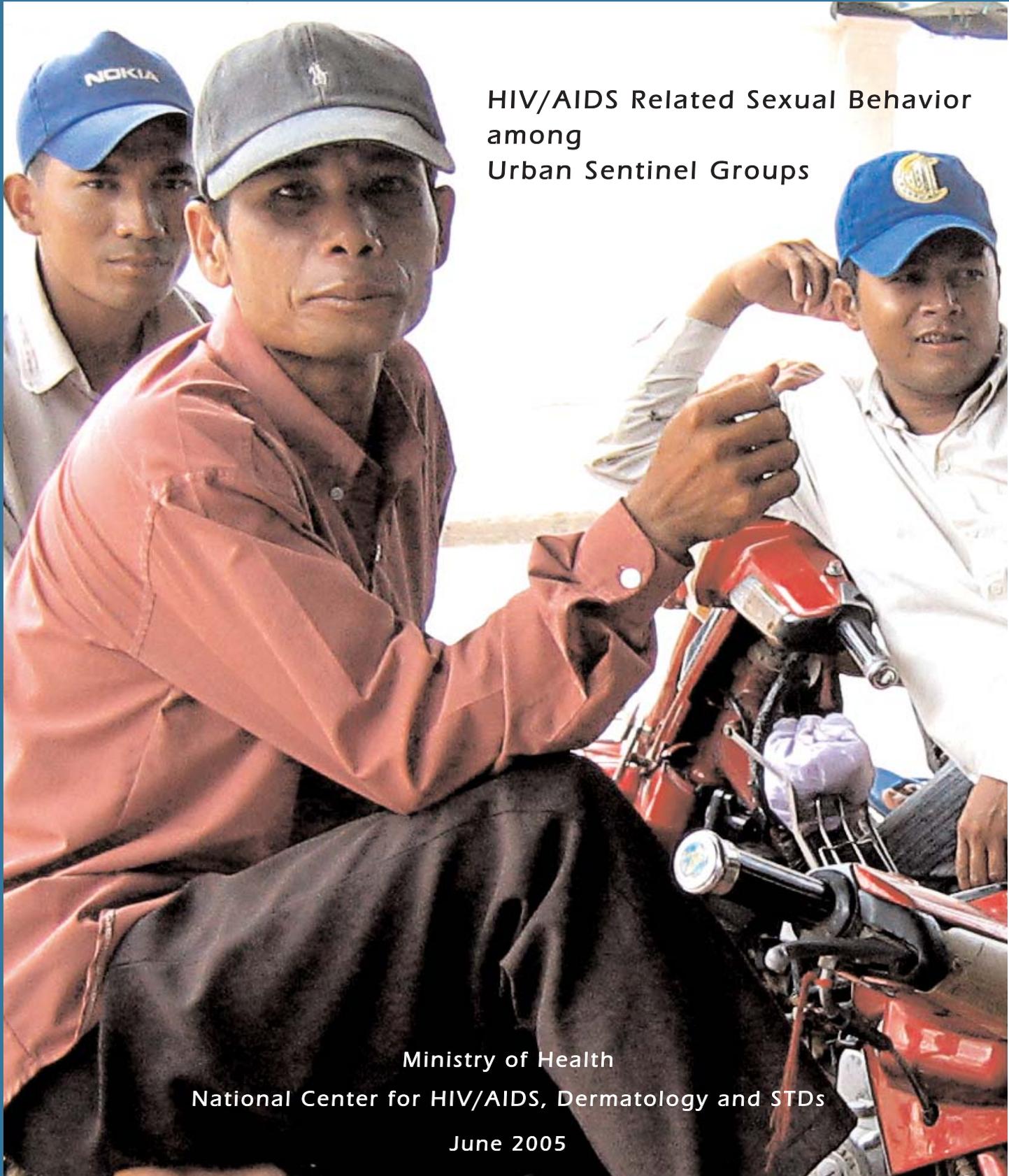


# Cambodia 2003 Behavioral Surveillance Survey BSS

HIV/AIDS Related Sexual Behavior  
among  
Urban Sentinel Groups



Ministry of Health  
National Center for HIV/AIDS, Dermatology and STDs

June 2005

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# CONTENTS

<b>BSS Team</b>	2
<b>List of Abbreviations</b>	8
<b>Aknowledgements</b>	8
<b>Foreword</b>	9
<b>Executive Summary</b>	11
<b>I Introduction</b>	17
<b>II Objectives of BSS 2003</b>	19
<b>III Background Information on Previous Rounds of BSS</b>	21
<b>IV Methodology</b>	23
1 Sites	23
2 Sentinel Groups	23
3 Sample Size	25
4 Sampling Procedures	26
5 Operational Procedures	27
6 Data Entry and Analysis	28
<b>V Results</b>	29
1 Sample Size and Refusals	29
2 Female Sentinel Groups	30
2.1 Demographic characteristics	30
2.2 Sexual initiation and history of commercial sex	32
2.3 Sex work conditions	34
2.4 Work history	37
2.5 Sweethearts and non-commercial partners	38
2.6 Condom use	40
2.7 Sexually transmitted infections & reproductive health	42
2.8 Sources of information about HIV/AIDS	45
2.9 HIV testing	46
2.10 Attitudes regarding people living with HIV/AIDS	48
2.11 Drug abuse	50

# CONTENTS

<b>3</b>	<b>Male Sentinel Groups</b>	<b>50</b>
3.1	Demographic characteristics	50
3.2	Sexual initiation and sexual behaviors	52
3.3	Sweethearts and non-commercial non-marital sexual partners	53
3.4	Paid sex	56
3.5	Condom use	59
3.6	Care seeking behaviors related to sexually transmitted infections	62
3.7	Sources of HIV/AIDS information	64
3.8	HIV Testing	66
3.9	Attitudes towards HIV/AIDS	69
3.10	Drug abuse	71
<b>VI.</b>	<b>Trends BSS I to VI: 1997 - 2003</b>	<b>73</b>
1	Introduction	73
2	Sample Sizes from BSS I to VI	74
3	Behavior Change among Sex-Workers	74
4	Behavior Change among Male Sentinel Groups	78
<b>VII.</b>	<b>Conclusion and Recommendations</b>	<b>83</b>
	<b>Annex 1: Questionnaire Female Sex Workers</b>	<b>89</b>
	<b>Annex 2: Questionnaire Indirect Female Sex Workers</b>	<b>93</b>
	<b>Annex 3: Questionnaire Men</b>	<b>97</b>

# TABLES

<b>Table 1</b>	Background information of BSS from 1997 to 2003: provinces covered, sentinel groups, and overall sample size	21
<b>Table 2</b>	Proposed sample size by provinces/cities: BSS 2003	26
<b>Table 3</b>	Exact sample size collected for BSS 2003	28
<b>Table 4</b>	Refusal cases by sentinel group and by province	29
<b>Table 5</b>	Demographic characteristics of DFSWs and IDFSWs	32
<b>Table 6</b>	Sexual initiation among DFSWs and IDFSWs	33
<b>Table 7</b>	Sex work conditions among direct female sex worker	35
<b>Table 8</b>	Sex work conditions among IDFSW	36
<b>Table 9</b>	Non commercial sex patterns among female sentinel groups	39
<b>Table 10</b>	Female sentinel groups having children, having lost children and contraceptive method currently used	44
<b>Table 11</b>	Female sex workers ever tested for HIV, facility used at last test and willingness to be tested in the future	47
<b>Table 12</b>	Proportion of female sex workers reporting being counseled at last HIV testing, by testing facility	48
<b>Table 13</b>	Female sentinel groups knowing PLHA and attitudes towards PLHA	49
<b>Table 14</b>	Demographic characteristics among male groups	53
<b>Table 15</b>	Frequency of giving money to sweetheart among males from sentinel groups reporting having had a sweetheart in the past year	54
<b>Table 16</b>	Male sentinel groups: fees paid to FSWs, place where last paid sex took place, and frequency of visits to FSWs	56
<b>Table 17</b>	Details of sweetheart relationships among male sentinel groups	57
<b>Table 18</b>	Reasons for taking last HIV test among male sentinel group ever tested for HIV apart from those tested during HSS	69
<b>Table 19</b>	Attitudes towards people living with HIV/AIDS	70
<b>Table 20</b>	Sample sizes used for trend analysis from BSS I to VI	74
<b>Table 21</b>	Trends 1997 to 2003 among DFSW and beer promoters: demographic characteristics, sexual initiation, working duration, health seeking behaviors, knowing PLHA and having been tested for HIV.	75
<b>Table 22</b>	Trends 1997 to 2003 among military and police: demographic characteristics, premarital sex, and number of sexual partners	79
<b>Table 23</b>	Trends 1997 to 2003 among moto-taxi drivers: demographic characteristics, premarital sex, and number of sexual partners	80

# FIGURES

<b>Figure 1</b>	Sentinel groups (n=4,105) and their role in the Cambodian HIV transmission dynamic	24
<b>Figure 2</b>	Previous employment reported by DFSWs and IDFSWs	37
<b>Figure 3</b>	Consistent condom use by type of partner: in past week among DFSWs and in past 3 months among IDFSWs	40
<b>Figure 4</b>	Reasons reported for not using condoms with sweethearts among those who ever had sex with a sweetheart	41
<b>Figure 5</b>	Reported care seeking behaviors at last episode of vaginal discharge among sex workers reporting seeking care following an episode of vaginal discharge in the past year	43
<b>Figure 6</b>	Proportion of female sentinel groups who received HIV/AIDS information by type of media	45
<b>Figure 7</b>	Facility used at last HIV test by female sentinel groups ever tested last for HIV apart from those tested during HSS	47
<b>Figure 8</b>	Sweetheart (SH) relationships and sex with sweetheart among male sentinel groups, by duration since last exposure	55
<b>Figure 9</b>	Proportion of male groups reporting sex with sex workers in the past year by age, among those who ever had sex	58
<b>Figure 10</b>	Types of paid sexual partners visited by those who had paid sex in the past year	59
<b>Figure 11</b>	Consistent condom use in the past three months by type of partner among male sentinel groups	61
<b>Figure 12</b>	First health care provider sought at last episode of urethral discharge in the past year	63
<b>Figure 13</b>	Sources of HIV/AIDS information by male sentinel group in the past 6 months	65
<b>Figure 14</b>	Male sentinel groups: Providers of face to face information on HIV/AIDS in the past 6 months	66
<b>Figure 15</b>	Male sentinel groups never tested for HIV, tested in public or private structures	67
<b>Figure 16</b>	Facility used for last HIV testing by male sentinel group who have ever been tested, except those tested during HSS	68

<b>Figure 17</b>	Trends 1997 - 2003: Virgins and sex trade in the past year among beer promoters	76
<b>Figure 18</b>	Trends 1997 - 2003: Consistent condom use with clients among DFSWs, beer-promoters and karaoke workers	77
<b>Figure 19</b>	Trends 1997 - 2003: Proportion of beer promoters and brothel based sex workers who had sex with a sweetheart in the past year	77
<b>Figure 20</b>	Trends 1997 - 2003: Consistent condom use with sweetheart in the past 3 months among DFSW, and in the past year among beer-promoters	78
<b>Figure 21</b>	Trends 1997 - 2003: Sex with non marital partners among male sentinel groups in past year	81
<b>Figure 22</b>	Consistent condom use with sex-workers in the past 3 months, by male sentinel group	82
<b>Figure 23</b>	Trends 1997 - 2003: Reported urethral discharge in the past year among male sentinel groups	82

# ABBREVIATIONS

BSS	Behavioral Surveillance Survey
DFSW	Direct Female Sex Worker
IDFSW	Indirect Female Sex Worker
FHI	Family Health International
FSW	Female Sex Worker
HSS	HIV Surveillance Survey
NCHADS	National Center for HIV/AIDS, Dermatology and STD's
NGO	Non-Governmental Organization
PAO	Provincial AIDS Office
PLHA	Persons Living with HIV/AIDS
PSI	Population Service International
SH	Sweetheart
SSS	STI Surveillance Survey
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing

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# FOREWORD

Cambodia is one of the very few countries that have successfully turned around its HIV epidemic. The multiple mechanisms that have led to this success have been documented by behavioral surveys regularly conducted among women at risk for HIV and occupational male groups serving as proximate for clients of sex workers. The National Center for HIV/AIDS, Dermatology and STDs (NCHADS) has included surveillance in its portfolio of activities since 1996 and has shaped the national strategy to control HIV/AIDS based on evidence gathered through surveillance. Behavioral surveys have provided key information to develop appropriate messages to the vulnerable groups. In addition behavioral surveys monitor changes in behaviors among sentinel groups, which serve as measure of impact for the large scale interventions focusing on: HIV/AIDS education to the groups at risk for HIV/AIDS, control of STIs among high risk groups, condom use promotion in non-marital sex, and promotion of individual's access to their sero-status.

This publication presents the results of the 6th round of behavioral surveillance which was conducted in 2003. It shows that consistent use of condoms in paid sex as reported by brothel based sex workers and their clients keeps on rising although the level was already very high in 2001. The uptake of STI and VCT services is also on the rise among brothel based sex workers suggesting that national programs were successful on these issues. Indirect sex workers, however, remain too frequently unprotected while having sex either with clients or sweethearts. The decrease in self reported urethral discharge among male sentinel groups suggest that protected sex have impacted the epidemiology of STI in Cambodia.

Finally, on behalf of the National Center for HIV/AIDS, Dermatology and STDs, I would like to express my gratitude to all those who contributed to this survey, and particularly to the respondents who have disclosed personal information for the benefit of their country.

Phnom Penh, .....



Dr. Mean Chhi Vun  
Director of NCHADS



# Executive Summary

In Cambodia, behavioral surveillance surveys (BSS) have been conducted regularly since 1997. These surveys have gathered data on sexual behaviors among brothel based sex workers, women working for beer companies, police, military and moto-taxi drivers in the same five provinces using a consistent methodology. For this year round (BSS VI), five new provinces were added to the sample. These five additional provinces, however, were not included in the trend analysis in order to ensure comparability of the results. In all BSS, individuals were selected through stratified cluster sampling except for moto-taxi drivers who were selected through time-location sampling. Strata were the provinces and clusters were brothels, beer companies, military battalions, or police posts. For moto-taxi drivers clusters were time slots of consistent length in lively areas of the cities. Overall refusal rates among sentinel groups were low: less than 1% in all groups except the moto-taxi driver in which it was 2%.

## DFSWs

1308 brothel based sex workers (direct female sex workers: DFSW) were interviewed. DFSW were on average 23.2 years of age and most reported first sex at marriage, at age 17 but one third initiated their sexuality by selling their virginity in a brothel. The turnover among brothel based sex workers is high. 80% have been in the current brothel for less than a year, and 23% for less than a month. Therefore, brothel based sex workers appear to be a very volatile group because of constant movements in and out of the group. Most have been selling sex for less than a year and had spent less than 5 months in the current brothel, suggesting that they work in different establishments even though they recently moved in the profession. Half of them are migrants since they have been living in the current city for less than a year, which suggests that they sell sex far from their home town. Half had another job prior to brothel work, and a quarter had been working in a karaoke bar prior to brothel based sex work.

The majority of DFSWs had 2 to 5 clients in the previous day and about 80 clients in the past month. 57% reported having a regular client and half reported having had a sweetheart in the past year. DFSWs' sweethearts were mostly laborers or sellers. Condoms were available at their working place and almost all reported using condoms consistently with their clients (96%) and even with their regular clients (93%). With sweethearts, the practice of consistently using condoms dropped to 57%.

40% reported an episode of vaginal discharge in the past year. Most had it treated in a public hospital and only 5% did not seek any treatment. Almost all DFSW (93%) had received information on HIV/AIDS in the past 6 months through media or trainings. In the past 6 months, 89% of DFSWs had received some information on HIV/AIDS from professional staff: including mostly PAO, NGOs, and peer educators. Half of the group had ever sought a HIV test, which shows a concern for HIV infection. Half of those tested sought their HIV test at a VCT.

### **IDFSWs**

648 beer promoters and 604 karaoke workers were interviewed. Beer promoters were older than karaoke workers (mean age 25 versus 22). While karaoke workers reported migrating as often as DFSWs (35% of beer promoters and 53% of karaoke workers had spent less than a year in the current city), fewer beer promoters were recent migrants: as half had spent at least 3 years in the current city. IDFSWs had first sex at marriage, on average at age 18, which is one year later than DFSWs. 6% of beer promoters and 21% of karaoke workers never had sex and were, therefore misclassified as sex-workers. Only 40% of beer promoters and 53% of karaoke workers acknowledged having sold sex in the past year. Karaoke workers had more sexual partners than beer promoters (2 versus 1 paying partner in the past month, respectively) but their number of paying partners remained low compared with the 80 clients monthly of DFSWs. While karaoke workers had stayed in average for 7 months in their current establishment, beer promoters had stayed for 14 months at their current work place. Half of IDFSWs had sex with a sweetheart in the past year. IDFSWs were mostly married with moto-taxi drivers but their sweethearts were government officials or businessmen. Karaoke workers were more likely than beer promoters to have sweethearts from modest socio economic background such as laborers or students. More than 80% of IDFSWs reported using condoms consistently with clients but only 66% did so with their sweetheart.

43% of beer promoters and 35% of karaoke workers reported an episode of vaginal discharge in the past year. Only one third of IDFSW (compared with two thirds of DFSWs) sought treatment at a clinic. More than a third either did not seek any treatment or sought treatment from traditional healers. More than 80% of IDFSWs had received some HIV/AIDS information in the past 6 months and 70% had been reached by some trained staff. 62% of beer promoters and 41% of karaoke workers had sought HIV testing, mostly at VCT.

### Military

675 military men were included in the survey. They were married (72%) and were aged 36 on average. One third had spent at least a month away from home in the past year, but they were not subject to permanent migration (87% had been living in the current province for more than 5 years). Their mean age at first sex was 23 years. Almost all respondents ever had sex and majority have had premarital sex. Half have had more than 10 partners in their lifetime. 9% had sex with a sweetheart in the past year and 8% had casual sexual partners in the past year. About one third had paid for sex in the past year. One quarter of those who had visited sex workers in the past month went to the brothel more than twice. The majority (81%) had drunk alcohol at last visit to sex workers. Consistent condom use in paid sex was high and was consistent with sex workers' reports. While single men seldom use condoms with their sweetheart, half of the married men had protected sex in this relationship. Only 6% reported an episode of urethral discharge in the past year. Among those who reported an episode of discharge in the past year, one third attended a clinic, another third sought care at a pharmacy, and 5% remained untreated. Almost all had received some HIV/AIDS information in the past 6 months from TV, trainings or radio. 30% had ever been tested voluntarily for HIV outside of the HSS.

### Police

676 policemen were included in the survey. They were married (87%) and were on average 38 years of age. One fourth had spent at least a month away from home in the past year, but they were not subject to permanent migration (96% had been living in the current province for more than 5 years). Their mean age at first sex was 22 years. Almost all respondents ever had sex. The majority have had premarital sex. Half have had at most 10 partners in their lifetime. In the past year, few policemen reported having had either casual sexual partners (8%) or sex with a sweetheart (7%). About one third had paid for sex in the past year. Police were more likely than other male sentinel groups to have used the services of IDFSWs in the past year. One quarter of those who had visited sex workers in the past month went to the brothel more than twice in the month. The majority (83%) had drunk alcohol at last visit to sex workers. Consistent condom use in paid sex was high and was consistent with sex workers' reports. Police were more likely than other male sentinel groups to report consistent condom use with sweethearts (56%). Only 4% reported an episode of urethral discharge

in the past year. The majority sought treatment at a pharmacy. Almost all had received some HIV/AIDS information in the past 6 months from TV, trainings or radio. 43% had been voluntarily tested for HIV outside the HSS.

### **Moto-Taxi Drivers**

974 moto-taxi drivers were included in the survey. They were younger than men from the military and police (mean age 32). Most were married (78%) and living with their wife. They reported a higher income in the past month than military or police. Many reported seasonal migration (26% had spent at least one month away from home in the past year) and being recent migrants (28% had spent less than 5 years in the current city). Their mean age at first sex was 22.8 years. 6% of moto-taxi drivers never had sex. The majority have had premarital sex. They reported having had less lifetime partners than men from the military and police (half have had at most 5 partners in their lifetime). In the past year, more moto-taxi drivers reported having had casual sexual partners (11%) than having had sex with a sweetheart (8%). 59% had paid for sex in the past year. One third of those who had visited sex workers in the past month went to the brothel more than twice. The majority (70%) had drunk alcohol at last visit to sex workers. Moto-taxi drivers sought paid partners almost exclusively at brothels and tend to pay less per sexual intercourse than men from the military and police. Consistent condom use in paid sex was high and was consistent with sex workers' reports. Only 42% used condoms consistently with their sweetheart. 4% reported an episode of urethral discharge in the past year. Half sought treatment at a clinic whereas the other half attended pharmacies or traditional healers. Almost all had received some HIV/AIDS information in the past 6 months from TV or radio. Only 45% of moto-taxi drivers had received any information on HIV/AIDS from trained staff in the past 6 months, compared to men from the military and police who almost unanimously reported having received HIV/AIDS information in the past 6 months. Only 20% of moto-taxi drivers had ever been voluntarily tested for HIV, which was less than any other male sentinel group.

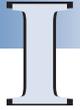
### **Trends**

Among both beer promoters and brothel based sex workers, the increase in consistent condom use with clients has been dramatic and persistent. The proportion of either DFSWs or beer promoters who had a sweetheart in the past year remained unchanged, involving about half of these female sex workers. In both groups of

female sex workers the increase in condom use reported between 1997 and 2003 has been much more moderate. The proportion of beer promoters who reported being separated or divorced increased consistently from 32% in 1997 to 49% in 2003. Among beer promoters, the age reported for first sex decreased between 1997 and 1999, and the proportion reporting selling sex in the past year increased. However, from 1999 until 2003 these same measures remain unchanged.

Condom use in paid sex as reported by male sentinel groups is consistent with sex workers' reporting. The proportion of male sentinel groups reporting having had sex with a sweetheart in the past year has remained unchanged since 1997. The proportion of men from the male sentinel groups reporting having visited DFSWs in the past year decreased between 1997 and 2001, but increased between 2001 and 2003. The proportion of male from sentinel groups reporting consistent condom use with sweetheart in the past 3 months remained below 45% between 1999 and 2003 and no trend could be identified. The proportion of those reporting having had non-marital sex decreased between 1997 and 2003. While less men reported having had non-marital sex in the past year in 1997 compared to 2003, they also reported an increasing number of sexual partners in the past year over the same period. In the present report, fewer men from the military and police have non-marital partners than in 1997, but those who have non-marital partners also have more partners than in the past. While the trends show a constant decline in the use of brothel based sex-workers services between 1997 and 2001 among all male sentinel groups, a rebound is observed in the period 2001 - 2003. The proportion of men reporting an episode of urethral discharge in the past 12 months has decreased by three folds in all male surveillance groups between 1997 and 2003.





The HIV/AIDS epidemic in Cambodia is now in its second decade. The first HIV infection was identified in 1991 in Phnom Penh and the first AIDS case was reported in 1993. Since 1995 Cambodia's HIV epidemic has been documented through a series of HIV sero-prevalence and behavioral surveys. Based on the HIV sentinel surveillance survey (HSS) in 2002, HIV prevalence appears to be declining in high risk and bridge sentinel groups including direct female sex workers (DFSWs), indirect female sex workers (IDFSWs), and policemen. Yet the prevalence of HIV in Cambodia remains relatively high compared to other countries in the region. The HIV prevalence among DFSWs decreased from 42.6% in 1998 to 33.2% in 1999, then dropped further to 31.1% in 2000 and to 28.8 in 2002. Similar declining trends in HIV prevalence were found among IDFSWs and police. However, HIV prevalence among pregnant women attending antenatal care clinics remained unchanged with a non significant increase from 2.3% in 2000 to 2.8% in 2002. This HIV prevalence pattern suggests that the epidemic has expanded from high-risk groups to the general population.

