NO RESPONSE 99 NUMBER OF NON-REGULAR PARTNERS --- --- --- ---
	Of all the partners you have had <u>anal intercourse</u> with in the <u>past twelve months</u> , how many were: "Regular" (partners whom you considered to be your boyfriend or 'keep' or stable partner) "Non-regular" (partners other than your boyfriend)	

REGULAR MALE PARTNER – PAST TWELVE MONTHS

IF PARTICIPANT INDICATED NO SEXUAL INTERCOURSE WITH REGULAR PARTNERS IN C9, GO STRAIGHT TO QUESTION C13.	
Think about <u>anal intercourse</u> with your regular partner/s or stable partner or boyfriend...	
C10	In the past twelve months, how often did you and your regular MALE partner use a condom for anal intercourse? Would you say... READ LIST
	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99 NO REGULAR MALE PARTNER -9 NO ANAL INTERCOURSE 0
C11	In the past twelve months, those times that you and your regular MALE partner did not use a condom for anal intercourse, why didn't you use a condom? MULTIPLE ANSWERS POSSIBLE
	Y N DK NR NEVER HEARD OF CONDOMS 1 2 88 99 I DON'T KNOW HOW TO OBTAIN A CONDOM 1 2 88 99 I DIDN'T THINK IT WAS NECESSARY 1 2 88 99 I DIDN'T THINK OF IT 1 2 88 99 NOT AVAILABLE 1 2 88 99 TOO EXPENSIVE 1 2 88 99 PARTNER OBJECTED 1 2 88 99 DON'T LIKE THEM 1 2 88 99 USED OTHER PREVENTION METHODS 1 2 88 99 PARTNER WAS 'FAITHFUL' 1 2 88 99 CONDOMS TAKE AWAY PLEASURE 1 2 88 99 OTHER

	AT NIGHT CLUBS 1 2 88 99	
	OTHER _____	

USE OF LUBRICANTS FOR ANAL INTERCOURSE WITH MEN

ONLY ASK QUESTIONS C21 TO C23 IF CONDOMS WERE USED AT LEAST ONCE IN PAST TWELVE MONTHS. OTHERWISE GO STRAIGHT TO QUESTION C24.

Now I would like to ask you some questions about the use of lubricants during anal intercourse with men

C21	In the past twelve months when you used condoms, how often did you use lubricant for anal intercourse with your male partners? Would you say...	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4
C22	When using condoms, which lubricants did you use? PROBE AND RECORD ALL ANSWERS	Y N DK NR GEL 1 2 88 99 VASELINE 1 2 88 99 KY JELLY OR SIMILAR BRAND 1 2 88 99 HAND LOTION 1 2 88 99 VAGINAL GEL 1 2 88 99 BABY OIL 1 2 88 99 COOKING OIL 1 2 88 99 OTHER _____
C23	Those times that you did not use lubricants, why didn't you use lubricants? PROBE AND RECORD ALL ANSWERS	Y N DK NR PARTNER OBJECTED 1 2 88 99 AFRAID TO USE IT 1 2 88 99 CAN'T GET IT 1 2 88 99 DON'T LIKE LUBRICANTS 1 2 88 99 OTHER _____

C16	In the past twelve months, those times that you did not use a condom for anal intercourse with those non-regular MALE partners, why didn't you use a condom? MULTIPLE ANSWERS POSSIBLE	Y N DK NR NEVER HEARD OF CONDOMS 1 2 88 99 I DON'T KNOW HOW TO OBTAIN A CONDOM 1 2 88 99 I DIDN'T THINK IT WAS NECESSARY 1 2 88 99 I DIDN'T THINK OF IT 1 2 88 99 NOT AVAILABLE 1 2 88 99 TOO EXPENSIVE 1 2 88 99 PARTNER OBJECTED 1 2 88 99 DON'T LIKE THEM 1 2 88 99 USED OTHER PREVENTION METHODS 1 2 88 99 PARTNERS WERE 'FAITHFUL' 1 2 88 99 CONDOMS TAKE AWAY PLEASURE 1 2 88 99 OTHER _____
C17	The last time you had anal intercourse with a non-regular MALE partner, did you use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99 NO NON-REGULAR MALE PARTNER -9 NO ANAL INTERCOURSE WITH PARTNERS 0 C20
C18	The last time a non-regular male partner performed oral sex on you (i.e. your partner sucked your penis), did you use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99 NO NON-REGULAR MALE PARTNER -9 PARTNER DID NOT PERFORM ORAL SEX ON ME 0 C20
C19	The last time you performed oral sex on a non-regular male partner (i.e. you sucked your partner's penis), did you use a condom?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99 NO NON-REGULAR MALE PARTNER -9 DID NOT PERFORM ORAL SEX ON PARTNER 0