HIV surveillance systems were designed to identify core transmitters (reservoirs) of HIV and monitor the trends in these particular groups. Examination of the HIV prevalence trends provides clues to monitor the spread of the HIV/AIDS epidemic within groups and from one group of people to other groups. Furthermore, the estimation derived from surveillance systems can be used to advocate political support and educate the public. In addition data on both behaviors and HIV prevalence allow making projections of the numbers of HIV-infected and AIDS cases, which may be used to anticipate future needs and to predict the impact of the epidemic.

In order to control the epidemic, the National Center for HIV/AIDS, Dermatology and STDs (NCHADS) has developed programs aimed at raising knowledge of HIV/STDs and preventing the spread of sexual diseases. It is argued that effective design of interventions requires accurate information about the HIV/AIDS epidemic as well as behaviors of sub-populations at risk. Over the past decade NCHADS has adapted its strategies according to the information delivered by the surveillance system. The second generation HIV surveillance system has provided the background for NCHADS to set up HIV prevention and control programs including: provision of STD services, AIDS care, vertical transmission prevention, voluntary testing and counseling services, 100% condom use programs targeting brothel based sex-workers, and behavior change communication.

The Cambodian second generation surveillance system is based on three types of surveys: HIV Surveillance Surveys (HSS), Behavior Surveillance Surveys (BSS), and the STI Surveillance Surveys (SSS). The HSS which was originally conducted in nine provinces has now expanded to 22 out of 24 cities/provinces throughout the country. Similarly, BSS which was launched in 1997 in the five most populated cities in Cambodia, has expanded in 2003 to include five additional provinces for a total of ten provinces included in this year's sampling frame.

HSS, SSS and BSS play important roles in monitoring and explaining the HIV/AIDS epidemic in Cambodia. While HSS investigates the HIV prevalence and SSS scrutinizes the prevalence of STIs, BSS may help explain or suggest what has happened in terms of risk behaviors and practices in particular sub-populations. So far, NCHADS has conducted eight rounds of HSS, 2 rounds of SSS, and six rounds of BSS. The data collection period for the latest BSS (VI) ran from May to June 2003.

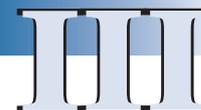


The objectives of the Behavioral Surveillance Survey 2003 are:

- to identify the current patterns of risk behavior among sentinel groups
- to track trends in risk behaviors among sentinel groups which influence the HIV epidemic in Cambodia
- to develop a behavioral risk profile of Cambodian sub-populations to be used in the targeting and design of HIV/AIDS prevention programs
- to provide information for the strategic planning of HIV/AIDS control programs and to stimulate political and social actions for ensuring the sustainability of the programs
- to obtain data in a standardized format, which enables comparison with behavioral surveillance studies carried out in other countries



# Background Information on Previous Rounds of BSS



The first round of BSS was conducted in 1997 by the National AIDS Program (NAP, nowadays known as NCHADS), and was used as the baseline profile of sexual behaviors in Cambodia. Six sentinel groups (brothel-based sex workers, beer promotion girls, working women, police/military, moto-taxi drivers, and male vocational students) characterized by different sexual behavior affecting the HIV/AIDS epidemic were selected for the survey.

The following year (1998), BSS was repeated in the same sites and target groups as the first round. The only methodological change was to drop the self-administered survey used in 1997 for the vocational students and replace it with face-to-face interviews in order to be consistent with the other BSS groups. In 1999, BSS suspended the inclusion of low-risk groups (working women, and male vocational students). In 2000, a household survey of urban and rural males (BSS 2000) was conducted to determine risk behaviors among males from the general population in the five BSS provinces. The findings from this household survey were used to compare levels of risk behaviors between BSS male sentinel groups and men from the general population. In 2001, BSS V returned to its original design but included karaoke workers as a new sentinel group. In 2003, the sixth round of BSS expanded from 5 to 10 provinces.

**Table 1** Background information of BSS from 1997 to 2003: provinces covered, sentinel groups, and overall sample size

Year	Sites	Target Groups	Sample Size
1997	KPC, SHV, BTB, SRP, PNP	DFSW, IDFSWs (beer promoters), Working Women, Military, Police, Moto-taxi Drivers, Male Vocational Students	4,353
1998	KPC, SHV, BTB, SRP, PNP	DFSW, IDFSWs (beer promoters), Working Women, Military, Police, Moto-taxi Drivers, Male Vocational Students	4,265
1999	KPC, SHV, BTB, SRP, PNP	DFSW, IDFSWs (beer promoters), Military, Police, Moto-taxi Drivers	3,400
2000	KPC, SHV, BTB, SRP, PNP	Male household survey	3,166
2001	KPC, SHV, BTB, SRP, PNP	DFSWs, IDFSWS (karaoke workers & beer promoters), Military, Police, Moto-taxi Drivers	2,962
2002			
2003	KPC, SHV, BTB, SRP, PNP, PST, KHK, KRT, TKO, KPT	DFSW, IDFSW (karaoke workers & beer promoters), Military/Police, Moto-taxi Drivers	4,105
KPC: Kampong Cham      SRP: Siem Reap      KHK: Koh Kong      KPT: Kampot SHV: Sihanoukville      PNP: Phnom Penh      KRT: Kratie BTB: Battambang      PST: Pursat      TKO: Takeo			



## 1 Sites

In order to insure trends could be assessed with previous BSS data, the sampling universe for BSS 2003 included the five same cities/provinces from which samples were drawn in the previous BSS rounds. These original sites consist of Phnom Penh, Battambang, Siem Reap, Sihanoukville, and Kampong Cham. In addition, five new provinces were added for the evaluation of the HIV/AIDS control programs supported by USAID in Cambodia, making BSS 2003 the largest round ever conducted, covering ten provinces. The new set of provinces from which survey participants were selected includes: Pursat, Koh Kong, Kratie, Takeo, and Kampot. Another province, Banteay Meanchey, also conducted an integrated behavior and sexually transmitted disease surveillance survey in 2003. Data from this survey, however, were not included in this report because the methodology and timing for data collection did not match with BSS.

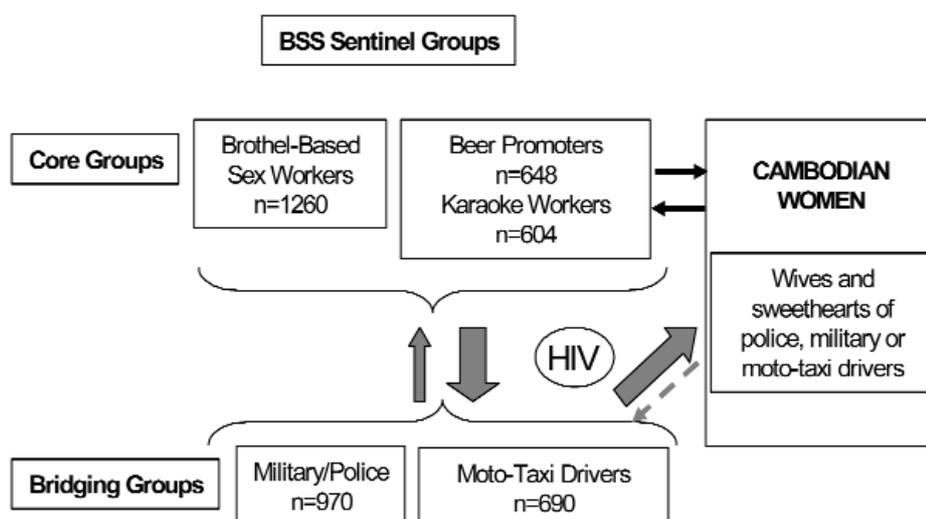
## 2 Sentinel Groups

To ensure that data derived from this round of BSS could be used to study trends of risk behaviors, sentinel groups included in BSS 2003 were kept similar to those selected in the previous rounds: military, police, moto-taxi drivers, direct female sex workers, and indirect female sex workers. For the purposes of calculating the sample size and for some of the analyses, military and police were merged into one sentinel group, with an equal number from each group selected independently, as in previous rounds. The group of indirect female sex workers was represented by both beer promoters and karaoke workers. BSS 2001 (V) had included karaoke workers as part of the IDFSW group for the first time but a crack down on karaoke establishments had limited the sample size, which did not allow independent analysis of this group. In BSS 2003, no karaoke worker was sampled in Phnom Penh and the number of beer promoters recruited in the survey was very small in some provinces. Despite disparities in number of beer promoters and karaoke workers recruited in each province, the overall numbers of individuals interviewed in these two sentinel groups were almost equal.

Each sentinel group was included in the behavioral surveillance to represent a specific level of risk for HIV transmission. These sentinel groups were categorized into 'core' and 'bridging' groups. On the one hand, 'core' groups by definition have higher

prevalence of HIV than the general population and have an elevated risk of transmitting HIV due to the frequency of their risky behaviors. 'Bridging' groups, on the other hand, establish transmission links between the core groups and the general population via sexual relationships. Figure 1 below illustrates which occupational groups represent the core and the bridging groups and their interaction with women from the general population.

**Figure 1:** Sentinel groups (n=4,105) and their role in the Cambodian HIV transmission dynamic



### 3 Sample Size

The variable used to estimate sample size was the percentage of each sentinel group reporting consistent condom use during commercial sex in a recent reference period (past week for DFSWs, and past three month for IDFSWs and the male groups) as measured in the last BSS. In previous BSS rounds, sample sizes had been estimated to detect a 15% change of consistent condom use. Since reported consistent condom use during commercial sex has reached relatively high percentages, a 15% change could no longer be expected, and previous calculations for desired sample size would no longer be accurate. Therefore, sample sizes were re-calculated to detect a 5 - 10% change of consistent use condom during commercial sex, assuming statistical tests applied would be two-sided, with a 95% confidence interval, and 80% power. A design effect of 2 was applied to take into account the effect of clustering. While a change of 10% was considered reasonable for most sentinel groups, the sample size for DFSWs, among whom consistent condom use with clients was reported at over 90% in the last BSS, was calculated to detect a change of 5% from the previous year's BSS. Since percentages of reported consistent condom use among military and police were also approaching 90%, sample sizes for these groups were calculated to be able to detect a 7% change. Sample sizes required according to these calculations were the following:

- DFSWs: 840
- IDFSWs: 786
- Military/Police: 646
- Moto-taxi: 460

Since the population size of the sentinel group at provincial level was not known, it was proposed to select an equal number of individual in each province. For each surveyed group, 5 equal provincial sample sizes were calculated to reach the total sample size using the 5 original BSS provinces. Sample sizes in the 5 additional provinces were calculated to be half size of the original provinces in respective surveyed groups. Sample sizes by surveyed group and provinces are detailed in Table 2.

Sample sizes in the 5 original provinces generated a sample which is large enough to detect changes in condom use for each sentinel group, although it does not allow detecting differences over time within each province. Sample sizes in the 5 original provinces generated a sample which is large enough to detect changes in condom use for each sentinel group, although it does not allow detecting differences over time within each province.

Although sample sizes in the new provinces were calculated to allow independent analysis of this set of provinces, the theoretical sample sizes were not obtained for IDFSW which reduces the precision of the estimates obtained from analysis of IDFSWs data in the 5 additional provinces (see Table 2).

**Table 2: Proposed sample size by provinces/cities: BSS 2003**

Provinces	DFSW	IDFSW	Pol/Mil	Moto-taxi	Total
Kampong Cham	168	158	129	92	547
Sihanouk Ville	168	158	129	92	547
Battambang	168	158	129	92	547
Siem Reap	168	158	129	92	547
Phnom Penh	168	158	129	92	547
Pursat	84	79	65	46	274
Koh Kong	84	79	65	46	274
Kratie	84	79	65	46	274
Takeo	84	79	65	46	274
Kampot	84	79	65	46	274
<b>Total</b>	<b>1260</b>	<b>1185</b>	<b>970</b>	<b>690</b>	<b>4105</b>

#### 4 Sampling Procedures

As in previous rounds of BSS, two-stage cluster sampling with equal probability was used for all the sentinel groups except moto-taxi drivers, for whom time-location sampling was employed. The clusters were represented by the following: brothels for DFSWs, beer companies for beer promoters, karaoke establishments for karaoke workers, battalions for military and administrative units for police. Clusters for moto-taxi drivers were time slots at heavily trafficked street corners such as those surrounding markets. All clusters and/or numbers of individuals in each cluster were listed to create sampling frames by the Provincial AIDS Office (PAO) in each province. If the sample size in a province was lower than the sample required, all individuals present at the sampling unit were selected. It should be noted that due to security restrictions not all military and police battalions are in the sampling frames. For moto-taxi driver, time slots were randomly selected from all locations.

Moto-taxi drivers present at the selected time-location units were proposed to be interviewed, but their perpetual movements around the selected lively areas and the moderate size of the data collection team limited the inclusion of all eligible individuals. In other groups, all individuals present at the cluster site at the moment of the visit were included, generating to a self-weighted sample. If the size of a survey group in a province was lower than the sample required, all sampling units and individuals present at these units were selected.

### **5 Operational Procedures**

Interviews were conducted face to face by gender-matched interviewers. Experience from previous rounds of BSS showed that two trained local supervisors from each province in addition to one or two supervisor from the NCHADS central office were sufficient to manage the data collection. The same procedure was followed in this year's round, and the mixed supervisor team was present at all times to ensure that interviews had been conducted in privacy and in an appropriately sensitive manner. All questionnaires were checked in the field by supervisors to ensure data quality before the data was entered. Informed consent was obtained orally before conducting interviews. Refusal rates were counted and recorded.

A training session was conducted in Phnom Penh for all provincial supervisors, while another round of training was conducted in each province for the interviewers. Additional training for each member of the provincial personnel was conducted at each site during the NCHADS team's trip to the province prior to data collection. The BSS Interviewer Training Guide and the BSS Supervisor Training Guide (Khmer version), developed in 1997, were supplied to all interviewers and supervisors, and were used in the training sessions. Questionnaires were reviewed to ascertain that the information collected fit the USAID indicators and were comparable to those used in previous rounds of BSS.

To provide extra supervision and support to the new BSS provinces, each new province was paired with a nearby province that had already taken part to the previous BSS. Supervisors from the experienced provinces worked with the NCHADS supervisors to provide additional support for conducting BSS to the new provinces.

## 6 Data Entry and Analysis

Data was coded and entered into a computerized database by NCHADS staff using Epi-Data software. The data entry was conducted at NCHADS and contracted to skilled and experienced computer staff within the center.

The data was analyzed using the statistical software program STATA. The selection of all sex workers in each selected establishment provides a self-weighted sample of sex-workers in a given province. However, each province shelters a different number of sex workers which was accounted for in analysis of previous BSS by weighting the data. For this year round, unweighted data were used across all groups because weighting for population size was found to have little effect on most variables. Moreover, because consensus could not be reached between researchers regarding the reference population to be used for male sentinel groups, it was not possible to calculate the various sampling probabilities across provinces.

**Table 3:** Exact sample size collected for BSS 2003

Provinces	DFSWs	IDFSWs		Military/Police	Moto-taxi Drivers
		Beer promoters	Karaoke		
Phnom Penh	170	161	--*	137	97
Kampong Cham	158	92	63	128	97
Battambang	154	63	95	136	92
Sihanouk Ville	172	63	91	133	94
Siem Reap	168	134	30	130	92
Pursat	107	30	37	145	96
Koh Kong	108	6	159	141	98
Kratie	76	30	25	136	95
Takeo	125	26	76	132	93
Kampot	70	43	28	133	93
<b>Total</b>	<b>1308</b>	<b>648</b>	<b>604</b>	<b>1351</b>	<b>947</b>

\* Data for karaoke workers were not collected in Phnom Penh



## 1 Sample Size and Refusals

The sample sizes obtained for each surveyed group are detailed in Table 3. Field data revealed that the size of target populations varied by province. Most of the 5 original provinces met the expected sample size, however, in the additional 5 provinces the samples were smaller than the expected sample size. Finally, Karaoke workers could not be recruited in Phnom Penh because no sampling frame was available.

Refusals to participate are detailed in Table 4. The very low numbers refusal rates observed in BSS-2003 are consistent with previous rounds of behavioral survey.

**Table 4:** Refusal cases by sentinel group and by province

Provinces	DFSWs	IDFSWs			Moto taxi Drivers
		Beer promoters	Karaoke	Military/Police	
Phnom Penh	0	0	—*	0	0
Kampong Cham	0	0	0	0	0
Battambang	3	1	0	0	0
Sihanouk Ville	0	0	0	0	0
Siem Reap	0	0	0	0	0
Pursat	0	0	0	1	4
Koh Kong	0	0	0	0	1
Kratie	0	1	0	0	4
Takeo	0	0	2	0	5
Kampot	0	0	0	0	4
<b>Total</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>18</b>

\* Data for karaoke workers were not collected in Phnom Penh

## **2 Female Sentinel Groups**

### **2.1 Demographic characteristics**

Demographic characteristics for DFSW, as well as beer promoters and karaoke workers are detailed in Table 5 on page 32.

#### **A Direct female sex workers**

The DFSWs were 15 to 45 years old, and their mean age was 23.3 years (median=22). Only 0.2% of the DFSWs reported being currently married, while about half had never been married and the other half were either divorced or separated. Among those who had ever been married (n=656), the mean age at first marriage was 17.6 years (median=17), while the mean age at first sex was 17.5 years (median 17). 70% of the DFSWs were childless. DFSWs reported having received little education: 44% reported no formal education, 9% had completed only primary school, and 2% had completed secondary school. The mean number of years of schooling was 2.4 overall. The DFSWs reported that their income in the past month ranged from 0 to 500 US \$, although 95% of the respondent earned less than 200 US \$ last month. Their median income in the past month was 50 US \$. The DFSWs had been living between 1 month and 13 years in the current city. The mean duration in the current city was 4.4 years, but most of the DFSWs (59%) had only been in the current city for less than a year, showing that most DFSW migrate after a short period of time.

#### **B Indirect female sex workers**

The IDFSWs were aged between 15 and 45, and their mean age was 23.5 years (median 23). Beer promoters were on average older than karaoke workers: 24.6 versus 22.3 years old respectively. While the majority of beer promoters were divorced (51%), most of the karaoke workers were either single (49%) or divorced (47%). Beer promoters were more likely to be currently married than karaoke workers (18% versus 2%). Among those who had ever been married, the mean age at first marriage was 18.2 years (median 18) and was similar in the two groups. Among those who had ever been married the mean and median age at first sexual intercourse were similar to the mean and median age at first marriage. Karaoke workers were less likely than beer promoters to have children; 72% of karaoke workers had no children compared to 51.5% of beer promoters. The mean number of years attending school was 4.2, but beer promoters had in average attended school longer than karaoke workers (4.5 versus 3.9 years, respectively). This difference

is mainly caused by the fact that more karaoke workers than beer promoters had never attended school (23% versus 17%, respectively). While beer promoters reported that their income in the past month ranged from 0 to 600 US \$, karaoke workers reported having earned between 0 and 500 US \$ in the same period. In both groups, only 4% reported having earned over \$200 in the past month. Beer promoters' median income in the past month was higher than karaoke workers' (70 US \$ versus 50 US \$).

Living arrangements were different among the two groups of IDFSWs since more beer promoters than karaoke workers were living with family members. Indeed, 26% of the beer promoters and 20% of karaoke workers reported living either with their family or relatives, while 22% versus 4% lived with their husband respectively. Beer promoters commonly reported living on their own (34%) whereas karaoke workers were more likely to live with friends (33%). The higher income reported by beer promoters compared to karaoke workers may play a role in the pattern of living arrangements because those with higher incomes are more likely to afford paying for single accommodation. 24% of karaoke workers reported living with persons other than relatives, husband, sweetheart, or friends, and were not living on their own. This might reflect that some karaoke establishments are providing housing to women in a similar fashion to brothels. A comparison of the living arrangements between beer promoters and karaoke workers excluding Phnom Penh (where no karaoke workers were sampled) showed little changes in distribution. This excludes the possibility that the differences described above may have been the result of differences in beer promoters' living patterns in the capital city.

Beer promoters reported having been away from their families for a longer period than karaoke workers (the mean number of months away from family was 24.8 versus 17.7, respectively). While divorced women reported living away from their families longer than those of other marital status (30.2 month among beer promoters and 20.7 among karaoke workers), married women in both groups had been away from family for the shortest period of time (7.2 months). Although many IDFSWs reported recent migration as revealed by 35% of the beer promoters and 53% of karaoke workers who reported living for less than a year in the current city, 16% of the beer promoters and 24% of the karaoke workers reported having lived their entire life in the current city.

**Table 5: Demographic characteristics of DFSWs and IDFSWs**

		DFSWs n=1308	IDFSWs	
			Beer promoters n=648	Karaoke workers n=604
<b>Age</b>	Mean	23.2	24.7	22.3
	Median	22	25	22
<b>Number of years at school</b>	Mean	4.2	4.5	3.9
	Median	4	5	4
<b>No schooling</b>		43.6%	16.7%	23.2%
<b>Marital status</b>	Married living with spouse	0.2%	18.1%	2.5%
	Married living away from spouse	1.5%	2.6%	2.0%
	Divorced	48.6%	51.5%	46.5%
	Never married	49.8%	27.8%	49.0%
<b>Age at first marriage</b>	Mean	17.6	18.3	18.0
	Median	17	18	18
<b>Age at first sex</b>	Mean	17.5	18.3	18.1
	Median	17	18	18
<b>Currently childless</b>		70.4%	51.5%	71.8%
<b>Have ever lost one child or undergone an abortion</b>		28.1%	42.7%	27.7%
<b>Currently living with:</b>	Parents	--	12.6%	6.8%
	Relatives	--	13.2%	13.6%
	Husband/sweetheart	--	22.5%	3.8%
	Friends	--	15.5%	33.4%
	Alone	--	33.5%	17.9%
	Other	--	2.6%	24.4%
<b>Number of years living in current city</b>	Mean	4.4	7.2	6.8
	Median	1	3	1
<b>Number of month living away from family</b>	Mean	--	24.8	17.7
	Median	--	11.5	8
<b>Income in the past month (US\$)</b>	Mean	78.9	91.2	70.5
	Median	50	70	50

## 2.2 Sexual initiation and history of commercial sex

Sexual initiation patterns for DFSWs, beer promoters and karaoke workers are detailed in Table 5.

### A Direct female sex workers

DFSWs reported having first sexual intercourse on average at 17.5 years of age. Their mean age at first commercial sex was 20.8 years, which is on average 3.3 years after their first sexual experience. While almost half of the DFSWs (47%) reported their first sexual partner being their husband, 16% had first sex with a sweetheart. One third of DFSWs started their commercial sex careers by selling their virginity as revealed by 33% who reported having their first sexual intercourse with a client. The age at first sex was similar among those who initiated their sexuality with either a client or another type of partner. Therefore, the age at first paid sex was higher among those who had some sexual experiences prior to commercial sex compared to those who had sold their virginity (22.4 years of age versus 17.6, respectively). As a result, those less than 19 years of age were more likely to have had their first sexual intercourse with a client than older sex workers (40% versus 9%, respectively). Moreover, 50% of the DFSWs had sold sex for the first time in the past year, while 19% reported that their first paid sex occurred 5 to 20 years ago. Therefore, the mean duration of selling sex, 2.4 years, does not represent well the fact that the majority of sex workers have been doing this job for a very short time.

50% of the DFSWs sold sex for the first time during the past year, while for 19% first paid sex occurred 5 to 20 years ago. Therefore, the mean duration of selling sex, 2.4 years, does not represent well the fact that a majority of sex workers have been doing this job for a very short time while almost a fifth have been staying in the profession for years.

**Table 6:** Sexual initiation among DFSWs and IDFSWs

		DFSWs n=1308	IDFSWs	
			Beer promoters n=648	Karaoke workers n=604
<b>Age at first sex</b>	Mean	17.5	18.3	18.1
	Median	17	18	18
<b>Never had sex</b>		--	6.2%	21.2%
<b>First sexual partner</b>	Husband	46.8%	73.7%	59.0%
	Sweetheart	16.1%	18.4%	26.7%
	Clients	32.8%	6.1%	11.3%
	Others	4.4%	1.8%	2.9%
<b>Age at first commercial sex</b>	Mean	20.8	--	--
	Median	20	--	--

## **B Indirect female sex workers**

Among those who ever had sex (n=1083), the mean age at first sexual intercourse was similar among the two groups of IDFSWs (about 18 years old), but a larger proportion of karaoke workers (21%) reported never having had sex compared to beer promoters (6%).

The majority of those who ever had sex had their first sexual intercourse with their husband (74% of beer promoters and 59% of karaoke workers). The karaoke workers, however, were more likely than the beer promoters to have had their first sexual intercourse with a client (11% versus 6%, respectively). Karaoke workers were also more likely than beer promoters to have had their first sexual intercourse with a sweetheart (27% versus 18%, respectively).

## **2.3 Sex work conditions**

### **A Direct female sex workers**

DFSWs reported working in brothels that employ 2 to 32 sex workers, and the median number of DFSWs per brothel was 7 (mean=9.6). Most of the DFSWs reported staying only for a short time in a given brothel since 82% had been in the current brothel for less than a year and 23% for less than a month. Only 14% of the DFSWs had been staying in the current brothel for a long period of time, from 2 to 13 years. This suggests that there are two populations of sex workers. On the one hand, those who work for a long time in sex work and tend to stay for a long time in the same establishment. On the other hand, the majority of the DFSWs - who are younger than the previous group - move either from one brothel to another or in and out of the sex industry after a short period of work. All together the mean length of stay in the current brothel was 10 months (median of 5 months). Since half of the DFSWs had sold sex for at most 12 months, they have worked in different establishments during their short career. Sexual intercourse with a DFSW cost up to 25 US\$ but prices were generally low with a median of 1.25 US\$ (5000 Riel).

DFSW reported up to 25 clients in the last working day, but 22% had no client and 18% had 5 clients or more. All together their mean number of clients in the past day was 2.6 (median=2). The mean number of sexual intercourse in the last working day was comparable to the number of clients in the same period, with only 5% of sex workers reporting having had more intercourse than clients in the last working

day. This suggests that the vast majority of the clients have only one intercourse per visit to the brothel.

A regular client was defined as a client with whom a sex worker had more than five distinct sexual encounters. 57% of the DFSWs reported having had regular clients. The DFSWs who currently had regular clients reported an average of 2.8 current regular clients (median of 1). While the median number of current regular clients was 1 among either those who had been staying in the current brothel for less than a year or those who had been staying for more than 2 years, the DFSWs who had been staying in the current brothel for 1 to 2 year had substantially more regular clients at the time of the interview (median=3).

**Table 7: Sex work conditions among direct female sex worker**

		DFSWs n=1308
<b>Number of months working as a sex worker</b>	Mean	21.3
	Median	12
<b>Cost in US \$ per sexual encounter</b>	Mean	2.1
	Median	1.25
<b>Number of months spent in current brothel</b>	Mean	10.0
	Median	5
<b>Number of sex workers per brothel</b>	Mean	9.6
	Median	7
<b>Number of clients in the last working day</b>	Mean	2.6
	Median	2
<b>Number of sexual intercourses in last working day</b>	Mean	2.7
	Median	2
<b>Current number of regular clients</b>	Mean	2.9
	Median	3

While 89% of the DFSWs reported meeting men with whom they have commercial sex at the brothel, 9% reported meeting men at hotels and 2% at other places, which suggests that they may be referred to those places as part of their brothel activities.

## B Indirect female sex workers

40% of beer promoters and half of karaoke workers (53%) reported having sold sex in the past year. However, 63% of beer promoters and 46% of karaoke workers reported that a majority or all of their peers were used to having sex for gifts or money.

Beer promoters who ever had sex (n=597) reported having had between 1 and 1000 lifetime partners. While 50% had 1 or 2 lifetime partners, only 4% had more than 30 partners in their lifetime. Karaoke workers who ever had sex (n=474) reported having had between 1 and 684 partners lifetime. While about one third only had 1 or 2 lifetime sexual partners, 9% had more than 30 sexual partners in their life. The median number of lifetime sexual partners was 4 among karaoke workers and 2 among beer promoters. These findings indicate that karaoke workers have more sexual partners than beer promoters, which is consistent with the reported number of partners in the past month. Indeed, beer promoters reported 0 to 27 partners in the past month (mean=1.0) and karaoke workers reported 0 to 56 partners in the past month (mean=1.9).

Karaoke workers reported having been in their current job for a shorter period than beer promoters (mean of 7 versus 14.3 months, and median of 3 versus 6 months, respectively), suggesting a higher turnover among karaoke workers. With a median number of months in the current job below 1 year, neither type of IDFSWs stay long in their profession. As shown in Table 8 above, by comparison with karaoke workers, beer promoters reported staying longer in their current job and having less sexual partners.

**Table 8: Sex work conditions among IDFSW**

	IDFSWs who ever had sex	
	Beer promoters n=600	Karaoke workers n=474
<b>Number of lifetime sexual partners</b>		
Mean	10.7	15.8
Median	2	4
<b>Number of sexual partners in past month</b>		
Mean	1.0	1.9
Median	1	1
<b>Number of months in current job</b>		
Mean	14.1	7.1
Median	6	4

## 2.4 Work history

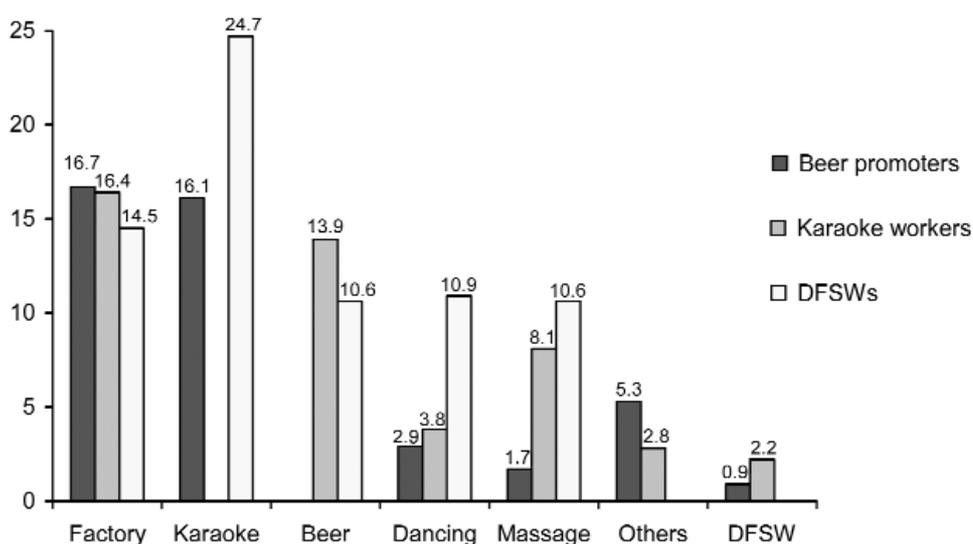
### A Direct female sex workers

Less than half of the DFSWs (45%) reported having worked as factory worker, masseuse, dancing girl, karaoke worker, or beer promoter prior to working in brothels. While 28% of the DFSWs reported having worked in only one of these professions prior to sex work, 17% had worked in at least 2 of these professions before joining a brothel. Most DFSWs reported a history of employment as karaoke workers (25%), followed by factory workers (15%), dancing girls (11%), masseuse (11%) and beer promoters (11%) (see Figure 2 below). These data suggest that a substantial proportion of the DFSWs move from karaoke bars to work in brothels.

### B Indirect female sex workers

Half (50%) of the beer promoters reported a history of working as dancing girl, karaoke worker, masseuse, DFSW, or factory worker. Slightly more (56%) of the karaoke workers reported having previously worked as dancing girl, beer promoter, masseuse, DFSW, or factory worker. Factory work was the most often reported previous job held by both beer promoters and karaoke workers (17% and 16%, respectively). While some karaoke workers had previously worked as beer promoters (14%) or masseuse (8%), beer promoters had previously worked as karaoke workers (16%). These figures suggest some movement between karaoke and beer promotion work, which provides further evidence to a previously described pattern observed in a rural province. Very few IDFSWs (2% combined) reported having previously worked as brothel-based sex workers. Previous reported employment by female sentinel group is illustrated in Figure 2, which shows that karaoke workers tend to move to other professions such as DFSWs or beer promoters.

**Figure 2: Previous employment reported by DFSWs and IDFSWs**



## **2.5 Sweethearts and non-commercial partners**

In both the current and the previous rounds of BSS, a sweetheart was defined as a romantic partner. This definition may be understood differently by members of each sub-population included in the BSS. Sweetheart relationships may involve sexual intercourse between partners, or may be platonic, just as those involving sexual intercourse may or may not include the exchange of money or gifts as payment for sex. While IDFSWs were asked if they had sex with their sweetheart in the past year, it was assumed that all DFSWs who had a sweetheart had sex with them.

### **A Direct female sex workers**

Less than half of the DFSWs (42%) reported having had sweethearts in the past year. The DFSWs who had sweethearts in the past year reported the following professions for their sweethearts: laborer (18%), seller (16%), student (10%), businessman or government official (10%), policeman (5%), or farmer (5%). Condom use with sweethearts will be discussed in the condom use section of this report.

### **B Indirect female sex workers**

The majority of the IDFSWs reported ever having had a sweetheart (64% of either beer or karaoke workers) and more than half reported having had a sweetheart in the past year (56% of beer promoters and 58% of karaoke workers). Among those who had a sweetheart in the past year, beer promoters were more likely to have had sexual intercourse with their sweetheart than karaoke workers (94% versus 84%, respectively). Overall, 53% of beer promoters and 49% of karaoke workers had sex with a sweetheart in the past year.

The majority of the IDFSWs reported ever having had a sweetheart (64% of either beer or karaoke workers) and more than half reported having had a sweetheart in the past year (56% of beer promoters and 58% of karaoke workers). Among those who had a sweetheart in the past year, beer promoters were more likely to have had sexual intercourse with their sweetheart than karaoke workers (94% versus 84, respectively). Overall, 53% of beer promoters and 49% of karaoke workers had sex with a sweetheart in the past year.

Most of the IDFSWs reported receiving money from their sweetheart in the past year, and only 3% of beer promoters and 11% of karaoke workers reported never receiving money from their sweetheart. They received money irregularly as reported by 57% of the beer promoters and 53% of the karaoke workers who received money from their sweetheart.

The professions reported by IDFSWs for their sweethearts differed from those reported for their husband. The husbands of the IDFSWs were moto-taxi drivers (19% compared to 2% of the sweethearts of unmarried IDFSWs), officials/businessmen (11%), salesmen (9%), or factory workers (7% compared to 2% of the sweethearts of unmarried IDFSWs). The sweethearts of the unmarried IDFSWs were mostly officials or businessmen (30%), salesmen (14%), or police (10% compared to 5% of the married IDFSWs).

**Table 9: Non commercial sex patterns among female sentinel groups**

	DFSWs n=1308	IDFSWs	
		Beer promoters n=648	Karaoke workers n=604
<b>Ever had a sweetheart</b>	--	64.2%	64.2%
<b>Had sweetheart in the past year</b>	42.0%	56.2%	58.4%
<b>Currently have sweetheart</b>	--	47.1%	43.9%
<b>Had sex with a sweetheart last year</b>	--	52.8%	49.0%
<b>Currently married</b>	0.2%	18.1%	2.5%
<b>EVER HAD A SWEETHEART</b>		<b>n=416</b>	<b>n=388</b>
<b>Frequency sweethearts give money</b>			
Never get paid	--	3.3%	11.4%
Each sex	--	6.1%	8%
Each week	--	12.8%	10.3%
Each month	--	27.1%	17.7%
Irregular basis	--	50.6%	52.6%
<b>Ever had sex with a sweetheart</b>	--	91.8%	83.3%
<b>MARRIED OR EVER HAD A SWEETHEART</b>		<b>n=470</b>	<b>n=366</b>
<b>Profession of sweetheart or husband</b>			
Laborer	18.2%	5.7%	12.3%
Salesman	15.6%	14.0%	12.8%
Police	5.1%	8.3%	11.2%
Student	10.2	1.3%	3.8%
Government officer or businessman	10.0%	29.2%	25.1%
Not specified	23.8%	19.6%	22.4

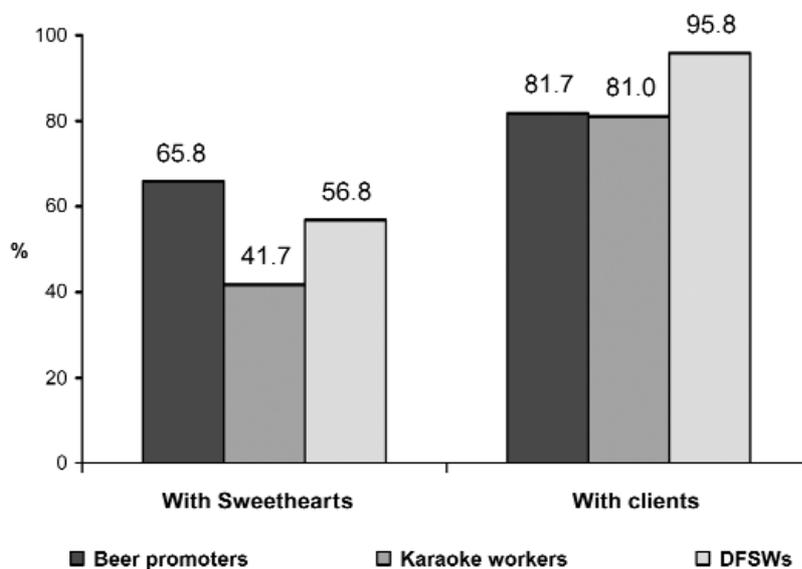
Both beer promoters and karaoke workers reported that their sweetheart or husband was a government-officer/businessman, salesman, or policeman, suggesting their regular partners tend to be men with some social or economic power. Karaoke workers, however, were more likely than beer promoters to have regular partners from modest socio economic strata including laborers or students (16% versus 7%, respectively) (see Table 9).

## 2.6 Condom use

### A Direct female sex workers

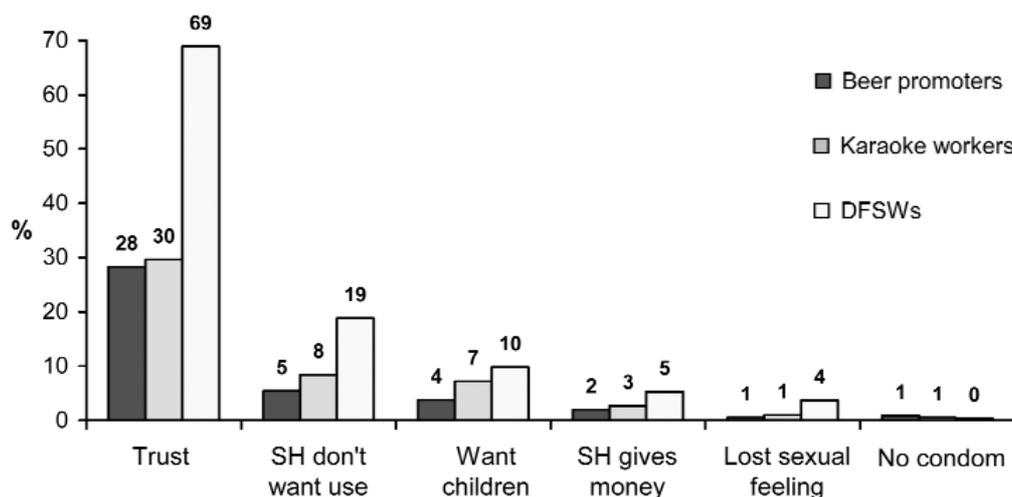
DFSWs reported different levels of consistent condom use with casual clients, regular clients and sweethearts. Among those who reported selling sex in the past week (n=1259), 96% reported having used condoms consistently with clients during the past week. Only 1% of the DFSWs who had clients in their last working day reported having used fewer condoms than their number of clients on that day. Among the DFSWs who reported having had sex with regular client(s) in the past month (n=748), 93% reported having used condoms consistently in these sexual encounters. Among the DFSWs who had sex with a sweetheart in the past week (n=373), 57% reported consistent condom use in these sexual encounters (see Figure 3). Some DFSWs probably use more than one condom at a time since they reported using 1 to 6 condoms per client on their last working day (mean=1.7, median=2), whereas they also reported having only one intercourse per client on their last working day (see paragraph 2.4.A). Almost all (97%) DFSWs reported that condoms were available at their working place.

**Figure 3:** Consistent condom use by type of partner: in past week among DFSWs and in past 3 months among IDFSWs



Among the DFSWs who had sex with sweethearts but did not use condoms consistently with them (n=244), the most common rationale for not using condoms with this partner was that they had trust in their sweetheart (69%) (see Figure 4). Other justifications were that: the sweethearts did not want to use condoms (19%), they wanted a baby with their sweetheart (10%), their sweetheart gave them a lot of money (5%), or they did not have any sensual feeling while using condoms (4%). Lack of condom availability was almost never a reason for not using condoms with sweethearts (0.4%).

**Figure 4:** Reasons reported for not using condoms with sweethearts among those who ever had sex with a sweetheart



### B Indirect female sex workers

IDFSWs also reported various levels of consistent condom use by type of partner. Among those who acknowledged having had paid sex in the past 3 months, 84% of beer promoters and 82% of karaoke workers reported consistent condom use in paid sex in the past 3 months. Among those who had sex with a sweetheart in the past 3 months, 66% of the beer promoters and 67% of the karaoke workers had always used condoms in these sexual encounters (n=468 and n=440, respectively). However, about one in four had never used condoms with their sweetheart in the past 3 months (25% of beer promoters and 23% of karaoke workers).

Among those who had sex with sweethearts but did not use condoms consistently (445 beer promoters and 415 karaoke workers), having trust in their sweetheart was the main rationale for not using condoms (28% in beer promoters, and 30% in karaoke

workers), followed by the fact that their sweetheart did not want to use condoms (5% in beer promoters and 8% in karaoke workers), or because they wanted a baby with their sweetheart (4% of beer promoters and 7% of karaoke workers). Less than 3% reported being given a lot of money by their sweetheart as a rationale for not using condoms, and less than 1% mentioned either the lack of sensual feeling while using condoms or the absence of condoms at the time of the intercourse (see Figure 4).

## **2.7 Sexually transmitted infections & reproductive health**

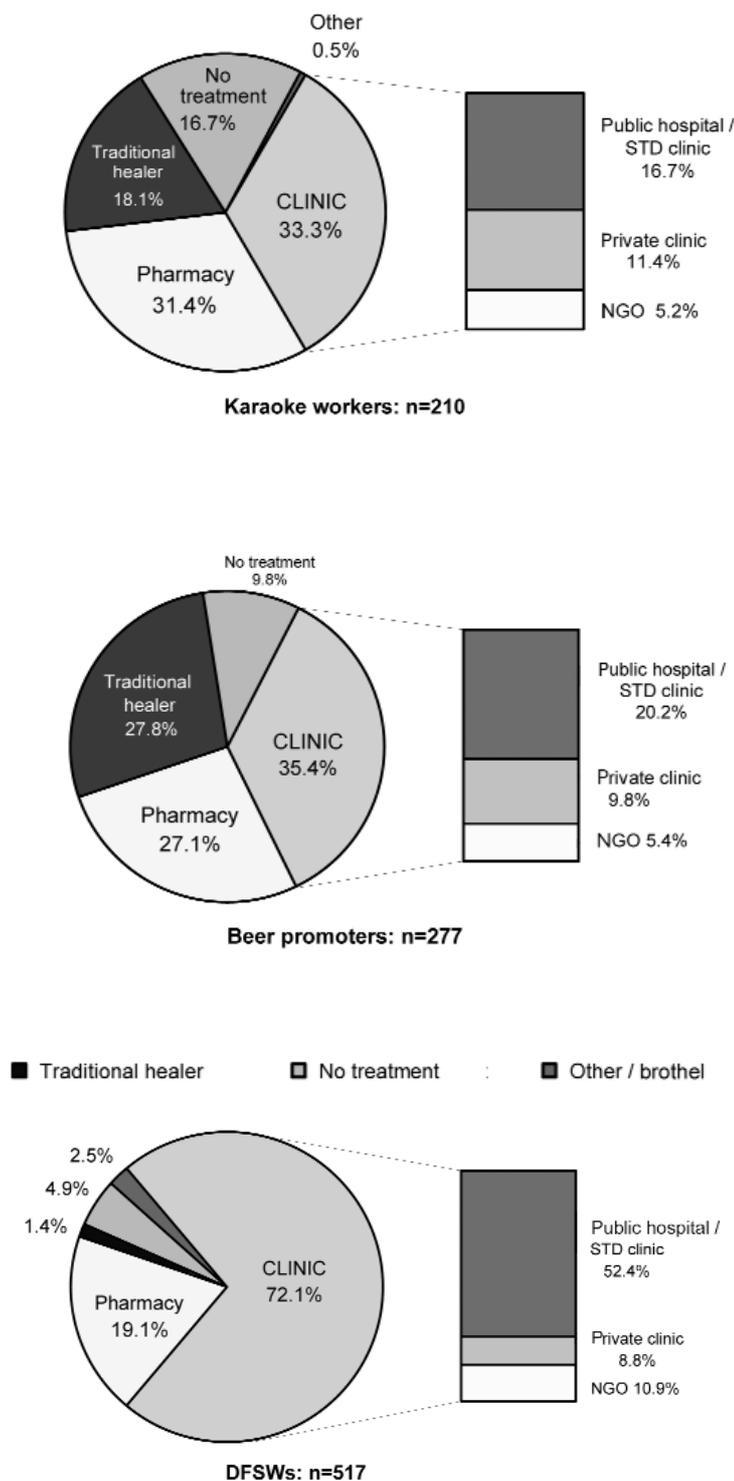
### **A Direct female sex workers**

40% of the DFSWs reported episodes of abnormal vaginal discharge in the past year. This is comparable to the 36% of women attending antenatal care who reported vaginal discharge in the national STI survey conducted in 2000. It should be noted that for women, reported abnormal vaginal discharge is not a good indicator of STI. Most STI are asymptomatic in women, non STI pathogens are a common cause of discharge, and many women may not differentiate abnormal discharge from physiological discharge. Among those who reported episodes of vaginal discharge in the past year and specified a health seeking behavior at last episode (n=519), the majority (53%) attended public hospitals or STI clinics, and only 5% did not seek any treatment. Pharmacies were the second source of health care for DFSWs with complaints of vaginal discharge with 19% of them getting treatment through this service (see Figure 5 on the next page).