MEETING MALE SEXUAL PARTNERS

C20	Where do you meet your MALE sexual partners? MULTIPLE ANSWERS POSSIBLE	Y N DK NR ON THE INTERNET 1 2 88 99 THROUGH FRIENDS 1 2 88 99 IN TOURIST AREAS 1 2 88 99 IN PUBLIC TOILETS 1 2 88 99 ON THE STREET 1 2 88 99 IN GAY CRUISING AREAS 1 2 88 99 AT DANCE PARTIES 1 2 88 99
	Now I would like to ask you some questions about your female partners...	
C24	Have you ever had sexual intercourse with a FEMALE? For the purposes of this survey, "sexual intercourse," is defined as vaginal or anal penetrative sexual intercourse.	YES 1 NO 2 C34

FEMALE PARTNERS EVER

C36	In the past twelve months, those times that you did not use a condom for vaginal intercourse with those non-regular female partners, why didn't you use a condom? MULTIPLE ANSWERS POSSIBLE	NEVER HEARD OF CONDOMS I DON'T KNOW HOW TO OBTAIN A CONDOM I DIDN'T THINK IT WAS NECESSARY I DIDN'T THINK OF IT NOT AVAILABLE TOO EXPENSIVE PARTNER OBJECTED DONT' LIKE THEM USED OTHER CONTRACEPTIVE USED OTHER PREVENTION METHODS PARTNERS WERE FAITHFUL? CONDOMS TAKE AWAY PLEASURE OTHER	Y N DK NR 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99
C37	The last time you had vaginal intercourse with a non-regular female partner, did you use a condom?	YES 1 NO 2 DONT' KNOW 88 NO RESPONSE 99 NO NON-REGULAR FEMALE PARTNER -9 NO VAGINAL INTERCOURSE 0	YES 1 NO 2 DONT' KNOW 88 NO RESPONSE 99 NO NON-REGULAR FEMALE PARTNER -9 NO VAGINAL INTERCOURSE 0
C38	In the past twelve months, how often did you use a condom for anal intercourse with your non-regular female partners? Would you say... READ LIST	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DONT' KNOW 88 NO RESPONSE 99 NO NON-REGULAR FEMALE PARTNER -9 NO ANAL INTERCOURSE 0	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DONT' KNOW 88 NO RESPONSE 99 NO NON-REGULAR FEMALE PARTNER -9 NO ANAL INTERCOURSE 0
C39	In the past twelve months, those times that you did not use a condom for anal intercourse with those non-regular female partners, why didn't you use a condom? MULTIPLE ANSWERS POSSIBLE	NEVER HEARD OF CONDOMS I DON'T KNOW HOW TO OBTAIN A CONDOM I DIDN'T THINK IT WAS NECESSARY I DIDN'T THINK OF IT NOT AVAILABLE TOO EXPENSIVE PARTNER OBJECTED DONT' LIKE THEM USED OTHER PREVENTION METHODS PARTNERS WERE FAITHFUL? CONDOMS TAKE AWAY PLEASURE OTHER	Y N DK NR 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99 1 2 88 99

C33	The last time you had anal intercourse with your regular female partner, did you use a condom?	YES 1 NO 2 DONT' KNOW 88 NO RESPONSE 99 NO REGULAR FEMALE PARTNER -9 NO ANAL INTERCOURSE 0	YES 1 NO 2 DONT' KNOW 88 NO RESPONSE 99 NO REGULAR FEMALE PARTNER -9 NO ANAL INTERCOURSE 0
C34	The last time your regular female partner performed oral sex on you (i.e. your partner sucked your penis), did you use a condom?	YES 1 NO 2 DONT' KNOW 88 NO RESPONSE 99 NO REGULAR FEMALE PARTNER -9 PARTNER DID NOT PERFORM ORAL SEX ON ME 0	YES 1 NO 2 DONT' KNOW 88 NO RESPONSE 99 NO REGULAR FEMALE PARTNER -9 PARTNER DID NOT PERFORM ORAL SEX ON ME 0