While 22% of the DFSWs kept on selling sex during menstruation, the majority (58%) stopped working for 3 to 4 days, and a minority (1%) reported a long working interruption of 8 to 20 days. On average, DFSWs refrained from having sex for 2.9 days (median=3 days) when menstruating.

Most of the DFSWs (53%) had never been pregnant, 28% reported having experienced one single pregnancy and 19% had been pregnant more than once in their lifetime. The most common modern contraceptive method used by the DFSWs was condoms, which was reported by 99% of DFSWs. Oral contraceptives were used by 5% of the DFSWs, and 2% mentioned hormones injections as their current contraceptive method. Abortion was the current contraceptive method used by 2% of the DFSWs. Other contraceptive methods including IUD, spermicide, cycle check or withdrawal were barely or not reported.

**Figure 5:** Reported care seeking behaviors at last episode of vaginal discharge among sex workers reporting seeking care following an episode of vaginal discharge in the past year



## B Indirect female sex workers

Among IDFSWs, 43% of beer promoters and 35% of karaoke workers reported having had abnormal vaginal discharge in the past year. Those who acknowledged having had discharge and reported their health seeking behavior at last episode sought care mainly at the pharmacy (27% of beer promoters and 31% of karaoke workers) or from traditional healers (28% of beer promoters and 18% of karaoke workers). A substantial proportion of the IDFSWs did not seek treatment at their last episode of STI (10% of beer promoters and 17% of karaoke workers). Less than one third of the IDFSWs sought treatment for STI at a private or public medical setting (30% of beer promoters and 28% of karaoke workers) (see Figure 5 on the previous page).

**Table 10: Female sentinel groups having children, having lost children and contraceptive method currently used**

	DFSWs n=1308	IDFSWs	
		Beer promoters n=648	Karaoke workers n=604
<b>Currently childless</b>	70.4%	51.5%	71.8%
<b>Have ever lost one child or undergone an abortion</b>	28.1%	42.7%	27.7%
<b>No use of any contraceptive method</b>	0.5%	--	--
<b>Contraceptive methods used (non mutually exclusive)</b>			
Condoms	98.9%	--	--
Pills	4.7%	--	--
Depoprovera	2.3%	--	--

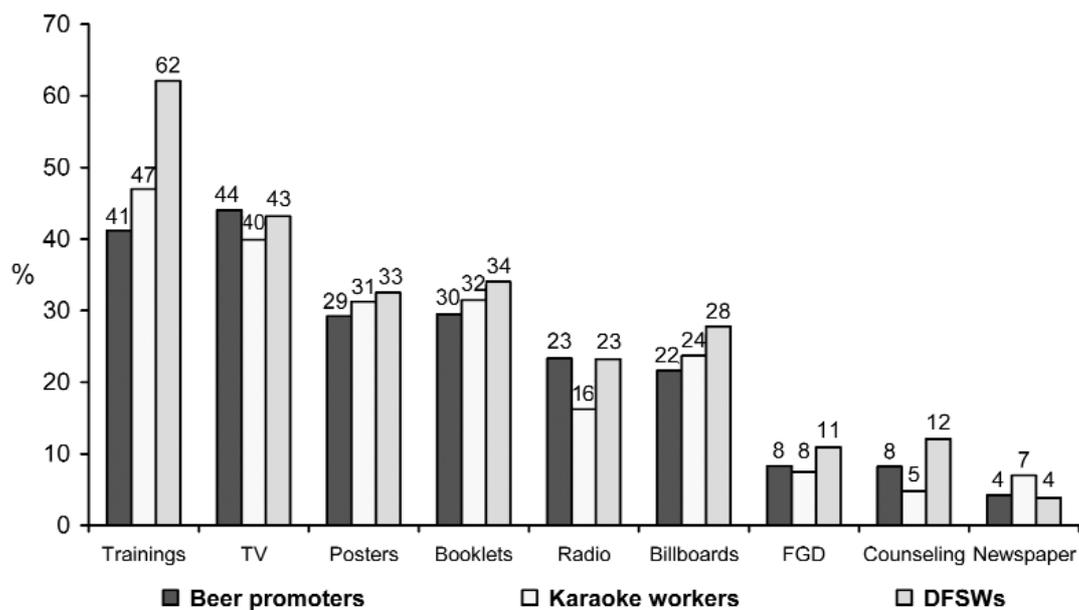
While most of the karaoke workers report no children (72%), only 52% of the beer promoters do not have children. Those with children generally had one single child (mean number of children=1.4, median=1 in both groups of IDFSWs). 69% of the beer promoters had ever been pregnant compared to 46% of the karaoke workers. The mean number of pregnancies among the beer promoters who had ever been pregnant was 2.2 (median 2) compared to 1.9 (median 1) among the ever pregnant karaoke workers. Among those who currently have children, 43% of beer promoters have had more pregnancies than their number of living children compared to 28% of karaoke workers.

## 2.8 Sources of information about HIV/AIDS

### A Direct female sex workers

Almost all DFSWs (92%) reported having received HIV/AIDS education or information in the past 6 months. Among those who received HIV/AIDS information through media, 20% had been reached by one media, 29% by two media, 24% by three media, and 26% by 4 to 8 media. In the past 6 months, 62% of the DFSWs had received HIV/AIDS information through training, whereas TV reached 43% of the DFSWs, booklet 34%, poster 33%, and radio 23% (see Figure 6).

**Figure 6: Proportion of female sentinel groups who received HIV/AIDS information by type of media**



89% of the DFSWs reported having received HIV/AIDS information from professional staff in the past 6 months. PAO staff provided HIV/AIDS information to 53% of the DFSWs. Other providers of HIV/AIDS information included NGO staff, STI clinics staff (reported by 30% of DFSWs), or peer educators (who informed 21% of DFSWs in the past 6 months).

## **B Indirect female sex workers**

Most of IDFSWs had received HIV/AIDS information in the past 6 months and the proportion was comparable in the 2 groups (82% of beer promoters and 81% of karaoke workers). Among those who had received HIV/AIDS information in the past 6 months, about one third had received it from one single source, one third from two sources, and the last third received information from more than 2 sources. The most common media by which IDFSWs received HIV/AIDS information were trainings and television. One third to one fourth of the IDFSWs received HIV/AIDS information either through posters, booklets, radio, or billboards. Focus group discussions, counseling and newspapers were less frequently reported sources of information as they did not reach 10% of the IDFSWs (see Figure 7).

70% of both beer promoters and karaoke workers had received HIV/AIDS information from a person in the past 6 months. IDFSWs have been lectured by PAO staff (40%) or NGO staff (39%), with no difference between the two groups of IDFSWs. In the past 6 months, peer educators had reached 16% of beer promoters and 24% of karaoke workers, and STI clinics staff delivered information to 9% of beer promoters and 13% of karaoke workers. In the same period of time, VCT staff delivered information to 5% of IDFSWs while private doctors represented a negligible source of HIV/AIDS information.

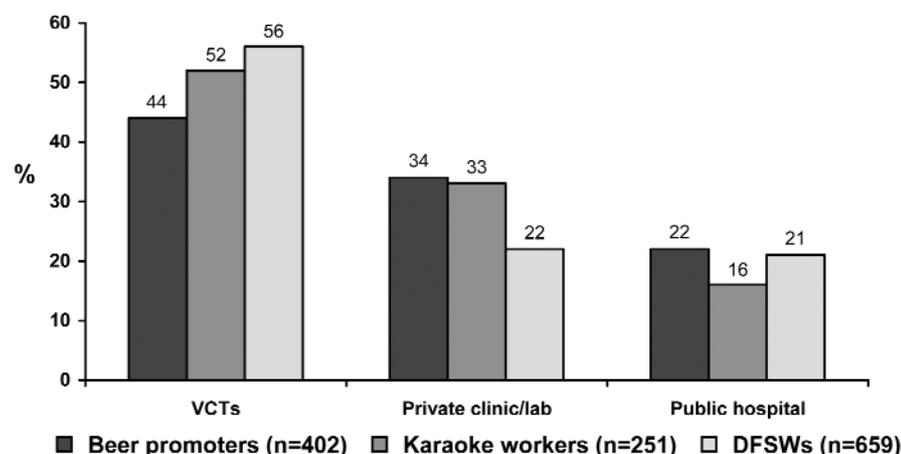
## **2.9 HIV testing**

### **A Direct female sex workers**

Overall more than half of DFSWs (61%) reported having ever been tested for HIV. This figure, however, does not represent those who may know their HIV status since 15% of the DFSWs had been tested last for HIV as part of the HIV sentinel surveillance surveys where results are not provided (see Table 11). Those who had ever been tested and who may have had access to their sero-status (i.e. were tested outside the HSS) (n=673) reported being tested last at a voluntary counseling and testing center (56%), at a private clinic (22%), or at the hospital (21%).

Among DFSWs who were tested last for HIV in facilities which may have provided test results, 80% reported receiving counseling at their last HIV testing. The term

**Figure 7:** Facility used at last HIV test by female sentinel groups ever tested last for HIV apart from those tested during HSS



counseling, however, may cover a large array of practices and might have been misunderstood by some respondents, as revealed by 5% of the DFSWs who equated the informed consent proposed in the sero-surveillance survey with counseling. However, almost all (98%) of those who attended voluntary counseling and testing centers and most (80%) of those tested at public hospitals reported receiving HIV counseling services, whereas only 33% of those tested at private clinics reported receiving HIV counseling. 72% of all the DFSWs reported that they would like to be tested for HIV and 79% of those never tested or tested in sero-surveys were willing to be tested in the future (Table 11).

**Table 11:** Female sex workers ever tested for HIV, facility used at last test and willingness to be tested in the future

	DFSWs n=1307	IDFSWs	
		Beer promoters n=648	Karaoke workers n=604
<b>Ever tested for HIV</b>	60.8%	67.9%	48.3%
<b>Facility used at last test*</b>			
HIV sero-surveillance survey	15.4%	8.2%	13.7%
VCT	47.0%	40.8%	44.5%
Hospital	17.5%	20.1%	13.0%
Private clinic	18.9%	30.8%	28.1%
Other	1.3%	0.2%	0.7%
<b>Would like to be tested for HIV</b>	72.7%	68.8%	64.3%

\* Among those ever tested for HIV

## B Indirect female sex workers

Most of the IDFSWs reported ever having been tested for HIV: 68% of beer promoters and 48% of karaoke workers, VCT was the most common place for either group of IDFSWs who sought a HIV test, followed by private clinics (see Table 12). Among those who had ever been tested, however, 8% of the beer promoters and 14% of the karaoke workers may not have known their serological status since they were tested last in a surveillance survey that did not provided results. Almost all of those who had been tested at a VCT and the majority of those who got tested a hospital had received counseling at last HIV testing (see Table 12). Private clinics provided counseling to 20% or less of their clients. The understanding of the concept of counseling may vary among participants since 6% of beer promoters and 3% of the karaoke workers reported receiving counseling from the HIV sero-prevalence survey which solely provides information on the survey as part of the informed consent (see Table 12). The majority of IDFSWs reported being willing to be tested for HIV in the future: 69% of the beer promoters and 64% of the karaoke workers. Among those never tested for HIV or tested during surveillance surveys, 71% of beer promoters and 78% of karaoke workers were willing to be tested.

**Table 12:** Proportion of female sex workers reporting being counseled at last HIV testing, by testing facility

	DFSWs n=795	IDFSWs	
		Beer promoters n=440	Karaoke workers n=291
HIV sero-surveillance survey	4.9%	5.7%	2.5%
VCT	98.4%	98.9%	98.5%
Hospital	79.7%	76.1%	63.2%
Private clinic	33.3%	20.0%	16.1%
Other	70.0%	100.0%	100.0%

## 2.10 Attitudes regarding people living with HIV/AIDS

### A Direct female sex workers

While 84% of the DFSWs did not report any close friend or relative living with HIV/AIDS, 9% had a friend infected with HIV and 7% had a relative living with HIV/AIDS. However, the majority (61%) knew someone sick or who had died from AIDS. 13% would not

accept to care for a family member sick with AIDS. The proportion was comparable among those who reported having close friends or relatives infected with HIV and others. Almost one in three (31%) would not buy any vegetables from a food seller living with HIV, and having close relatives or friends living with HIV/AIDS had little influence on the answer. 16% of the DFSWs thought that a non-sick woman living with HIV should not be allowed to teach children. Finally, if a member of their family would become infected with HIV, 51% of the DFSWs would like to keep it secret.

### B Indirect female sex workers

Attitudes regarding people living with HIV/AIDS are consistent between beer promoters and karaoke workers. While 82% did not have any close friend or close relative living with HIV/AIDS, 12% reported having a close relative and 7% a close friend living with HIV. More beer promoters reported having close friends living with HIV than karaoke workers (8% versus 5%, respectively) and this difference remains after accounting for the difference in age distribution. The majority (63%) of IDFSWs knew someone sick from AIDS or someone who died from AIDS. 12% of those with an infected close relative would not like to keep that person in their house. Those who had a close friend living with HIV reported being more willing to keep an infected family member at home

**Table 13:** Female sentinel groups knowing PLHA and attitudes towards PLHA

	DFSWs	IDFSWs	
		Beer Promoters	Karaoke Workers
<b>Know someone close living with HIV</b>			
Close relative	7.4%	11.3%	11.8%
Close friend	9.1%	8.2%	4.8%
None	83.5%	80.5%	83.4%
<b>Know someone sick or someone who died from AIDS</b>	61.1%	67.5%	58.1%
<b>Would keep in the house an infected family member</b>	87.4%	93.7%	91.9%
<b>Would buy vegetable/food from PLHA</b>	69.5%	69.1%	69.7%
<b>Non sick female teacher who has HIV should keep on teaching</b>	83.7%	88.5%	84.5%
<b>Would like to keep secret the HIV status of an infected family member</b>	51.3%	49.9	48.0

since only 6.6% would reject this person. All together, 7% of the IDFSWs would not keep an infected relative in their house. Almost one in three (31%) would not buy vegetables from a food seller living with HIV. 13% of the IDFSWs thought that a non-sick female teacher living with HIV should not be allowed to teach children, but those who had children were less likely to ban an infected teacher than others (11% versus 15%). Finally, if a member of their family would become infected with HIV, half of the IDFSWs would like to keep their sero-status secret (see Table 13).

### **2.11 Drug abuse**

Although few women in this BSS reported any drug use, more women reported using methamphetamines than reported using any other drug. In fact, 5% of DFSWs, 4% of karaoke workers and 0.6% of beer promoters reported having ever taken methamphetamines. Cannabis was the second most reported drug used with 0.9% of DFSWs and 0.7% of karaoke workers, but none of the beer promoters. 0.4% of DFSWs and 0.5% of karaoke workers had ever smoked heroin. Only one brothel based sex worker acknowledged having ever injected heroin. Beer promoters appear to be less exposed to drug use than karaoke workers or brothel based sex workers, however, overall levels of reported substance use were very low (less than 5%).

## **3 Male Sentinel Groups**

### **3.1 Demographic characteristics**

Demographic characteristics of the male sentinel groups are described in Table 14 on page 53.

#### **A Military and police**

The BSS 2003 included 675 military and 676 police. Police were age 22 to 50 years old and their mean age was 37.9. Military were slightly younger with their age ranging between 20 and 49, and their mean age was 36.4. Most men were currently married and lived with their spouse (72% of military and 87% of police). About half the police who were not currently married lived with their parents or relatives (53%), the other half lived with people other than friends or relatives (49.7%), suggesting that they were

living with their colleagues. Fewer unmarried military than unmarried police lived on their own (8% versus 19%, respectively). Military were more likely than police to have spent more than a month away from family in the past year (37% versus 26%, respectively). Despite these trips, few in either group were recent migrants since 87% of military and 96% of police had been living in the current province for more than 5 years.

Military reported significantly less years of schooling than police (mean 7.3 years versus 8.8 years, respectively). This difference in overall level of education is mostly due to the large proportion of military who had not completed primary school (21% among military compared to 5% among police).

While military have been on their job from 1 to 30 years, police has been appointed 2 to 25 years ago. However, the mean and the median duration of working in their occupation was comparable in the two groups (around 13 years). Military reported a lower income in the past month than police: median 25 US\$ compared to 30 US\$ among police. It should be noted that both groups solely reported their official salary which may be loosely related to their actual wealth.

## **B Moto-taxi drivers**

The sample of moto-taxi drivers includes 947 individuals. The moto-taxi drivers were aged between 18 and 49, and their mean age was 32 years old. Most were currently married (78%) and all of those reported living with their wife. The unmarried moto-taxi drivers reported living with parents or relatives (86%), on their own (7%), or with friends (4%). One quarter of moto-taxi drivers reported seasonal migration (traveled for more than one month in the past year); and 28% reported recent permanent migration (i.e. reporting living in the current city for less than 5 years).

Almost all moto-taxi drivers had attended primary or secondary school, and their mean number of years at school was 7.2. They had been working as moto-taxi drivers for 1 to 25 years, and the mean duration in this job was 4.4 years. In the past month, moto-taxi drivers reported earning between US\$ 1.5 and US\$ 250, and their median income in the past month was US\$ 50.

## **3.2 Sexual initiation and sexual behaviors**

### **A Military and police**

Very few of either the military (0.9%) or police (0.4%) never had sex. The mean age at first sexual intercourse was lower among military than police (21.5 years compared to 22.8 years). Among those who ever had sex, 59% of the military and 52% of police acknowledged having had sex prior to marrying. Consequently the mean age at first marriage is slightly higher than the mean age at first sex. The median duration between first sex and marriage was 2 years among military and 1 year among police. The first sexual partners of police or military are roughly equally distributed among wife, sweetheart, and sex-workers. Police, however, were more likely than military to report initiating their sexuality with their wife (43% versus 34%), while more military than police reported having had first sex with a sex worker (28% versus 22%, respectively). The median number of lifetime partners was similar among military and police (10 lifetime partners), revealing identical numbers of exposure to sexual risk in both groups (Table 14).

### **B Moto-taxi drivers**

More moto-taxi drivers than other men from BSS sentinel groups reported never having had sex (6%). This difference remains after accounting for age differences between surveillance groups. Moto-taxi drivers reported the youngest mean age at first sex of all male groups (21.5 years). Among those married, 54% reported having had premarital sex. Consequently the age at first marriage is higher than the age at first sex (see Table 14).

While the majority (41%) had initiated their sexuality with their wife, slightly less than one third had first sex with a sweetheart (28%) or a sex worker (28%). Most (54%) of the moto-taxi drivers reported having had their first sexual intercourse at a younger age than their age at first marriage, showing that pre-marital sex is common among this occupational group. The median duration between first sex and first marriage was 1 year, revealing that the majority still have first sex either at marriage or in the year before marriage. Their median number of lifetime partners (5) was half of that reported by men from the military and police. The currently married moto-taxi drivers reported more sexual encounters with their wife in the past month than men from the uniformed service (median 5, compared to 4 either in military or police).

Table 14: Demographic characteristics among male groups

	Military n=675	Police n=676	Moto-taxi drivers n=947
<b>Age in years</b>			
Mean	36.4	37.9	32.0
Median	36	37	32
<b>Marital status</b>			
Married living with spouse	72.3%	87.4%	77.8%
Married living away from spouse	7.3%	2.5%	3.0%
Divorced	3.9%	1.9%	2.3%
Never married	16.6%	8.1%	16.9%
<b>Currently living with</b>			
Parents	6.1%	3.9%	11.4%
Relatives	0.7%	2.8%	7.4%
Wife	72.7%	87.4%	78.2%
Friends	4.4%	1.5%	1.0%
Alone	13.8%	2.1%	1.6%
			0.4%
<b>Traveled more than a month away from family in the past year</b>	36.8%	26.1%	25.6%
<b>Years of schooling</b>			
No formal education	5.6%	0.3%	0.7%
1 to 6 years	28.4%	14.1%	35.5%
7 to 12 years	64.3%	83.7%	63.5%
13 years and over	1.6%	1.9%	0.3%
Mean	7.3	8.8	7.2
Median	8	9	7
<b>Income earned last month (US\$)</b>			
Mean	34.5	39.9	51.7
Median	25	30	50
<b>Number of years in the current profession</b>			
Mean	12.9	13.8	4.4
Median	13	13	3
<b>Number of years living in current province</b>			
Mean	20.2	24.7	12.5
Median	20	23	13
<b>Traveled for at least one month in the past year</b>	36.8%	26.1%	25.6%

### 3.3 Sweethearts and non-commercial non-marital sexual partners

#### A Military and police

Slightly less than half of military and police reported ever having had sex with a sweetheart (48% of military and 47% of police). However, such a measure of the lifetime

exposure is very dependant on the age distribution, and men from the military and police are mostly middle aged. 14% of military and 9% of police reported having had a sweetheart in the past year. However, almost half the relationships with sweetheart did not include sexual activity: only 9% of the military and 7% of the police reported sex with a sweetheart in the past year. A similar proportion of men from the military and police had sex with sweetheart in the past year as in the past 3 months (see Figure 8 on the next page). Out of those who had sex with a sweetheart in the past 3 months, 49% of military and 65% of police were currently married. Those who had sex with a sweetheart in the past year were slightly younger than all men in their group (mean age of 33 years among military and 34 years among police).

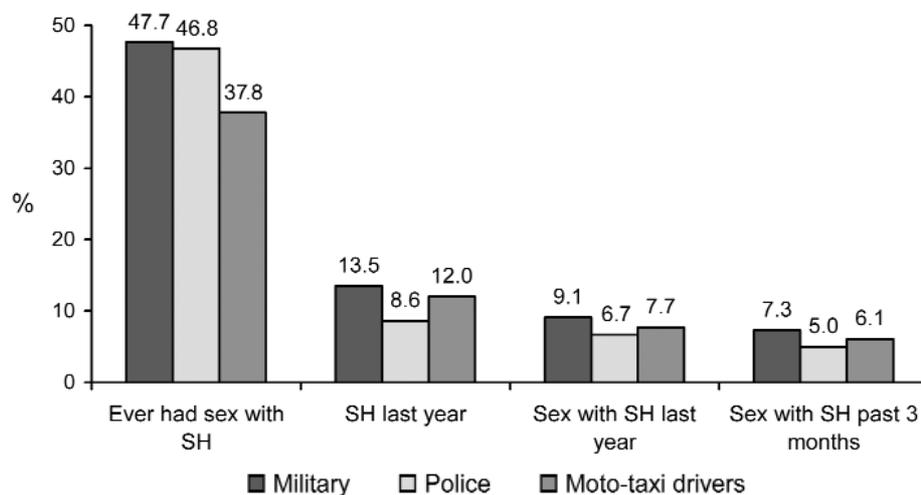
**Table 15:** Frequency of giving money to sweetheart among males from sentinel groups reporting having had a sweetheart in the past year

	Military n=90	Police n=54	Moto n=111
After sex	6.7%	1.9%	7.2%
Weekly	—	—	1.8%
Monthly	5.7%	1.9%	8.1%
Occasionally	32.2%	40.7%	33.3%
Never	55.7%	55.6%	49.6%

Very few police or military men who had a sweetheart in the past year gave money with any kind of regularity to their sweethearts (see Table 15). Most of these men reported never giving money to their sweetheart, but 40% of military and 32% of police reported doing so occasionally.

Among those who were sexually active, 8% of military or police reported having had sexual intercourse in the past year with someone who is neither a sex worker, nor their wife, nor their sweetheart. Therefore, in the past year, as many men from the military and police had casual sexual partners as those who had sex with sweethearts.

**Figure 8: Sweetheart (SH) relationships and sex with sweetheart among male sentinel groups**



### B Moto-taxi drivers

More than half (63%) of moto-taxi drivers reported ever having had a sweetheart. However, only 38% of the moto-taxi drivers ever had sex with a sweetheart which means that about 40% of those who had a sweetheart in their lifetime never had sex with this partner. In the past year, 12% of the moto-taxi drivers had a relationship with a sweetheart, 8% had sex with a sweetheart, and 58% of those who had sex with a sweetheart were married men living with their spouse. Of those who had a sweetheart in the past year (n=113), 65% had sex with this partner. About half of the men with sweethearts reported giving them money sometimes or regularly, while the other half never gave them any money. While 17% of moto-taxi drivers had never married, 34% of those who had sex with a sweetheart in the past year had never married. In addition moto-taxi drivers who had sex with a sweetheart in the past year were younger than their occupational group (mean age 30 years compared to 32 years). Similarly to men from the military and police, a substantial proportion of moto-taxi drivers (11%) reported having had sex with someone other than sex workers or wife or sweetheart in the past year, revealing that more moto-taxi drivers had sex with casual partners than with sweethearts in the past year.

**Table 16:** Details of sweetheart relationships among male sentinel groups

	<b>Military n=675</b>	<b>Police n=676</b>	<b>Moto-taxi drivers n=947</b>
<b>Ever had sex with sweetheart</b>	47.7%	46.8%	37.8%
<b>Had sweetheart last year</b>	13.5%	8.6%	12.0%
<b>HAD SWEETHEART IN THE PAST YEAR</b>	<b>Military n=91</b>	<b>Police n=58</b>	<b>Moto-taxi drivers n=113</b>
<b>Had sex with sweetheart last year</b>	67.0%	77.6%	65.5%
<b>Give money to sweetheart</b>			
After sex	6.7%	1.9%	7.2%
Weekly	—	—	1.8%
Monthly	5.7%	1.9%	8.1%
Occasionally	32.2%	40.7%	33.3%
Never	55.7%	55.6%	49.6%
<b>HAD SWEETHEART IN THE PAST 3 MONTHS</b>	<b>Military n=70</b>	<b>Police n=38</b>	<b>Moto-taxi drivers n=113</b>
<b>Had sex with sweetheart in the past 3 months</b>	61.4%	68.4%	67.2%

### 3.4 Paid sex

#### A Military and police

The majority (80%) of police or military reported ever having had sex with a sex worker. In the past year, 39% of military and 33% of police had sex with FSWs. The overwhelming majority (99%) of those who had sex with FSWs in the past year went to a brothel. The use of sex worker services was associated with age. Among sexually active men from the uniformed service, the use of sex worker services was more common among those aged 18 to 24 (100% of police and 70% of military) and less common among those 35 or older (see Figure 9). Among those who had sex with a FSW in the past year, half did not have sex with a FSW in the past month, but 8% of military and 12% of police had visited at least 4 FSWs in the past month (see Table 16).

**Table 17: Male sentinel groups: fees paid to FSWs, place where last paid sex took place, and frequency of visits to FSWs**

	<b>Military n=675</b>	<b>Police n=676</b>	<b>Moto-taxi drivers n=947</b>
<b>Sex with FSW in the past year</b>	38.7%	33.0%	34.9%
<b>HAD SEX WITH SEX WORKER IN THE PAST YEAR</b>	<b>Military n=261</b>	<b>Police n=223</b>	<b>Moto-taxi drivers n=329</b>
<b>Price of last paid sex (US \$)</b>			
Mean	2.7	2.5	2.0
Median	2	2.5	1.3
<b>Place where last paid sex took place</b>			
Brothel	86.5%	86.6%	94.2%
Hotel	5.4%	7.2%	2.4%
Karaoke shop	5.0%	4.0%	1.8%
Massage parlor	0.8%	1.4%	0.3%
Other	2.3%	0.9%	1.2%
<b>Number of SWs visited in the past month</b>			
0	50.2%	52.0%	41.8%
1	21.1%	20.2%	25.2%
2-3	20.3%	15.7%	24.9%
4-7	6.9%	8.5%	6.1%
>7	1.5%	3.6%	2.1%

Among police, one in five had sex with a beer promoter in the past year and almost the same proportion had sex with a karaoke worker. Compared to military, police reported more sex with indirect sex workers, including beer promoters, karaoke workers, masseuses, or restaurant employees (see Figure 10 on the next page). Few police (1%), however, reported having had sex with a street based sex worker, while military men (5%) reported visiting this group of sex workers more than any other male sentinel group.

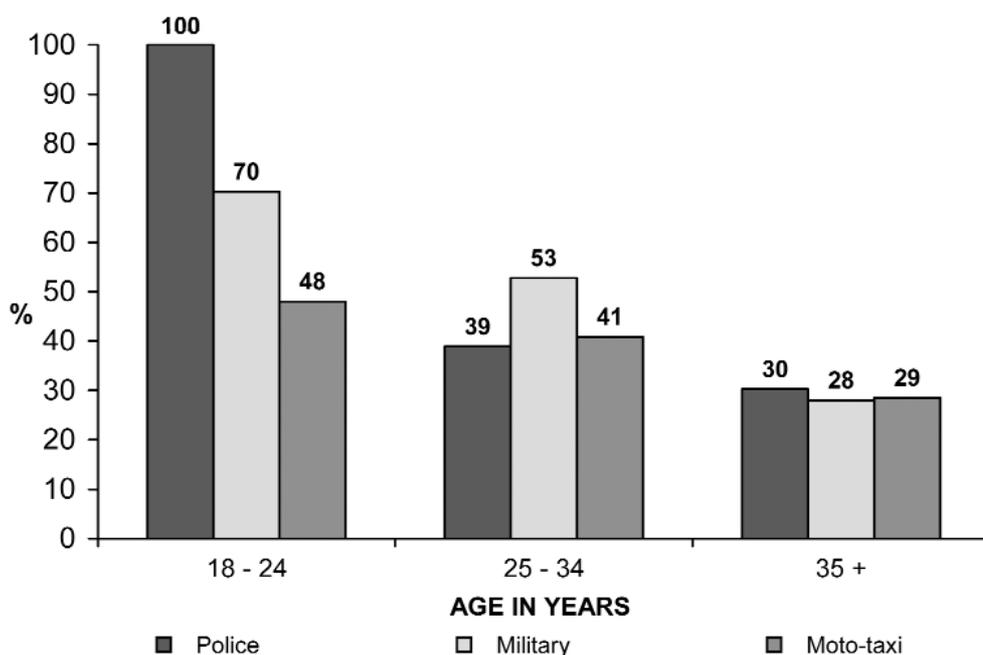
Most men from the uniformed service reported that their last paid intercourse had taken place at a brothel (87%), whereas about 1 in 10 of last paid sex took place either in hotels or karaoke bars (see Table 16). The majority of military had paid slightly less than police for their last sex with a sex worker (median 2 versus 2.5 US\$, respectively).

Alcohol intake was often associated with visits to sex workers. Among those who had sex with sex workers in the past year, only 19% of military and 17% of police did not acknowledge any intake of alcohol at last visit to FSWs. However, 33% of military and 41% of police reported that their alcohol intake at last visit to FSWs was restricted to a moderate quantity (less than 3 cans of beer or 1 glass of wine).

### B Moto-taxi drivers

Overall 59% of moto-taxi drivers reported ever having had sex with a sex worker in their lifetime. In the past year, 35% of moto-taxi drivers had sex with a FSW (see Table 16). Of those who ever had sex, the proportion of those who visited sex workers in the past year was higher among young age groups; 48% of the ones aged 18 to 24 had sex with a sex worker in the past year, compared with 41% of those aged 25 to 34, and 29% of those older than 34 (see Figure 9). Among those who reported sex with a sex worker in the past year, 42% did not visit a FSW in the past month but one third had sex with two or more FSWs (see Table 16). Additionally, among those who had sex with a FSW in the past year almost all (99%) reported sex with a brothel based sex worker, while 16% also had sex with a karaoke girl and 13% also had sex with a

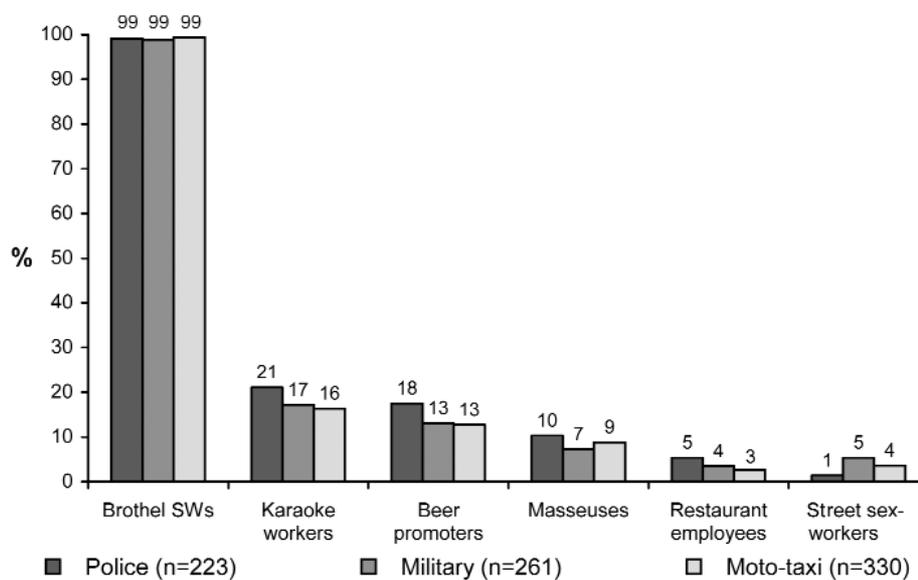
**Figure 9:** Proportion of male groups reporting sex with sex workers in the past year by age, among those who ever had sex



beer promoter (see Figure 10). Therefore, men who had sex with sex workers all had sex with brothel based sex workers but some of these same men also had sex with other types of sex workers. Compared to other male groups, few (6%) moto-taxi drivers reported having had their last paid sexual intercourse in places other than brothels. Moto-taxi drivers reported having paid lower fees than men from the military and police at last paid sex, suggesting that moto-taxi drivers may visit different establishments than the two other male sentinel groups.

Among the moto-taxi drivers who reported having had sex with a sex worker in the past year, the majority (70%) acknowledged some alcohol intake at last visit to sex workers and 33% had only consumed a moderate quantity of alcohol (less than 3 cans of beer or 1 glass of wine).

**Figure 10:** Types of paid sexual partners visited by those who had paid sex in the past year



### 3.5 Condom use

The proportion of men reporting consistent condom use varied greatly depending on the type of sexual partner. Similarly to reports from female sentinel groups, men were more likely to consistently use condoms with sex workers than with their sweethearts.

#### A Military and police

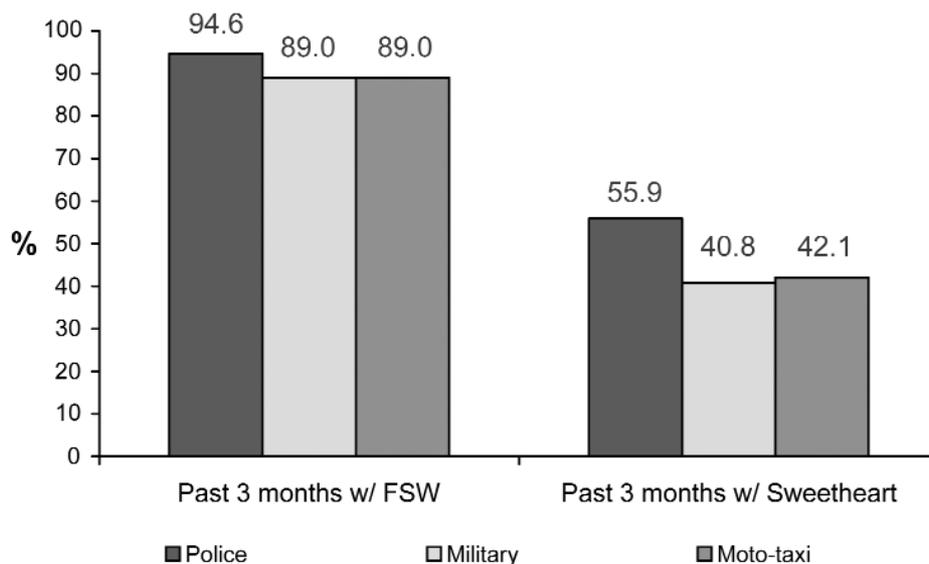
Consistent condom use in the past 3 months in sex with sex workers was high: 89% among military and 95% among police. In either military or police, there was no significant association between consistent condom use with sex workers in the past 3 months and either the marital status or the age of these clients. The level of consistent condom use with sex workers remained high when considering a one year period; of those who had sex with sex workers in the past year, 85% of military and 91% of police reported using condoms consistently with sex workers in the past year.

Among those who reported having had sex with a sweetheart in the past 3 months (n=49 for military and n=34 for police), 41% of military and 56% of police used condoms consistently in these sexual encounters. Among military, those who were currently married were more likely than others to consistently use condoms with their sweetheart (58% vs 24%), whereas 64% of the non currently married military men who had sex with sweethearts in the past 3 months (n=25) never had used condom with this partner. Among police, currently married men were also more likely than others to have used condoms consistently with sweethearts in the past 3 months (64% versus 42%, respectively), but the proportion of those who never used condoms with sweetheart did not vary with marital status (32% of the currently married versus 33% of the non married). Among those who had sex with sweethearts in the past year and did not use condoms consistently (n=36 for military and n=21 for police), having known their sweetheart for a long time was the main rationale for not using condoms with her: as reported by 50% of military and 52% of police. Other reasons included: having a virgin sweetheart (25% of military and 10% of police), loving their sweetheart (11% of military and 14% of police), and the non availability of condoms at the time of the intercourse (11% of military and 10% of police).

### B Moto-taxi drivers

In a similar fashion to men from the military and police, most moto-taxi drivers reported a high level of consistent condom use with sex workers. Among those who had sex with sex workers in the past year (n=328), 88% had always used condoms in these encounters. Of those who had sex with sex workers in the past 3 months (n=264), 89% reported using condoms consistently with these partners. Moreover, men who were currently married were just as likely to use condoms with FSWs in the past three months as unmarried men (89% versus 89%) and consistent condom use with sex workers was similar among age groups of moto-taxi drivers. Only 42% of those who had sex with a sweetheart in the past 3 months reported having consistently used condoms with this type of partner. Currently married men, however, were more likely than others to have consistently used condoms with their sweetheart (53% versus 27%, respectively). Among those who had sex with a sweetheart but did not use condoms consistently (n=34), having known their sweetheart for a long time was the main rationale for not using condoms (65%). Other reasons for not using condoms

**Figure 11:** Consistent condom use in the past three months by type of partner among male sentinel groups



with sweethearts included: their sweetheart was a virgin at first intercourse with them (9%), they love their sweetheart (9%), condoms were not available at the time of the intercourse (6%).

### **3.6 Care seeking behaviors related to sexually transmitted infections**

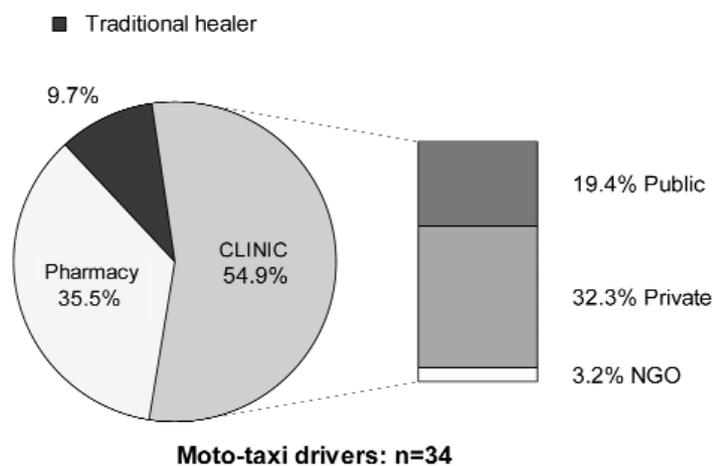
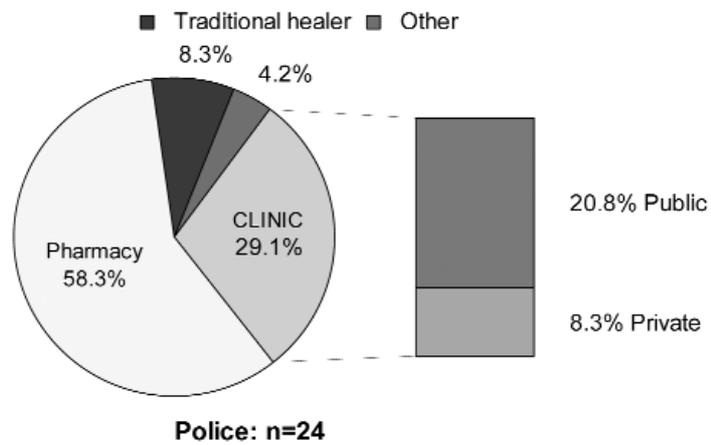
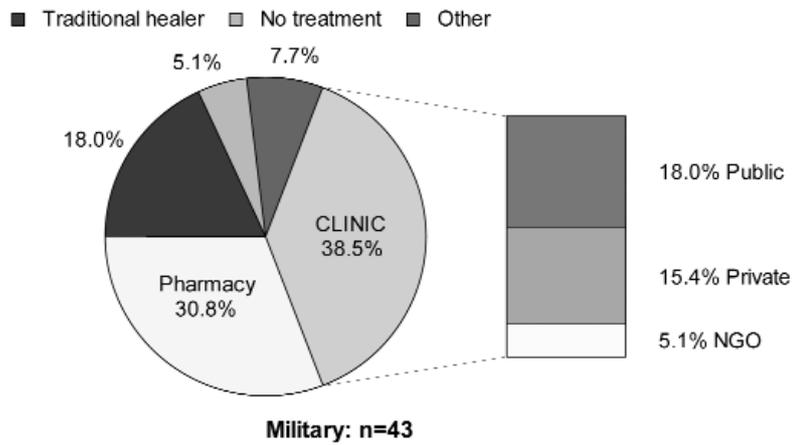
#### **A Military and police**

While few men reported experiencing abnormal urethral discharge in the past year, military men were more likely than policemen to report episodes of urethral discharge in the past year (6% versus 4%, respectively). No police and only 5% of military did not seek treatment at their last episode of urethral discharge (see Figure 12). Pharmacies were the most common source of STI care for last episode of urethral discharge among police (58%) but only 31% of military chose this option for treatment of their symptom. While military preferred attending clinics (39%) to get their STI treated, only 29% of police used these services. Traditional healers were the first STI care providers for a substantial proportion of military (18%) but were less common among police (8%). Among those who sought care at a clinic, public services were the most common source of clinical care, reported by 47% of military and 71% of police.

#### **B Moto-taxi drivers**

Only 4% of moto-taxi drivers reported having experienced an episode of urethral discharge in the past year. All of those who reported an episode of discharge in the past year have sought treatment for this symptom. The majority (55%) of those who had discharge first sought care at a clinic. However, unlike military and police men, private clinics accounted for the greatest part (59%) of the care providers sought by those who attended clinics. While pharmacies were the second source of STI care (36%), traditional healers still accounted for 10% of the STI care providers.

**Figure 12: First health care provider sought at last episode of urethral discharge in the past year.**



### **3.7 Sources of HIV/AIDS information**

#### **A Type of media conveying HIV/AIDS information**

Almost all men from the male sentinel groups reported having received some information on HIV/AIDS in the past 6 months (93% of military, 97% of police, and 92% of moto-taxi drivers). As shown in Figure 13, audio-visual media were delivering information to more people than written media. TV was the first source of information for every male sentinel group in the past 6 months, which had reached 87% of the police, 75% of military and 82% of moto-taxi drivers. Trainings represented the second source of information received in the past 6 months for military (74%) and police (67%), but not for moto-taxi drivers (40%). This finding probably reflects the fact that there has been little HIV/AIDS training designed specifically for moto-taxi drivers who are not targeted by any large scale HIV/AIDS prevention programs. HIV/AIDS information aired by the radio had reached 64 to 70% of the male sentinel groups in the past 6 months. Billboard or posters reached about half of the police and moto-taxi drivers, and slightly less military (42%). Some of the military isolated in their barracks may be less exposed to these type of media that is usually posted in large communities. Booklets had reached about one fourth of each group in the past 6 months. Newspaper had been a source of HIV/AIDS information for about one in five of military or moto-taxi drivers, and one in four of police. The higher level of education of police compared to other sentinel groups may grant them an easier access to written information. Group discussions represented a minor source of information on HIV/AIDS in the past 6 months (6% of military, 5% of police, and 7% of moto-taxi drivers), and counseling had provided information on HIV/AIDS to about 1% of any male sentinel group.

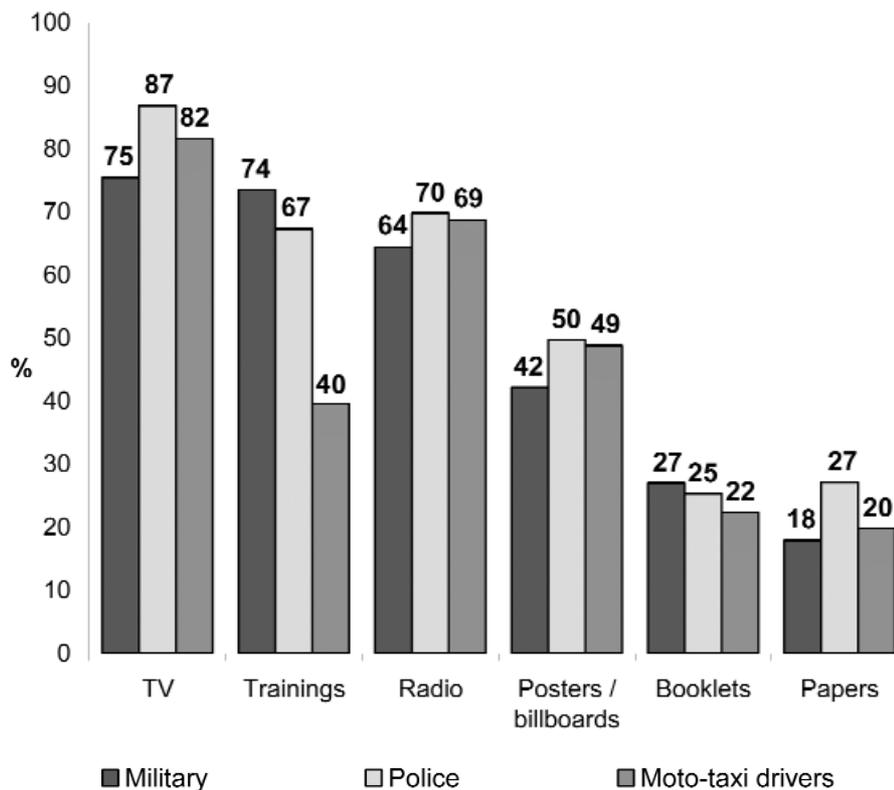
#### **B Type of providers conveying HIV/AIDS information**

Most of the men from the military and police have received some information on HIV/AIDS by trained staff in the past 6 months (74% of military, 70% of police), but only 45% of the moto-taxi drivers received this type of face to face information. In the past 6 months, staff from provincial AIDS offices (PAO) have been the main trained staff providing information to police (45%), while military were mainly informed by peer-educators (42%, see Figure 14). Provincial AIDS office staff and NGOs had reached at least 1 person in 4 in each sentinel group. Clinical and VCT staff was marginal providers of HIV/AIDS information, who had not informed more

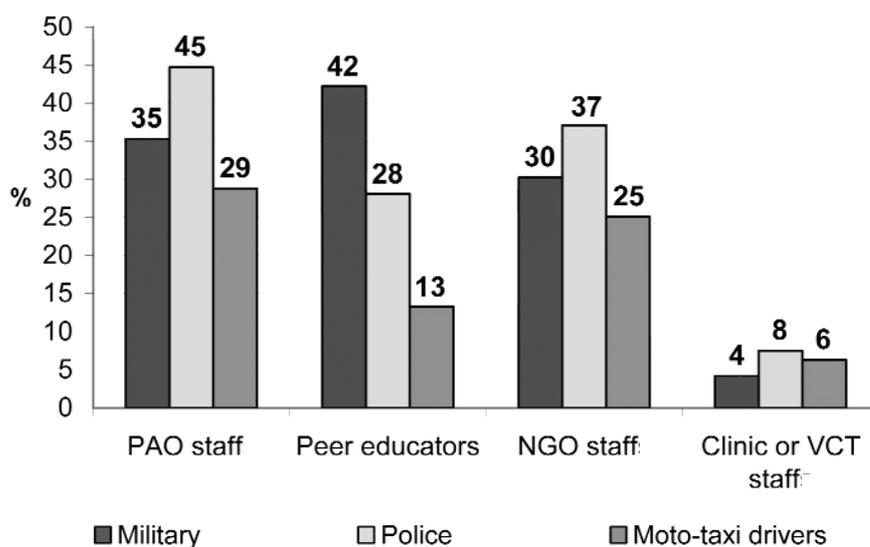
than 8% of any sentinel group. Since a large scale peer education program has been setup among men from the military and police but not among moto-taxi drivers, it is not surprising to find that peer educators had provided information almost exclusively to police or military.