NON-REGULAR FEMALE PARTNERS PAST TWELVE MONTHS

IF PARTICIPANT INDICATED NO SEXUAL INTERCOURSE WITH NON-REGULAR FEMALE PARTNER IN C27, GO STRAIGHT TO QUESTION C41.	
Think about your non-regular FEMALE partner/s (that is, those partners other than your wife or girlfriend)...	
C35	In the past twelve months, how often did you use a condom for vaginal intercourse with your non-regular female partners? Would you say... READ LIST
	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DONT' KNOW 88 NO RESPONSE 99 NO NON-REGULAR FEMALE PARTNER -9 NO VAGINAL INTERCOURSE 0

		NO RESPONSE .99
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SECTION D: MALE CONDOM

ONLY ASK QUESTIONS D1 AND D2 OF PEOPLE WHO INDICATED NO CONDOM USE IN THE QUESTIONS ABOVE		CONDOM USE INDICATED IN SECTION C	<input type="checkbox"/> D3
D1	Prior to now, have you ever seen a male condom? (I mean a rubber object that is put on a man's penis before sex.) SHOW PICTURE OR SAMPLE OF ONE IF YOU ALREADY KNOW THE ANSWER IS 'YES', DO NOT ASK THE QUESTION – SIMPLY RECORD 'YES'	YES 1 NO 2 DON'T KNOW .88 NO RESPONSE .99	<input type="checkbox"/> D3
D2	Have you <u>ever</u> used a male condom during sex with any partner? IF YOU ALREADY KNOW THE ANSWER IS 'YES', DO NOT ASK THE QUESTION – SIMPLY RECORD 'YES'	YES 1 NO 2 DON'T KNOW .88 NO RESPONSE .99	
D3	Do you know of any place or person from which you can obtain male condoms?	YES 1 NO 2 DON'T KNOW .88 NO RESPONSE .99	
D4	Do you feel comfortable enough to obtain male condoms?	YES 1 NO 2 DON'T KNOW .88 NO RESPONSE .99	

SECTION E: STIs

E1	Have you ever heard of diseases that can be transmitted sexually?	YES 1 NO 2 DON'T KNOW .88 NO RESPONSE .99	<input type="checkbox"/> E4
E2	Can you describe any symptoms of sexually transmitted infections (STIs) in women? Any others? DO NOT READ OUT THE SYMPTOMS MULTIPLE ANSWERS POSSIBLE	Y N DK NR ABDOMINAL PAIN 1 2 .88 .99 GENITAL DISCHARGE 1 2 .88 .99 FOUL-SMELLING DISCHARGE 1 2 .88 .99 BURNING PAIN ON URINATION 1 2 .88 .99 GENITAL ULCERS / SORES 1 2 .88 .99 SWELLING IN GROIN AREA 1 2 .88 .99 ITCHING 1 2 .88 .99 OTHER _____	

C40	The last time you had anal intercourse with a non-regular female partner, did you use a condom?	YES 1 NO 2 DON'T KNOW .88 NO RESPONSE .99	NO NON-REGULAR FEMALE PARTNER .9 NO ANAL INTERCOURSE 0 <input type="checkbox"/> C42
C41	The last time your non-regular female partner performed oral sex on you (i.e. your partner sucked your penis), did you use a condom?	YES 1 NO 2 DON'T KNOW .88 NO RESPONSE .99	NO NON-REGULAR FEMALE PARTNER .9 PARTNER DID NOT PERFORM ORAL SEX ON ME 0

CLOSENESS TO COMMUNITY

C42	How many of your friends are gay or homosexual men?	NONE 1 A FEW 2 SOME 3 MOST 4 ALL 5 DON'T KNOW .88 NO RESPONSE .99
C43	How many of your friends are bisexual men?	NONE 1 A FEW 2 SOME 3 MOST 4 ALL 5 DON'T KNOW .88 NO RESPONSE .99
C44	How much of your free time is spent with gay, homosexual, or bisexual men?	NONE 1 A LITTLE 2 SOME 3 A LOT 4 ALL 5 DON'T KNOW .88 NO RESPONSE .99