Moto-taxi drivers received less of any kind of face to face information on HIV/AIDS in the past 6 months than men from military and police. Those who received this kind of information had it from contact with PAO staff (29%) or NGOs (25%). The differences in face to face information observed between moto-taxi drivers and men from the military and police could be explained by the fact that moto-taxi drivers do not benefit from any national structured HIV/AIDS prevention program.

**Figure 13: Sources of HIV/AIDS information by male sentinel group in the past 6 months**



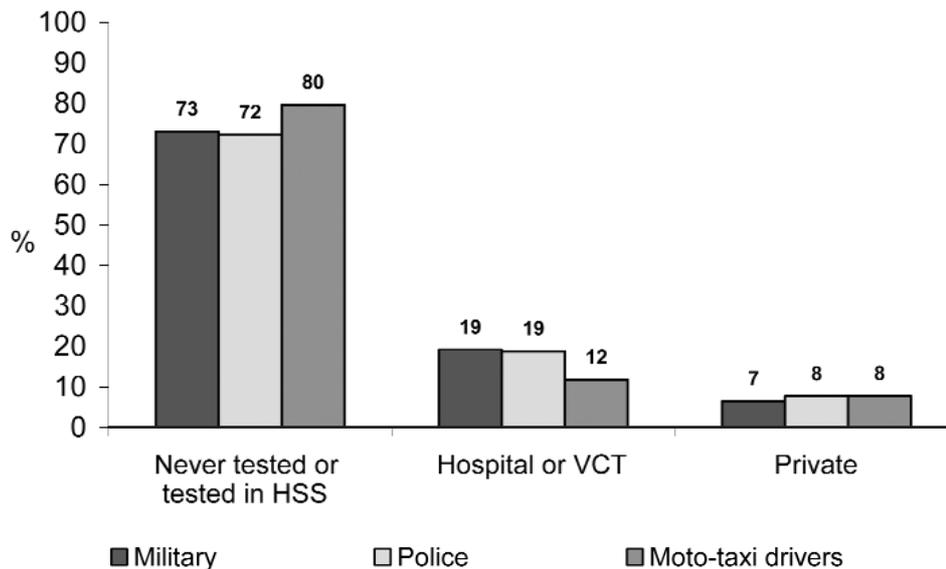
**Figure 14: Male sentinel groups: Providers of face to face information on HIV/AIDS in the past 6 months**



### 3.8 HIV testing

38% of the military and 22% of the moto-taxi drivers had ever been tested for HIV. A greater proportion (63%) of police had ever been tested for HIV, but a substantial proportion (35%) of the police had their last HIV testing in the national HIV surveillance survey (HSS) which does not provide their sero-status to participants. By comparison only, 11% of military and 2% of moto-taxi drivers had their last HIV test through the sero-surveillance. All together less than one man in three from the male sentinel group reported HIV testing outside HSS (military 27%, police 28%, moto-taxi drivers 20%). The fact that less moto-taxi drivers than men from the military and police had sought their sero-status may reflect the absence of structured programs providing HIV/AIDS information to moto-taxi drivers. Most of those who had been tested in clinics which may have provided test results went to public hospitals or VCT (see Figure 15).

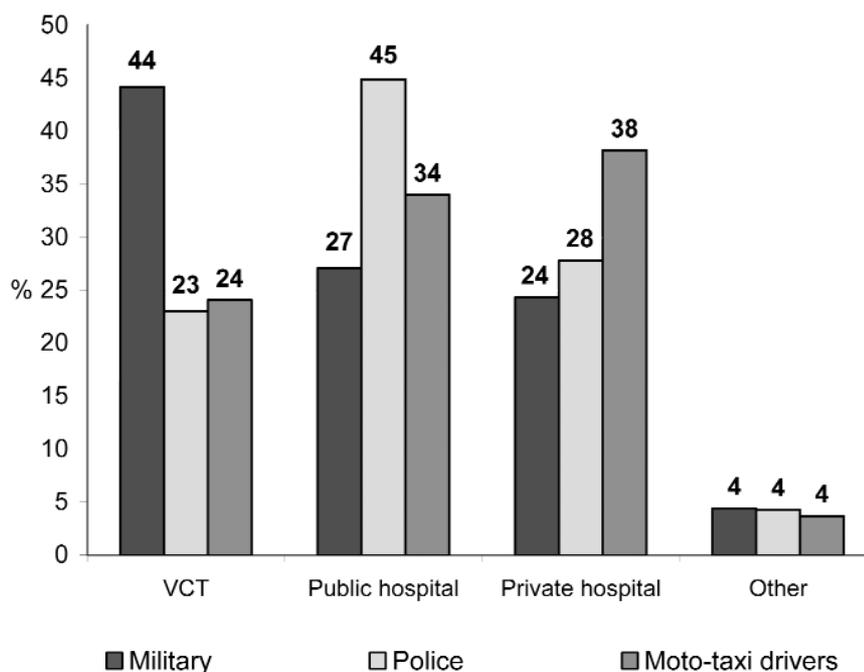
**Figure 15: Male sentinel groups never tested for HIV, tested in public or private structures**



Among the men from the male sentinel groups reporting getting tested for HIV outside the HSS, most military (44%) reported having been tested at voluntary counseling and testing centers, whereas policemen (45%) were tested at public hospitals and moto-taxi drivers (38%) went to private hospitals (see Figure 15). VCT were the less frequently reported facilities chosen by police or moto-taxi drivers for their last HIV test (figure 15), which suggests a lack of information regarding the availability of this new medical service in Cambodia.

Among those who had been tested for HIV outside of the HSS, the majority reported having received counseling: 62% of military, 65% of police, and 61% of moto-taxi drivers. However, the term 'counseling' might have been misinterpreted since since some of those who had been tested within HSS also reported having been counseled (24% of military, 4% of police, and 7% of moto-taxi drivers), although sero-surveillance surveys only administer informed consent to participants. While all moto-taxi drivers who attended VCT received counseling, only 90% of military and 79% of police reported having received counseling at VCT. Public hospitals also provided counseling

**Figure 16:** Facility used for last HIV testing by male sentinel group who have ever been tested, except those tested during HSS



services with HIV testing since 65% of military, 84% of police, and 78% of moto-taxi drivers reported having been counseled at last test taken at a public hospital. By comparison, private hospitals had provided counseling to only 17% of military, 25% of police, and 25% of moto-taxi drivers who had been tested in these facilities.

Among men from male sentinel groups who have sought their HIV status, the main rationale for taking the test was simply because they were worried about AIDS (see Table 18). About one in five took the test because they were feeling unwell or had symptoms, but it is not known if they were referred by a practitioner. Moto-taxi drivers were more likely than men from the military and police to seek for their HIV status prior to marrying (31% versus 14% and 15%). Among those who got married in the past 3 years, 25% of military, 29% of police, and 26% of moto-taxi drivers had taken a HIV test prior to marriage. Having an infected relative was not a frequent reason for being tested HIV, and only 2 to 5% of the male sentinel groups who sought for HIV testing

did it following an intercourse with a sex-worker whom they suspected to be infected with HIV (see Table 18).

Most of the men from the male sentinel groups expressed their willingness to be tested for HIV in the future (64% of either military or police, and 51% of moto-taxi drivers). Among military and police, most of those who had ever been tested for HIV but not during HSS were willing to be tested for HIV in the future (77% of military

**Table 18: Reasons for taking last HIV test among male sentinel group ever tested for HIV\***

	<b>Military n=181</b>	<b>Police n=189</b>	<b>Moto-taxi drivers n=195</b>
Worried about AIDS	44.8%	40.2%	34.9%
Pre-marital test	14.4%	14.8%	30.8%
Fell ill or have symptoms	20.4%	23.3%	22.1%
Had sex with SW who might be infected	2.2%	2.7%	4.6%
Have infected relative	0.0%	0.5%	0.5%
Other	18.2%	18.5%	7.2%

\* Excluding those tested during HSS

and 70% of police) as well as those who had never sought HIV testing in the past (60% of military and 61% of police). Conversely, among moto-taxi drivers, 74% of those who had ever sought for HIV testing were willing to be tested in the future, whereas only 45% of those who had never sought HIV testing were to be willing to be tested in the future.

### 3.9 Attitudes towards HIV/AIDS

A large majority of the men from the male sentinel group knew someone infected with HIV or who had died from AIDS: 84% of military, 89% of police, and 83% of moto-taxi drivers. A substantial proportion of the male from sentinel groups had a close friend or a close relative infected with HIV or who died from AIDS: 36% of military, 46% of police, and 39% of moto-taxi drivers. Therefore more than one third of the men from sentinel groups were personally connected to PLHA. While

more men from the military and police reported having had close friends with HIV/AIDS than close relatives with HIV/AIDS (24% versus 16% for military, and 31% versus 19% for police), moto-taxi drivers had roughly the same proportion of close friends or close relatives with HIV/AIDS (21% versus 24%, respectively).

In all male sentinel groups, most of the men stated that they would keep at home a family member infected with HIV: 90% of military, 93% of police, and 87% of moto-taxi drivers (see Table 19). However, those who had had a close friend or family member infected with HIV or who died from AIDS were more likely than others to be willing to keep an HIV infected family member at home (93% versus 88% for military, 90% versus 85% for police, and 92% versus 85% for moto-taxi drivers). 92% of military and 93% of police think that a non-sick HIV-infected school teacher should keep on working, but only 85% of moto-taxi drivers agreed with this statement. Buying food from an HIV infected person is perceived as more risky than direct contact with PLHA (such as a teacher or a family member) as revealed by 15 - 17% of the men from the military and police and 28% of the moto-taxi drivers who stated not to be willing to buy food from an HIV-infected person. HIV is still perceived as a disease which may generate discrimination as about two third of the men from each male sentinel group would not be willing to disclose the presence of an HIV-infected person within their family. In each of the sentinel group, there was no significant difference between those who had had a close family member with HIV/AIDS and others regarding the willingness to keep secret the presence of a PLHA within the family.

**Table 19: Attitudes towards people living with HIV/AIDS**

	<b>Military n=675</b>	<b>Police n=676</b>	<b>Moto-taxi driver n=947</b>
Willing to keep their HIV infected family member at home	89.9%	92.6%	87.4%
Willing to allow HIV infected teacher to teach at school	91.6%	92.7%	85.4%
Willing to buy foods or vegetable from HIV infected seller	82.5%	85.1%	71.7%
Would keep secret presence of HIV-infected family member	32.8%	32.2%	36.6%

### 3.10 Drug abuse

Few men from the male sentinel groups acknowledged having ever used any kind of drug: 9% of military, 4% of police, and 6% of moto-taxi drivers. Those who reported having used drugs had consumed marijuana (98% of military abusers, 89% of police abusers, and 90 % of moto-taxi driver abusers) or amphetamines (8% of military abusers, 11% of police abusers, and 21% of moto-taxi driver abusers). Only 2 moto-taxi drivers and 1 military reported having smoked opium. A single moto-taxi driver reported having ever injected heroin. Nobody acknowledged having ever smoked heroin or used any other type of substance.



Photo: Vinh Thy

## 1 Introduction

Construction of trends using the data from the past 6 behavioral surveys allows for monitoring the changes in behaviors since 1997. There may be differences between the numbers in previous reports and this report because some analytic techniques were changed. For example, data were not weighted for population size in this report. A decision was made to not weight the data because there was an absence of recent data on population size for male sentinel groups. Another difference is due to some changes in how the questions were asked between survey rounds. Over the years, the measurement for all sentinel groups has become more precise for some key measures such as condom use during sex, and this change may have an impact on the trends. Indeed, in the first two rounds of BSS (1997 and 1998), consistent condom use was measured by counting episodes of protected and unprotected sex over the three consecutive past days for DFSWs and the three consecutive past months for male sentinel groups. To construct trends, consistent condom use with clients in the past week among DFSWs was approximated by creating a variable on consistent condom use with clients in the past 3 days for the two first rounds of BSS. In BSS 1997 and 1998, consistent condom use among IDFSWs was only collected as a general question without specifying any time frame. This variable was used in the trends to approximate consistent condom use in the past 3 months. In male sentinel groups, consistent condom use in the past 3 months as measured in BSS 1997 and 1998 was generated by collapsing three questions on each of the 3 retrospective months, which confers less precision to the measure than a single question. From 1999 onward, the wording of the questionnaires was consistent and used precise time periods for questions on condom use (past week in DFSWs and past 3 months for men and IDFSWs). Although trends in consistent condom use from this report are based on different methodologies, it appeared useful to include the approximated measures from the two first rounds of BSS together with data from the following surveys in order to provide a visual illustration of the behavior changes over time among the sentinel groups.

To ensure comparability of data the trend analysis was restricted to the 5 original provinces which were consistently studied since 1997. Therefore, in this chapter VI percents presented may be slightly different than those detailed chapter V which represents results from the 10 provinces.

## 2 Sample Sizes from BSS I to VI

Relatively large sample sizes have been collected each year in BSS in order to have enough power to detect some changes in behaviors at the national level for each of the sentinel groups. Sample sizes used for trend analysis are detailed below.

**Table 20: Sample sizes used for trend analysis from BSS I to VI\***

	<b>BSS I 1997</b>	<b>BSS II 1998</b>	<b>BSS III 1999</b>	<b>BSS V 2001</b>	<b>BSS VI 2003</b>
Brothel based sex-workers	245**	804	792	569	1308
Beer promoters	581	406	379	402	648
Karaoke workers	---	---	---	163	604
Police	210	405	674	498	675
Military	195	344	808	678	676
Moto-taxi drivers	570	756	746	651	947
* BSS IV which was a household based survey is not included in the trend analysis ** Only DFSW from Phnom Penh and Siem Reap were included in BSS					

## 3 Behavior Change among Sex-Workers

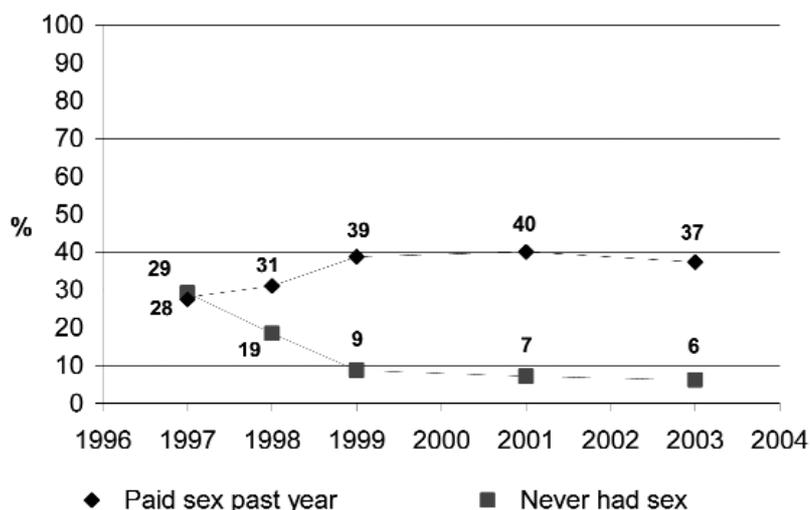
During the period 1997 to 2003, the age and the age at first sex has not changed among both direct sex workers and beer promoters. The proportion of beer promoters who are divorced or separated increased consistently since the first round of BSS. Beer promoters have always reported a higher income and a higher level of education than DFSWs or karaoke workers. While DFSW's age at first commercial sex has not varied since 1997, the proportion of those who have been selling sex for more than one year followed an upward trend. Among both DFSW and beer promoters, the proportions of those knowing PLHA and those ever tested for HIV increased consistently since 1997. In all BSS rounds, more beer promoters sought HIV testing than DFSW. Since 1997, an increasing proportion of DFSW have sought treatment of vaginal discharge at a clinic but beer promoters did not follow this pattern. The 100% condom use program which has been expanding since 1998 and specifically targets brothel based sex workers rather non brothel based or IDFSW may explain this difference. The fact that the time spent in the current city is shorter than the time spent in the current establishment suggests that most sex workers work more than once in a given establishment with interruptions in their professional activity.

**Table 21: Trends 1997 to 2003 among DFSW and beer promoters: demographic characteristics, sexual initiation, working duration, health seeking behaviors, knowing PLHA and having been tested for HIV.**

		DFSW					Beer promoters				
		1997	1998	1999	2001	2003	1997	1998	1999	2001	2003
<b>Age</b>	Mean	21.9	21.5	21.6	22.4	23	22.5	22.8	23.1	23.7	24.7
	Median	21	20	20	21	22	22	23	23	23	25
<b>Age at first sex</b>	Mean	17.6	17.6	17.6	17.7	17.4	18.4	18.2	18.4	18.5	18.3
	Median	17	17	17	18	17	18	18	18	18	18
<b>% Divorced or separated</b>		--	49.1	46.6	49	49.7	32.2	39.9	44.8	48.7	54
<b>Monthly income (\$ US)</b>	Mean	36.7	56.2	65.1	73.9	78.8	--	66.3	67.8	70.7	94.4
	Median	25	50	50	50	50	--	50	57	50	70
<b># months spent in current establishment</b>	Mean	5.5	4.7	6	7.9	9.9	--	--	--	14.1	14.2
	Median	3	2	3	5	5	--	--	--	5	6
<b>Age at first commercial sex</b>	Mean	20.4	20.5	20.4	20.7	20.5	--	--	--	--	--
	Median	19	20	19	20	20	--	--	--	--	--
<b># years since first sex work</b>	< 1 year	51.6	51.2	48.0	33.2	25.4	--	--	--	--	--
	1 to 2 years	33.3	36.9	36.2	40.8	40.4	--	--	--	--	--
	3 to 10 years	14.8	11.6	15.2	25.4	32.4	--	--	--	--	--
	>= 11 years	3.3	0.3	0.6	0.5	1.9	--	--	--	--	--
<b>% initiated sexuality with client</b>		--	--	--	31.6	34.8	--	--	--	5.0	6.0
<b>% ever tested for HIV apart from HSS</b>		--	13.8	26.1	50	53.4	21.4	22.7	46.4	51.9	65.1
<b>% know HIV infected person</b>		--	7	20.6	33.7	64	--	8.9	29.8	40.1	68.8
<b>Lifetime partner</b>	Mean	--	--	--	--	--	--	3.1	3.2	4.8	11.2
	Median	--	--	--	--	--	--	1	1	2	2
<b>% of last episode of discharge treated in clinic</b>		--	35.8	60.3	60.8	69.4	--	38.4	51.9	37.2	26.7
<b>Duration in current city (months)</b>	Mean	--	5.7	5.3	5.4	3.4	--	8.5	8.1	9.4	7.1
	Median	--	1	1	1	1	--	3	3	4	3

In contrast to brothel based sex workers, not all beer promoters report selling sex. Therefore a part of the IDFSWs are not sex workers. While the proportions of beer promoters who reported never having had sex have dropped from 29% to 9% between 1997 and 1999, the proportions of those who acknowledged having sold sex increased from 28% to 39% in the same period (see Figure 17). The proportion of beer promoters selling sex has therefore increased between 1997 and 1999 but has remained unchanged since then.

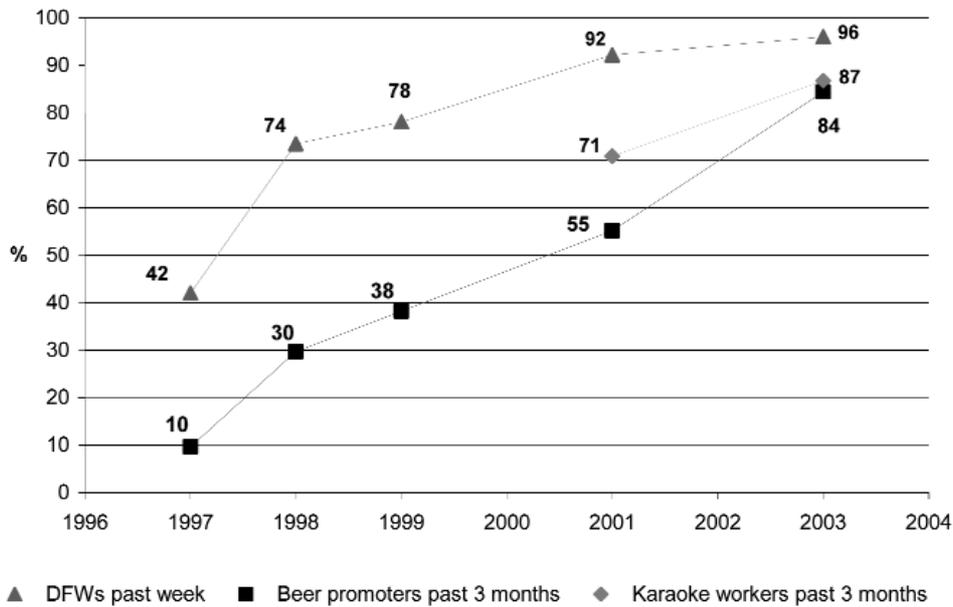
**Figure 17: Trends 1997 - 2003: Virgins and sex trade in the past year among beer promoters**



Consistent condom use with clients among both brothel based sex-workers and beer promoters has steadily increased between 1997 and 2003. The increase has been much more dramatic among beer promoters who started from very low level of consistent condom use and kept an ascending slope across the 7 years period illustrated by BSS data. There are 2 single data points representing karaoke workers suggest that they have followed similar trends as other female sentinel groups. Cambodian sex-workers report an extremely high level of consistent condom use. However a gap remains between the levels of protection reported by brothel based sex workers and those reported by beer promoters or karaoke workers who sell sex (see Figure 18).

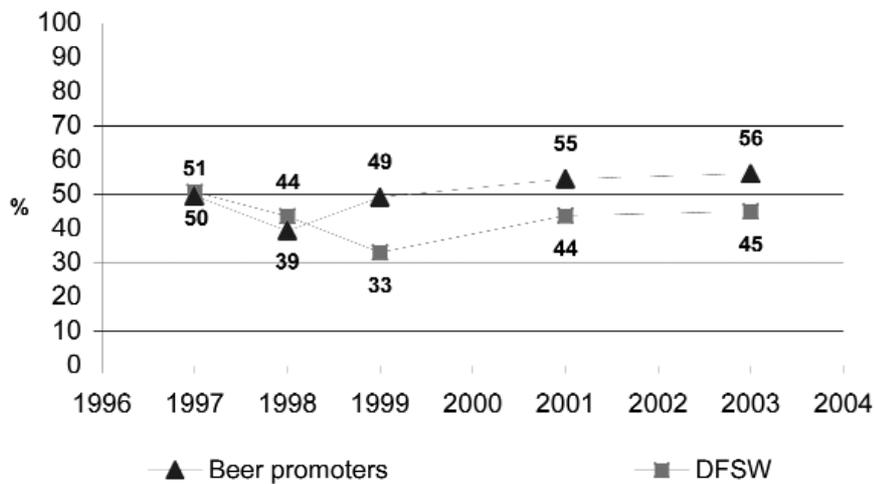
The proportion of brothel based sex workers or beer promoters who had sex with a sweetheart in the past year did not change significantly over time. More or less half of the DFSW and beer promoters have a sweetheart with whom they have sex.

**Figure 18:** Trends 1997 - 2003: Consistent condom use with clients among DFSWs, beer-promoters and karaoke workers



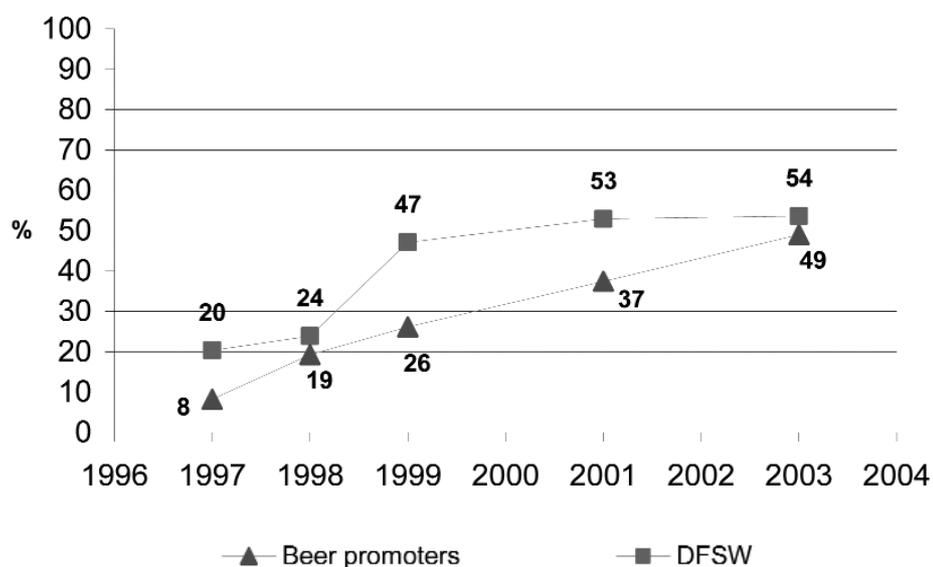
The proportion of brothel based sex workers or beer promoters who had sex with a sweetheart in the past year did not change significantly over time. Around half of the DFSW and beer promoters have a sweetheart with whom they have sex.

**Figure 19:** Trends 1997 - 2003: Proportion of beer promoters and brothel based sex workers who had sex with a sweetheart in the past year



The proportion of beer promoters reporting consistent condom use with sweetheart in the past year has risen steadily since 1997. However, less than half of the sexual encounters between beer promoters and their sweetheart are protected. Among brothel based sex workers, consistent condom use with sweetheart in the past 3 months has increased between 1997 and 1999, and seems to have reach plateau since then. Likewise beer promoters, about half of the sexual relationships of DFSW and their sweetheart remain unprotected.

**Figure 20: Trends 1997 - 2003: Consistent condom use with sweetheart in the past 3 months among DFSW, and in the past year among beer-promoters**



With about half of FSWs having sex with a sweetheart and half of those using condoms consistently with this partner, a quarter of FSWs have unprotected sex with a sweetheart.

#### 4 Behavior Change among Male Sentinel Groups

BSS trends shows that both military and police are aging populations, which is expected since recruitment in these two occupations is frozen. Among military, fewer men had no formal education in the first 3 rounds of BSS than in the last 2 rounds, suggesting differences in recruitment methodology. Indeed, sampling

among military is always a challenge as commanders of battalions usually name the men who are available to take part in the sampling. Age at first sex remained unchanged in both groups from 1997 to 2003. The dramatic decrease of the proportion of policemen reporting having had premarital sex between 1997 and 2003 is unexpected because in an aging cohort there cannot be important variation regarding an event which took place prior to the first round of survey in most of the cases. Hence this difference may reflect a change in reporting of sexual behaviors. In both groups the proportion of those reporting having had non-marital sex decreased between 1997 and 2003, and so did the mean number of sex workers visited in the past month. Nowadays fewer men from the military and police practice sex with non-marital partners than in 1997, but those who do report more partners than in past BSS (see Table 22).

**Table 22: Trends 1997 to 2003 among military and police: demographic characteristics, premarital sex, and number of sexual partners**

		Military					Police				
		1997	1998	1999	2001	2003 <sup>1</sup>	1997	1998	1999	2001	2003 <sup>1</sup>
<b>Age</b>	Mean	31.1	30.4	31.6	34.1	35.7	31.5	31.1	33.1	37.4	37.8
	Median	30	30.5	31	34	35	31	30	32	37	37
<b>Income past month (\$US)</b>	Mean	--	23.4	19.2	19.5	30.2	--	18.5	26.7	33.9	38.7
	Median	--	15	16.5	24	22.5	--	12.5	19.5	22.5	25
<b>% no formal education</b>		3.7	3.9	6.6	9.6	9.9	0.0	0.5	0.3	0.4	0.3
<b>Age at first sex</b>	Mean	21.0	20.0	21.6	21.6	20.8	22.5	22.0	22.7	22.6	22.7
	Median	20	21	21	21	20	22	22	22	22	22
<b>% had premarital sex<sup>2</sup></b>		11.5	33.1	25.6	19.5	15.6	30.7	26.0	24.1	11.7	7.9
<b>% had non-marital partners past year<sup>3</sup></b>		85.6	75.4	65.4	76.2	50.6	76.6	73.3	65.9	81.1	51.5
<b>Number of partners past month</b>	Mean	1.7	1.4	1.3	1.2	1.6	3.0	1.2	1.4	1.5	1.7
	Median	1	1	1	1	1	2	1	1	1	1
<b>Number of paid partners past month</b>	Mean	3.0	1.0	0.7	0.3	0.7	1.2	1.8	0.7	0.4	0.8
	Median	1	0	0	0	0	1	0	0	0	0
<b>Number of partners past year</b>	Mean	--	--	7.9	2.9	4.6	--	--	3	4.3	5.3
	Median	--	--	3	1	1	--	--	7.7	1	1

1. 5 provinces only  
2. Variable generated by using 2 variables  
3. Variable generated by using 4 variables

The age of moto-taxi drivers surveyed did not vary much since 1997. Conversely to other sentinel groups, moto-taxi drivers' reported income did not increase between 1997 and 2003. Their number of partners in the past year as well as their number of paid partners last month decreased over the reporting period. The proportion of men practicing non-marital sex also decreased over the period 1997 to 2003 (see Table 23).

**Table 23: Trends 1997 to 2003 among moto-taxi drivers: demographic characteristics, premarital sex, and number of sexual partners**

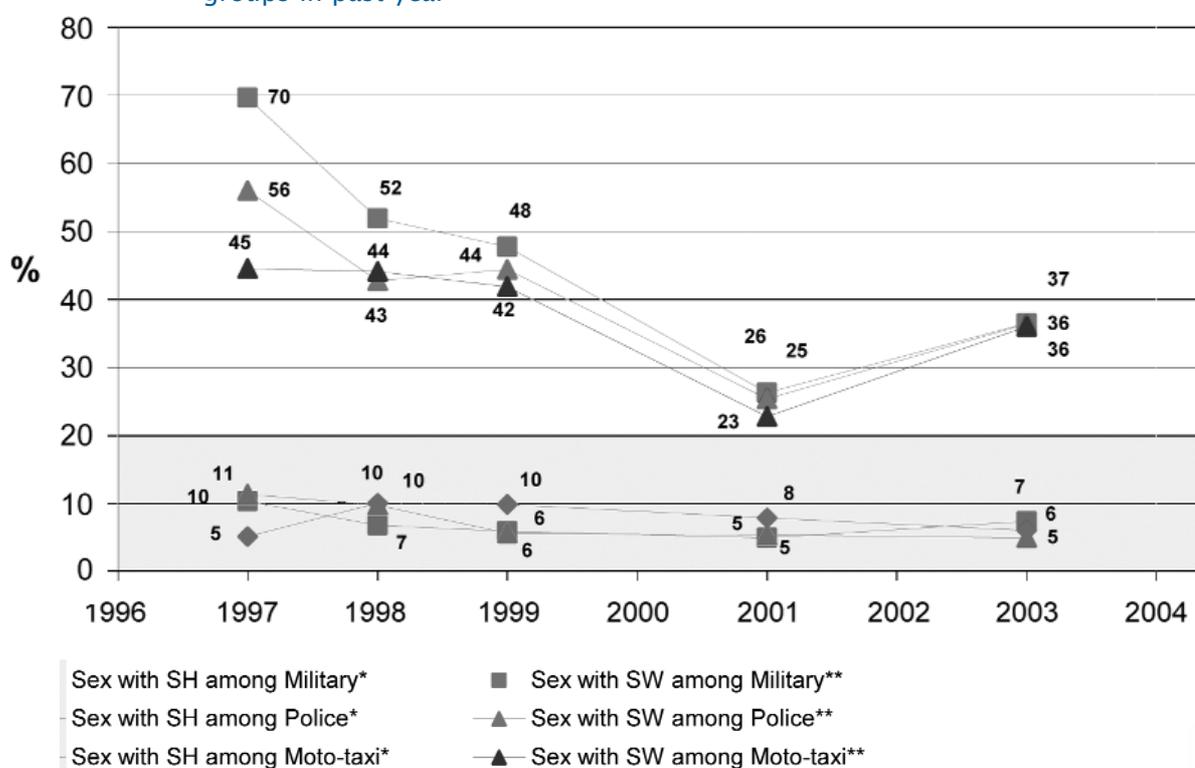
		1997	1998	1999	2001	2003 <sup>1</sup>
<b>Age</b>	Mean	31.3	29.4	31.9	32.8	32.7
	Median	31	30	31	32	33
<b>Income past month (\$US)</b>	Mean	--	55	50	49	52
	Median	--	50	50	50	50
<b>% no formal education</b>		1.8	1.1	1.3	1.5	1.1
<b>Age at first sex</b>	Mean	21.4	21.3	21.3	21.8	21.5
	Median	21	21	20	21	21
<b>% had premarital sex</b>		8.8	15.2	16.1	11.2	11.8
<b>% had non-marital partner past year<sup>2</sup></b>		59.0	65.0	63.3	33.0	45.6
<b>Number of partners past month</b>	Mean	2	1.6	1.6	1.3	1.5
	Median	1	1	1	1	1
<b>Number of paid partners past month</b>	Mean	1.4	1.2	0.8	0.5	0.7
	Median	0	0	0	0	0
<b>Number of partners past year</b>	Mean			8.3	2.8	4.9
	Median			3	1	1

1. Five original provinces only  
2. Among married men

The variations in non-marital partnerships across the 7 year period of surveillance are consistent among all sentinel groups. From 1997 to 2003, the proportions of men who had sex with a sweetheart in the past 3 months did not changed significantly

in any of the sentinel group, involving 5% to 10% of the men depending on the group and the year of survey (see Figure 21). While the trends show a constant decline in the use of brothel based sex-workers services between 1997 and 2001 among all male sentinel groups, a rebound is observed in the period 2001 - 2003. The recent increase in reported number paid sexual partner need to be confirmed in the next behavioral surveillance survey.

**Figure 21: Trends 1997 - 2003: Sex with non marital partners among male sentinel groups in past year**

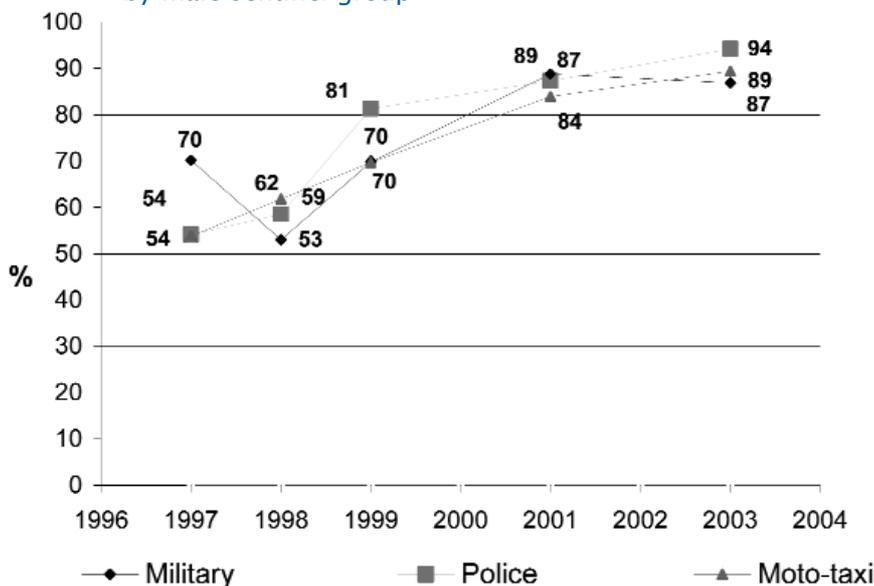


\* SH = Sweetheart

\*\*SW = Sex-workers

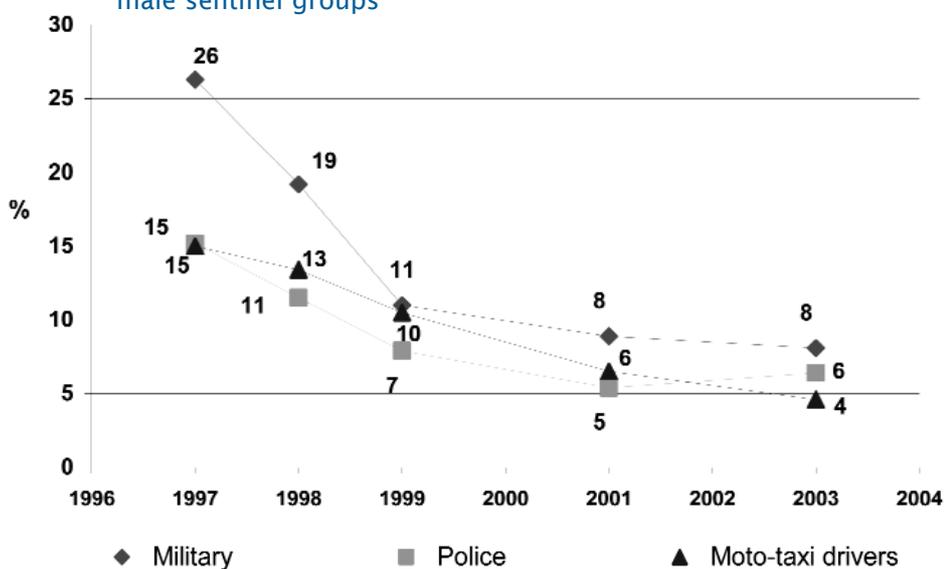
Consistent condom use with sex workers in the past 3 months has risen in all male sentinel groups between 1997 and 2003 (see Figure 21). Consistent condom use in paid sex as reported by male group has reached very high levels which are consistent with sex-workers' reporting of consistent condom use with clients. The variation observed between groups in 1997 and 1998 are likely to be related to the methodology that was used to collect this information (see details paragraph VI.1).

**Figure 22: Consistent condom use with sex-workers in the past 3 months, by male sentinel group**



Trends in self-reported episodes of urethral discharge in the past 12 months have decreased by about three folds in all male groups. Assuming that interviewee's interpretation of urethral discharge has remained unchanged over the period studied, these trends suggest a decrease in occurrence of male STDs, meaning a reduction of sexual risk behaviors and/or a better management of STDs. In 1997, the proportion of men reporting an episode of urethral discharge in the past year was higher among military than among other male groups. Despite having presented the most dramatic decrease between 1997 and 1999, military remains the group reporting the highest frequency of urethral discharge (8%) (Figure 23).

**Figure 23: Trends 1997 - 2003: Reported urethral discharge in the past year among male sentinel groups**



DFSW and IDFSW are mobile populations who move from their home town to their workplace and from one brothel to another. Data also suggests some movements in and out of the sex business. For example, 25% of DFSWs and 16% of beer promoters reported a history of working as a karaoke worker, suggesting that working as karaoke worker may serve as entry point in prostitution for some sex workers. Therefore karaoke workers should be considered as important target for interventions. Because of these factors sex workers are a very volatile population needing continuous information and education regarding HIV/AIDS. The other aspect of volatility is the frequent movement of DFSWs between establishments. This presents a further challenge to provision of services including prevention education to these women, as information and education regarding HIV/AIDS needs to be provided continuously. All data suggests that outreach interventions to sex workers need to be conducted with great regularity. However, the trends in duration working as a brothel based sex worker show that DFSW tend to stay longer in their job than in previous BSS rounds, which may ease the work of HIV prevention actors.

One brothel based sex worker in three has started selling sex by selling her virginity. Moreover, DFSWs below 19 years of age were more likely than other DFSWs to have initiated their sexuality by selling sex. This has two important policy implications. First, policy makers should explore means to reduce trafficking of women, because young sex workers are often less empowered to use condoms than older sex workers. Second, among DFSWs the youngest and newest to brothels should be priority for interventions as they are the most vulnerable DFSWs.

Brothel based sex workers have about 80 clients per month and 96% of the DFSWs consistently used condoms in the past week. Still 42% of the DFSW had a sweetheart in the past year, with which sex is most often unprotected (58%). Nevertheless, brothel based sex workers are exposed to unprotected sex with more clients than sweethearts.

The proportion of DFSWs who had their last episode of vaginal discharge treated at a clinic has almost doubled between 1997 and 2003 showing the success of STI care programs to brothel based sex workers. During the same period, beer promoters deserted the clinics to prefer treatments delivered by pharmacies or traditional healers. Programs facilitating IDFSWs' access to public clinics should be developed.

Less than half of the beer promoters acknowledged having sold sex in the past year. Beer promoters make more money, have a higher level of education, are more likely to have children, and are more likely to live with their family than DFSWs or karaoke workers. They also have less sexual partners than other female surveillance groups. Therefore, education messages tailored to beer promoters should be different from messages provided to other sex workers.

The majority (53%) of beer promoters had sex with a sweetheart in the past year, and most of those received money from their sweetheart. Since less than half of the sexual relationships with sweetheart were consistently protected, there is great potential for such relationships to allow for HIV transmission between sub-populations. HIV/AIDS information to beer promoters should emphasize protected sex with sweetheart and mass media campaigns delivering information to the men with sweethearts, especially to those married, should be considered.

The findings from women working in karaoke venues in this BSS show that they fall somewhere in between beer promoters and DFSWs on the spectrum of risk behavior. One quarter of karaoke women report living in a place other than her own, her relatives' or friends', suggesting that they may be living at the karaoke establishment itself. More research on karaoke settings is needed to determine if women live there, and if they are being operated like brothels. Misclassifications between sub-groups of sex workers are common errors which weakens both the development of sound targeted intervention and the quality of the surveillance measures. Consensus on common definitions of sub-groups of sex-workers should be sought by field workers, scientists and decision makers.

Fewer IDFSWs reported receiving information from professional staff than DFSWs, but they were twice likely as DFSWs to have been reached recently by a NGO (20% versus 40%). Overall, the health education providers had recently delivered HIV/AIDS information to 89% of the DFSWs compared to 70% of IDFSWs. This difference is accountable to the level of coverage for the provision of STI services: 30% of DFSWs compared to 10% of IDFSWs had recently received information from a STI clinic staff. Less than one IDFSW in three seek STI treatment at a clinic when symptoms occur. Targeted intervention to well defined groups of sex-workers could be a

solution. Better evaluation of programs is needed to allocate resources to the most efficient strategies.

More than half of the men from surveillance groups reported premarital sex. However, male surveillance groups are mostly composed of middle aged men who married 10 to 13 years ago on average. This means that pre-marital sex may have occurred years ago for the majority of those men. Behavioral surveillance should include a group of younger men in order to survey exposure to sexual risk in the first years of sexuality. Young men are especially important target to prevention intervention when taking into account that almost all men from the uniformed service aged 18 to 24 and half of the moto-taxi drivers of this age range had sex with a sex worker in the past year.

While all the clients of SWs had visited brothel based sex workers in the past year, policemen reported more encounters with karaoke workers, beer promoters, masseuses or restaurant employees than militaries or moto-taxi drivers, leaving the few street based sex workers to militaries and moto-taxi drivers. In addition, differences in fees paid to sex workers between male surveillance group suggest that each male groups visits different types of establishments. Although condom use remained high during commercial sex, regardless of the price paid, a better understanding of paid sex networks would help provide adequate information to both male and females who operate within these networks.

Among male sentinel groups, although attendance to sex workers in the past year decreased consistently between 1997 and 2001, there was a rebound in this last round of BSS. This raises a concern for the trajectory of Cambodia's HIV epidemic whether this rebound will be sustained. Although this rebound is yet to be confirmed by further studies of male sexual behaviors, prevention strategies to men should include information on abstinence and faithfulness.

Almost all men used condoms consistently with brothel based sex workers but only half used them with their sweetheart. With only 10% of the men from sentinel groups reporting having had a sweetheart in the past year, unprotected sex at the brothel remain the most frequently reported high risk behavior. In addition, given the large

difference in HIV prevalence between women from the general population and sex-workers, unprotected sex at the brothel remains the main mode of HIV transmission from women to men. The men who had sex with a sweetheart in the past year tended to be younger and were less likely to be married than other men from the surveillance groups. However, because most of the men from the surveillance groups are married, the majority of those who reported sex with a sweetheart were married men. Safe sex in sweetheart relationships should be widely discussed in mass media with messages to both young single and married men.

Fewer men from the male sentinel groups reported having had non-marital partners in 2003 compared to 1997. However, those who practice non-marital sex in 2003 reported more partners than in previous rounds of BSS. Although the proportion of men reporting non-marital partners has decreased, those who are at risk practice these risk behaviors more frequently than in previous round of BSS. In addition to the mass media education mentioned above, peer education among male groups may be an approach to behavior change for men at the highest risk.

Men from sentinel groups reported having had as many or more casual partners than sweethearts in the past year. Men's understanding of the term 'casual partners' should be studied to clarify if there is a new sexual mixing pattern.