INVOLUNTARY SEXUAL RELATIONS

C45	In the last twelve months did any of your sexual partner(s) force you to have sex with them even though you did not want to have sex?	YES 1 NO 2 DON'T KNOW .88
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F2	How did you find out about HIV/AIDS? MULTIPLE ANSWERS POSSIBLE	Y N DK NR SCHOOL 1 2 88 99 HEALTH SERVICES 1 2 88 99 WORKPLACE 1 2 88 99 FRIENDS/FAMILY 1 2 88 99 TELEVISION 1 2 88 99 NEWSPAPER/ MAGAZINE 1 2 88 99 POSTERS/ BILLBOARD 1 2 88 99 PAMPHLET/ LEAFLETS 1 2 88 99 RADIO 1 2 88 99 NGOs 1 2 88 99 OTHER _____
F3	From which ONE source of information did you acquire the most thorough understanding of HIV/AIDS? CHOOSE ONE ANSWER ONLY	SCHOOL 01 HEALTH SERVICES 02 WORKPLACE 03 FRIENDS/FAMILY 04 TELEVISION 05 NEWSPAPER/ MAGAZINE 06 POSTERS/ BILLBOARD 07 PAMPHLET/ LEAFLETS 08 RADIO 09 NGOs 10 OTHER _____
F4	Have you ever discussed HIV or AIDS with any of these partners?	YES, ALL 1 YES, SOME 2 NO, NONE 3 DON'T KNOW 88 NO RESPONSE 99
F5	Have any of these partners ever told you their HIV status?	YES, ALL 1 YES, SOME 2 NO, NONE 3 DON'T KNOW 88 NO RESPONSE 99
F6	Do you know anyone who is infected with HIV or who has died of AIDS?	YES 1 NO 2 <input type="checkbox"/> F8 DON'T KNOW 88

E3	Can you describe any symptoms of STIs in men? Any others? DO NOT READ OUT THE SYMPTOMS MULTIPLE ANSWERS POSSIBLE	Y N DK NR GENITAL DISCHARGE 1 2 88 99 BURNING PAIN ON URINATION 1 2 88 99 GENITAL ULCERS / SORES 1 2 88 99 SWELLING IN GROIN AREA 1 2 88 99 ITCHING 1 2 88 99 OTHER _____
E4	Have you had a genital discharge in the past twelve months?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
E5	Have you had a genital ulcer / sore in the past twelve months?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
E6	Is it possible to have an STI without there being any symptoms?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
E7	Have you ever had STI symptoms?	YES 1 NO 2 <input type="checkbox"/> F1 DON'T KNOW 88 NO RESPONSE 99
E8	The last time you had STI symptoms what did you do? MULTIPLE ANSWERS POSSIBLE	Y N DK NR DID NOTHING 1 2 88 99 TALKED TO FRIEND 1 2 88 99 VISITED GENERAL PRACTITIONER 1 2 88 99 VISITED TRADITIONAL PRACTITIONER 1 2 88 99 VISITED HEALTH CARE WORKER 1 2 88 99 VISITED STD CLINIC 1 2 88 99 VISITED GOVERNMENT HOSPITAL 1 2 88 99 CONSULTED SPECIALIST 1 2 88 99 GOT MEDICINE FROM PHARMACY 1 2 88 99 OTHER _____

SECTION F: KNOWLEDGE AND ATTITUDES ABOUT HIV / AIDS

I am now going to ask you some questions about your knowledge and attitudes about HIV/AIDS	
F1	Have you ever heard of HIV or the disease called AIDS? YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99

F12	Can people protect themselves from getting HIV sexually by using a condom correctly every time they have sex?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F13	Can a person get the HIV virus from mosquito bites?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F14	Can a woman who has HIV pass on the disease to her unborn child?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F15	Can a woman who has HIV pass on the disease to her newborn child through breastfeeding?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F16	Can people protect themselves from getting HIV sexually by abstaining from sexual intercourse?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F17	Can a person get HIV by sharing a meal with someone who is infected?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
18	Can a person get HIV by getting injections with a needle that was already used by someone else?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F19	Can a person get HIV from a transfusion of blood / blood products?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F20	Can a person get HIV by using the same toilet as someone who is HIV-positive?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99

F7	Do you have a close relative or close friend who is infected with HIV or has died of AIDS?	NO RESPONSE 99 YES, A CLOSE RELATIVE 1 YES, A CLOSE FRIEND 2 NO 3 DON'T KNOW 88 NO RESPONSE 99
F8	How likely do you think it is that you yourself will contract HIV/AIDS? Would you say there is no risk you will get HIV or some risk of you getting HIV?	NO RISK 1 SOME RISK 2 DON'T KNOW 88 NO RESPONSE 99
F9	Why do you think you are at some risk of contracting HIV? MULTIPLE ANSWERS POSSIBLE	Y N DK NR Have had many partners 1 2 88 99 Do not always use condoms 1 2 88 99 Have used intravenous drugs 1 2 88 99 Partner has other partners 1 2 88 99 Blood transfusions/unsafe injection 1 2 88 99 Have had sex with persons who I think has HIV 1 2 88 99 have been in contact with persons with HIV 1 2 88 99 AFTER ANSWERING THIS QUESTION
F10	Why do you think you have no risk of contracting HIV? MULTIPLE ANSWERS POSSIBLE	Y N DK NR Not sexually active 1 2 88 99 Have only one partner 1 2 88 99 Trust my partner 1 2 88 99 Always use condoms 1 2 88 99 Always use condoms with people I don't know well 1 2 88 99 Do not use intravenous drugs 1 2 88 99 Partner is faithful 1 2 88 99 No blood transfusions / unsafe injections 1 2 88 99 Only those with many partners are at risk 1 2 88 99 Have not been in contact with persons with HIV 1 2 88 99
F11	I am now going to ask you some questions about your knowledge and attitudes about HIV/AIDS. Can HIV be transmitted from an infected person to their uninfected partner during sexual intercourse?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99

SECTION G: ACCESS TO SERVICES

G1	Is it possible for you or someone in your community to get a confidential test to find out if you (they) are infected with HIV? By confidential, I mean that no one will know the result if you don't want them to know it.	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
G2	I don't want to know the result, but have you ever had an HIV test?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99 VOLUNTARY 1 REQUIRED 2 OTHER _____ DON'T KNOW 88 NO RESPONSE 99
G3	Did you voluntarily undergo the HIV test, or were you required to have the test?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
G4	Where did you get the HIV test?	SPECIAL STI CLINIC 1 GOVERNMENT HOSPITAL 2 PRIVATE CLINIC 3 PRIVATE HOSPITAL 4 OTHER _____ DON'T KNOW 88 NO RESPONSE 99
G5	Please do not tell me the result, but did you find out the result of your test?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
G6	When did you have your most recent HIV test?	WITHIN PAST 6 MONTHS 1 BETWEEN 6-12 MONTHS 2 BETWEEN 1-2 YEARS 3 BETWEEN 2-4 YEARS 4 MORE THAN 4 YEARS AGO 5 DON'T KNOW 88 NO RESPONSE 99

F21	Do you think that a person infected with HIV can be healthy-looking?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F22	Would you be willing to work with someone you knew had HIV?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F23	Would you agree to live in the same house as someone with HIV?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F24	If a relative of yours became ill with HIV, would you be willing to care for him or her in your household?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F25	If a student has HIV but is not sick, should he or she be allowed to continue attending school?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F26	If you knew a shopkeeper or food seller had HIV, would you buy food from them?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F27	If a member of your family had HIV, would you want it to remain secret?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F28	In Sri Lanka, are there new drugs that a doctor can prescribe to people infected with HIV/AIDS?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99
F29	In Sri Lanka, can people get treatments for HIV/AIDS other than western drugs?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99

G7	If someone in your community has a sexually transmitted infection, where can they get confidential advice and treatment? CIRCLE A RESPONSE FOR EACH OPTION	Y N DK NR AYURVEDIC PHYSICIAN 1 2 88 99 PHARMACY 1 2 88 99 PRIVATE CLINIC 1 2 88 99 GOVERNMENT HOSPITAL 1 2 88 99 STI CLINIC 1 2 88 99 SPECIALIST CHANNELLING SERVICE 1 2 88 99 OTHER _____
G8	If you needed help for a sexually transmitted infection, where would you prefer to go? CIRCLE A RESPONSE FOR EACH OPTION	Y N DK NR AYURVEDIC PHYSICIAN 1 2 88 99 PHARMACY 1 2 88 99 PRIVATE CLINIC 1 2 88 99 GOVERNMENT HOSPITAL 1 2 88 99 STI CLINIC 1 2 88 99 SPECIALIST CHANNELLING SERVICE 1 2 88 99 OTHER _____
G9	Are you aware of any HIV/AIDS services available at your workplace?	YES 1 NO 2 DON'T KNOW 88 NO RESPONSE 99

SECTION H: INCOME & EXPENDITURE

H1	According to the following scale, Could you please tell me, approximately what is your monthly PERSONAL income? SHOW CARD	< 5,000 Rupees 1 5,000 – 10,000 Rupees 2 10,001 – 20,000 Rupees 3 20,001 – 30,000 Rupees 4 > 30,000 Rupees 5 DON'T KNOW 88 NO RESPONSE 99 NUMBER [— — —]
H2	Including yourself, how many people are you supporting with your income?	
H3	What is your DAILY personal expenditure?	AMOUNT: _____ Rupees

That is the end of our questionnaire.

Thank you very much for taking time to answer these questions.
We appreciate your help.