Men from the sentinel groups remain more exposed to sex with sex workers in the past year than other urban men. Indeed in BSS 2003, about one man in three had visited SWs in the past year compared to one in five among urban men surveyed in the 2000 household survey<sup>1</sup> or in the PSI 2003 survey<sup>2</sup>. Although sexual risk behaviors among male from sentinel groups has decreased since 1997, men from these groups are still more likely to engage in sex with sex workers than other Cambodian urban men. Although the proportion of urban men reporting consistent condom use in paid sex in the past year (PSI 2003 survey) is higher than that reported by military or moto-taxi drivers in BSS, differences in the data collection methodologies between these two surveys does not allow for an accurate comparison between these findings.

While reported episodes of urethral discharge have decreased consistently

<sup>1</sup> National center for HIV/AIDS, dermatology and STDs. Cambodian household male behavioral surveillance survey IV, 2000. Phnom Penh, 2000.

<sup>2</sup> Population service international. Knowledge, attitudes and behaviors regarding HIV/AIDS in Cambodia: results of a 2003 national survey. Phnom Penh, 2003.

among male surveillance groups between 1997 and 2003, pharmacies remain the main source of treatment for the last episode. Given the little improvement in treatment of STI to men from sentinel groups, this reduction in reported symptoms of STIs is likely to reflect a reduction in sexual behaviors. For STI control projects targeting clients of sex workers practicing unprotected sex, pharmacies may be a potential site to provide both treatment and information to these men.

Written media are the sources of information which reached the smallest proportion of any surveillance groups. Training, TV and radio are the most efficient way to provide HIV/AIDS information to individuals from surveillance groups.

Fewer moto-taxi drivers received information from professional staff than other male sentinel groups. Prevention interventions targeting moto-taxi drivers should be developed.

The proportion of both DFSWs and beer promoters seeking their HIV sero-status has doubled since 1999. Similarly, an increasing number of men from the surveillance groups are seeking their HIV sero-status, suggesting both a real concern about HIV/AIDS and the results of an expanded national program of voluntary counseling and testing becoming available in most provinces. Getting tested before marriage is becoming a common practice among recently married men. Promotion of VCT services is needed to further increase its use and insure that more Cambodians tested for HIV benefit from counseling.

Methamphetamine was the first substance abuse reported by all sentinel groups. Less than 5% of female sentinel groups and less than 10% of the male sentinel groups have ever experienced this substance. Future rounds of BSS should try to improve the precision of measurement of members sentinel groups currently using drugs.

This report shows that sexual risk behaviors have followed a downward trend since the first round of BSS, suggesting that prevention interventions in Cambodia have been successful. Prevention efforts, however, need to be maintained in order to sustain these changes. While this suggests overall that prevention interventions have been successful, efforts must be maintained in order to sustain these changes and avoid resurgence of risk behaviors.



Photo: Vinh Thy

## Cambodia Behavioral Surveillance Survey VI: Brothel based sex workers

1. How old are you \_\_\_\_\_ (western years)
2. Are you married now?
- |  |   |
|--|---|
| Yes – currently and living together..... | 1 |
| No – never married.....                  | 2 |
| No – divorced.....                       | 3 |
| No - separated.....                      | 4 |
3. How old were you when you were first married?..... years (0 if not married)
8. How many years did you complete at school? .....years (0 if never study)
9. How much money did you earn last month? .....Riels
10. There are various ways or methods a woman can use to delay or avoid pregnancy. Are you currently doing something to avoid getting pregnant? (More than one)
- |                   |   |
|-------------------|---|
| Nothing.....      | 0 |
| IUD.....          | 1 |
| Pill.....         | 2 |
| Condom.....       | 3 |
| Spermicide.....   | 4 |
| Injection.....    | 5 |
| Rhythm.....       | 6 |
| Withdrawal.....   | 7 |
| Abortion.....     | 8 |
| Other _____ ..... | 9 |
11. How many times have you been pregnant? \_\_\_\_\_
12. How many children do you have now? \_\_\_\_\_
13. How many days do you stop having sexual intercourse when menstruating? \_\_\_days(0= don't stop)
14. In the past year have you had discharge that is not normal (very smelly or abnormal color?)
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |
15. Where do you first get treatment the last time you had abnormal discharge?
- |                                  |   |
|----------------------------------|---|
| Never had vaginal discharge..... | 0 |
| Never get treatment.....         | 1 |
| In Brothel.....                  | 2 |
| Private clinic.....              | 3 |
| Public Hospital/STD Clinic.....  | 4 |
| Clinic NGO.....                  | 5 |
| Pharmacy/drug seller.....        | 6 |
| Traditional healer.....          | 7 |
| Other _____ .....                | 8 |
16. How old were you when you first had sexual intercourse? \_\_\_ years
17. Who was your first sex partner?
- |                 |   |
|-----------------|---|
| Husband.....    | 1 |
| Sweetheart..... | 2 |
| Client.....     | 3 |
| Other.....      | 4 |
18. How old were you when you first had sexual intercourse for money? \_\_\_\_\_ years
19. How long have you been working as a sex worker? \_\_\_\_\_ months
20. How many times did you have sexual intercourse yesterday or last working day? .....times/day
21. How many clients did you have yesterday or last working day? .....clients/day
22. How many condoms did you use yesterday or last working day? ..... condoms

23. Did you use a condom the last time you had sex with a client?  
 Yes.....1  
 No.....2
24. This past week, how often did/do you use condoms with your clients?  
 Never had sex.....0  
 All of the time.....1  
 Frequently.....2  
 Sometimes.....3  
 Never.....4
25. Where do you meet men who pay to have sex with you?  
 At the brothel.....1  
 Hotel.....2  
 At a dance hall/night club.....3  
 Other.....4
26. How many other women who have sex for money live at the brothel where you live?
27. How long have you worked/lived in this place (this brothel)?..... months(1 = 1 month or less)
28. How often do you get paid for your work?  
 Every client/man.....1  
 Once a day.....2  
 Once a week.....3  
 Once a month.....4  
 Yearly.....5  
 Never get paid.....6  
 Other.....7
29. How much does it cost to have sex with you one time? ..... \_Riels
30. Are there condoms available at the place where you work?  
 Yes.....1  
 No.....2
31. Do you have any regular customers now (men you have sex with more than 5 times)?  
 Yes.....1  
 No.....2
32. How many regular customers (men you have sex with more than 5 times) do you have now? ..... (0 if no)
33. Did you use a condom the last time you had sex with a regular customer?  
 No regular customers.....0  
 Yes.....1  
 No.....2
34. How often do you use condoms with regular customers in the past month?  
 No regular customers..... 0  
 Always.....1  
 Frequently.....2  
 Sometimes.....3  
 Never.....4
35. Have you had a boyfriend/sweetheart in the past year?  
 Yes.....1  
 No.....2
36. Did you use a condom the last time you had sex with a boyfriend/sweetheart? (In the last year)  
 Don't have a boyfriend.....0  
 Yes.....1  
 No.....2  
 Never have sex.....3
37. This past week, how often do you use condoms with your boyfriend/sweetheart?  
 Don't have boyfriend now.....0  
 Always.....1  
 Frequently.....2  
 Sometimes.....3  
 Never use condom.....4  
 Never have sex .....5

38. Why didn't you use condoms with your boyfriend? (more than one)
- |                                    |   |
|------------------------------------|---|
| Don't have boyfriend.....          | 0 |
| Never have sex.....                | 1 |
| Use .....                          | 2 |
| Trust.....                         | 3 |
| Boyfriend give a lot of money..... | 4 |
| Want to have children.....         | 5 |
| Boyfriend don't want to use.....   | 6 |
| Unhappy when use condom.....       | 7 |
| No condom at the time.....         | 8 |
| Other.....                         | 9 |
39. What is your husband or sweetheart's job?
- |                               |    |
|-------------------------------|----|
| No husband/sweetheart.....    | 0  |
| Seller.....                   | 1  |
| Military.....                 | 2  |
| Police.....                   | 3  |
| Factory worker.....           | 4  |
| Student.....                  | 5  |
| Teacher.....                  | 6  |
| Official or business man..... | 7  |
| Porter/labor.....             | 8  |
| Farmer.....                   | 9  |
| Mototaxi driver.....          | 10 |
| Other.....                    | 11 |
| Don't know.....               | 12 |
- Did you ever work before in the following jobs: (ask one by one – CIRCLE YES OR NO)
- |                    | Yes | No |
|--------------------|-----|----|
| 40. Dancing girl   | 1   | 0  |
| 41. Masseuses      | 1   | 0  |
| 42. Beer girl      | 1   | 0  |
| 43. Karaoke girl   | 1   | 0  |
| 44. Factory worker | 1   | 0  |
45. Have you received HIV/AIDS education and/or information in the past 6 months?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |
46. Through what method have you received HIV/AIDS education and/or information in the past 6 months? (more than one)
- |                             |    |
|-----------------------------|----|
| Never get information.....  | 0  |
| TV.....                     | 1  |
| Radio.....                  | 2  |
| Newspaper.....              | 3  |
| Billboard.....              | 4  |
| Poster.....                 | 5  |
| Booklet.....                | 6  |
| Lecture/Training.....       | 7  |
| Focus group discussion..... | 8  |
| Counseling.....             | 9  |
| Others (Specified).....     | 10 |
47. From whom have you received HIV/AIDS education and/or information in the past 6 months? (more than one)
- |                            |   |
|----------------------------|---|
| Never get information..... | 0 |
| NGO staff.....             | 1 |
| PAO staff.....             | 2 |
| STD clinic staff.....      | 3 |
| Peer educator.....         | 4 |
| VTC staff.....             | 5 |
| Private clinic/doctor..... | 6 |
| Other (Specified).....     | 7 |
48. Did you ever have a HIV test?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |

49. Where did you have your last HIV test?
- Never had HIV test.....0
  - Private lab or clinic.....1
  - Public hospital.....2
  - VTC/NGO .....3
  - Government test (HIV sentinel surveillance).....4
  - Other.....5
50. Did you get counseling the last time you had a HIV test?
- Never had HIV test..... 0
  - Yes..... 1
  - No..... 2
51. Would you like to be test for HIV?
- Yes.....1
  - No.....2
52. Do you have a close relatives or close friends who is infected with HIV or who has died of AIDS?
- Close relatives.....1
  - Close friends.....2
  - No.....3
53. Do you know anyone sick with or who has died from AIDS?
- Yes.....1
  - No..... 2
54. If a member of your family becomes ill with AIDS, would be willing to care for him/her in your house?
- Yes.....1
  - No..... 2
55. If you know that a shopkeeper or food seller had HIV/AIDS, would you buy vegetables from him/her?
- Yes.....1
  - No..... 2
56. If a female teacher has HIV/AIDS virus but is not sick, should she be allowed to continue teaching in school?
- Yes..... 1
  - No.....2
57. If a member of your family becomes infected with HIV, would you want it to remain a secret?
- Yes..... 1
  - No.....2
58. How long have you lived in this city?.....\_\_\_\_\_years

Some people tried different drugs. Which of the following, if any, have you tried? :

(ask one by one – CIRCLE YES OR NO)

	Yes	No
59. Marijuana	1	0
60. Heroin that is smoked	1	0
61. Heroin that is injected	1	0
62. Yamma (amphetamine)	1	0
63. Opium smoked	1	0
64. Opium injected	1	0
65. Other	1	0

Interviewer: "Thank you very much for answering these questions. Let me repeat that your answers are totally confidential and there is no way anyone will learn what you told me. Here is a token of our appreciation" -- (give respondent a health pack or something)

**Cambodia Behavioral Surveillance Survey – BSS VI**  
**Module: Beer & Karaoke girls**

1. How old are you?..... (years)
2. Are you married now?  
 Yes – currently and living together.....1  
 No - never married.....2  
 No - Divorced.....3  
 No - Separated.....4
3. How old were you when you were you first married?.....years (0 if not married)
4. How many years did you complete at school?.....years
5. How much money did you earn last month?.....Riels
- 6 Who do you live with now?  
 Parents.....1  
 Relatives.....2  
 Husband/boyfriend.....3  
 Friends.....4  
 Alone.....5  
 Other.....6
- 7 How long have you lived away from your family? \_\_\_\_\_ # months
- 8 How long have you lived here in this place? \_\_\_\_\_ # months
- 9 How long have you worked in this job? \_\_\_\_\_ # months
- 10 Have you ever had a sweetheart/boyfriend?  
 Yes.....1  
 No.....2
- 11 Did you never have sex with a boyfriend/sweetheart?  
 Don't have a boyfriend.....0  
 Yes.....1  
 No.....2
- 12 Did you have a sweetheart/boyfriend in the past year?  
 Yes.....1  
 No.....2
- 13 Did you have sex with a boyfriend/sweetheart in the past year?  
 Don't have a boyfriend.....0  
 Yes.....1  
 No.....2
- 14 Do you have a boyfriend or sweetheart now?  
 Yes.....1  
 No.....2
- 15 In past three months, how often do you use a condom with your current (or last if no current) boyfriend or sweetheart?  
 Never boyfriend.....0  
 Always .....1  
 Frequently.....2  
 Sometimes.....3  
 Never boyfriend.....4  
 Have boyfriend but never have sex with him.....5
16. Did you use a condom the last time you had sex with current (or last if no current) girlfriend/sweetheart? (boyfriend in the last year)  
 Never boyfriend.....0  
 Yes.....1  
 No.....2  
 Have boyfriend but never have sex.....3

17. Why didn't you use condoms with your boyfriend? (more than one)
- Don't have boyfriend.....0
  - Never have sex.....1
  - Use .....2
  - Trust.....3
  - Boyfriend give a lot of money.....4
  - Want to have children.....5
  - Boyfriend don't want to use.....6
  - Unhappy when use condom.....7
  - No condom at the time.....8
  - Other.....9
18. How often does your boyfriend give you money?
- No boyfriend.....0
  - Never get money.....1
  - Every time we have sex.....2
  - Ever week.....3
  - Every month.....4
  - Not regularly.....5
19. What is your husband or sweetheart's job?
- No husband or sweetheart.....0
  - Seller.....1
  - Military.....2
  - Police.....3
  - Factory worker.....4
  - Student.....5
  - Teacher.....6
  - Official or business man.....7
  - Porter/labor.....8
  - Farmer.....9
  - Mototaxi driver.....10
  - Other.....11
  - Don't know.....12
20. How old were you the first time you had sexual intercourse?.....\_\_ years  
(0= never had sex)
21. Who was your first sex partner?
- Never sex.....0
  - Husband.....1
  - Sweetheart.....2
  - Client.....3
  - Other.....4
22. Some beer girls get money or gifts for having sex with men. How many beer girls do you know have sex with men for money or gifts?
- All.....1
  - Most.....2
  - Few.....3
  - None.....4
  - Don't know.....5
23. In the past year, did you get money or gifts from any man for having sex?
- Yes.....1
  - No.....2
24. Did you use a condom the last time you had sex for money?
- Never have sex for money.....0
  - Yes.....1
  - No.....2
25. In the past 3 months, how often did you use condoms when you have sex for money or gifts?
- Never have sex for money.....0
  - Always.....1
  - Frequently.....2
  - Sometimes.....3
  - Never.....4
26. How many men have you had sex with in your lifetime (until now)?..... (0=never had sex)
27. In the last month, how many men did you have sexual intercourse with?. \_\_ 0= never had sex)

28. In the past year have you had discharge that is not normal (very smelly or abnormal color?)  
 Yes.....1  
 No.....2
29. Where do you first get treatment the last time you had abnormal discharge?  
 Never had vaginal discharge.....0  
 Pharmacy.....1  
 Private clinic.....2  
 Public Hospital/STD clinic.....3  
 Traditional healer/doctor.....4  
 Clinic NGO.....5  
 Never get care.....6  
 Other.....7
30. How many times have you been pregnant? \_\_\_\_\_
31. How many living children do you have now? \_\_\_\_\_
32. Have you ever received HIV/AIDS education and or information in the past 6 month?  
 Yes.....1  
 No.....2
33. Through what method have you received HIV/AIDS education and/or information in the past 6 months?  
 Never get information.....0  
 TV.....1  
 Radio.....2  
 Newspaper.....3  
 Billboard.....4  
 Poster.....5  
 Booklet.....6  
 Lecture/Training.....7  
 Focus group discussion.....8  
 Counseling.....9  
 Others (Specified).....10
34. From whom have you received HIV/AIDS education and/or information in the past 6 months?  
 Never get information.....0  
 NGO staff.....1  
 PAO staff.....2  
 STD clinic staff.....3  
 Peer educator.....4  
 VTC staff.....5  
 Private clinic/doctor.....6  
 Other (Specified).....7
35. Have you ever had an HIV test?  
 Yes.....1  
 No.....2
36. Where did you have your last HIV test?  
 Never had HIV test.....0  
 Private lab or clinic.....1  
 Public hospital.....2  
 VTC/NGO.....3  
 Government test (HIV sentinel surveillance).....4  
 Other.....5
37. Did you get counseling the last time you had a HIV test?  
 Never had HIV test.....0  
 Yes.....1  
 No.....2
38. Would you like to be test for HIV?  
 Yes.....1  
 No.....2
39. Do you have a close relatives or close friends who is infected with HIV or who has died of AIDS?  
 Close relatives.....1  
 Close friends.....2  
 No.....3

40. Do you know anyone sick with or who has died from AIDS?  
 Yes.....1  
 No.....2
41. If a member of your family becomes ill with AIDS, would be willing to care for him/her in your house?  
 Yes.....1  
 No.....2
42. If you know that a shopkeeper or food seller had HIV/AIDS, would you buy vegetables from him/her?  
 Yes.....1  
 No.....2
43. If a female teacher has HIV/AIDS virus but is not sick, should she be allowed to continue teaching in school?  
 Yes.....1  
 No.....2
44. If a member of your family becomes infected with HIV, would you want it to remain a secret?  
 Yes.....1  
 No.....2

45. How long have you lived in this city? \_\_\_\_ years

46. Did you ever work before in the following jobs: (ask one by one – CIRCLE YES OR NO)

	Yes	No
50. Dancing girl	1	0
51. Masseuses	1	0
52. Beer girl	1	0
53. Karaoke girl	1	0
54. Factory worker	1	0
55. Female sex worker	1	0
56. Other	1	0

47. Some people tried different drugs. Which of the following, if any, have you tried? :

(ask one by one – CIRCLE YES OR NO)

	Yes	No
57. Marijuana	1	0
58. Heroin that is smoked	1	0
59. Heroin that is injected	1	0
60. Yamma (amphetamine)	1	0
61. Opium smoked	1	0
62. Opium injected	1	0
63. Other	1	0

Interviewer: "Thank you very much for answering these questions. Let me repeat that your answers are totally confidential and there is no way anyone will learn what you told me. Here is a token of our appreciation!" -- (give respondent a health pack or something)]

## Cambodia Behavioral Surveillance Survey VI 2003: Male Groups

1. How old are you? \_\_\_\_\_ years
2. Are you married now?
- |  |   |
|--|---|
| Yes – currently and living together..... | 1 |
| Never married.....                       | 2 |
| No - Divorced.....                       | 3 |
| Live far away from their spouse).....    | 4 |
3. How old were you when you first married?----- years(0- not married)
4. How many years did you complete at school?-----Years
5. How much money did you earn last month? -----Riels
6. Who do you live with now?
- |                |   |
|----------------|---|
| Parents.....   | 1 |
| Relatives..... | 2 |
| Wife.....      | 3 |
| Friends.....   | 4 |
| Alone.....     | 5 |
| Other.....     | 6 |
11. How long have you been working in this job? .....Years
12. In the past year have you been away from your home for more than one month altogether (in total all trips)?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |
13. How old were you when you first had sexual intercourse with a woman? \_\_ years  
(0 if never sex)
14. Who was your first sex partner?
- |   |   |
|---|---|
| Never have sex.....                         | 0 |
| Wife.....                                   | 1 |
| Sweetheart.....                             | 2 |
| Sex Worker in Brothel.....                  | 3 |
| Beer, karaoke, massage or dancing girl..... | 4 |
| Friend.....                                 | 5 |
| Other.....                                  | 6 |
15. Until now, how many different women have you had sexual intercourse with (including wife)?..... (0- if never sex)
16. In the last year, how many different women have you had sexual intercourse with (including wife)?..... (0- if never sex)
17. In the last month, how many different women have you had sexual intercourse with (including wife)?..... (0- if never sex)
18. In the last month, how many times did you have sexual intercourse with your wife?.....  
(0- no sexual intercourse, 99- no wife)
19. Have you ever had a girlfriend or sweetheart (or mistress)?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |
20. Did you ever have sexual intercourse with a girlfriend or sweetheart (or mistress)?
- |                       |   |
|-----------------------|---|
| Never girlfriend..... | 0 |
| Yes.....              | 1 |
| No.....               | 2 |
21. Have you had a girlfriend or sweetheart (or mistress) in the past year?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |
22. Do you have a girlfriend or sweetheart (or mistress) now?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |

23. In the past three months, how often did you use a condom with your most recent girlfriend or sweetheart (or mistress)?

- No girlfriend/sweetheart.....0
- Always .....1
- Frequently.....2
- Sometimes.....3
- Never.....4
- Have sweetheart but never sex with her.....5

24. Did you use a condom the last time you had sex with last or current girlfriend/sweetheart?

- (In the last year)
- No girlfriend.....0
- Yes.....1
- No.....2
- Have sweetheart but never sex with her.....3

25. Why didn't you use condom with your girlfriend? (In the last year)

- Never have girlfriend.....0
- Have girlfriend but never have sex with her.....1
- Used condom.....2
- Virgin.....3
- Trust.....4
- Love a lot.....5
- No condom at that time.....6
- Unhappy when use condom.....7
- Other.....8

26. How often do you give your current or last sweetheart/girlfriend money? Read responses

- Never girlfriend.....0
- Every time you have sex.....1
- Every week.....2
- Every month.....3
- On occasion, but not regularly.....4
- Never give money.....5

In the past year, did you ever have sex with: (ask one by one – CIRCLE YES OR NO)

	Yes	No
27. Sex worker in brothel	1	0
28. Woman in massage place	1	0
29. Sex worker from the street or park/garden	1	0
30. Beer girl	1	0
31. Sweetheart	1	0
32. Karaoke girl	1	0
33. Restaurant worker	1	0

34. Have you ever paid to have sex (or had sex with a sex worker)?

- Yes.....1
- No.....2

35. In the past year did you ever pay to have sex (or have sex with a prostitute)?

- Yes.....1
- No.....2

36. In the past month how many commercial sex workers did you pay to have sex with? ..... (0- if never sex)

37. How much did you pay the last time you had sex with a sex worker?.....Riels  
(0 never sex with FSW, 99 did not pay)

38. Which place did you meet (seek/recruit) the last sex worker the last time you paid for sex?

- Never paid for sex.....0
- Brothel.....1
- Massage Place.....2
- Hotel or guesthouse.....3
- Street or park/garden.....4
- Karaoke bar.....5
- Other.....6

39. Did you use a condom the last time you had sex with a prostitute?

- Never sex with FSW.....0
- Yes.....1
- No.....2

40. In the past three months, how often did you use a condom when you have sex with commercial sex workers?
- |                         |   |
|-------------------------|---|
| Never sex with FSW..... | 0 |
| Always .....            | 1 |
| Frequently.....         | 2 |
| Sometimes.....          | 3 |
| Never.....              | 4 |
41. In the past year (12 months), how often did you use a condom when you have sex with commercial sex workers?
- |                         |   |
|-------------------------|---|
| Never sex with FSW..... | 0 |
| Always .....            | 1 |
| Frequently.....         | 2 |
| Sometimes.....          | 3 |
| Never.....              | 4 |
42. Last time you went to a sex worker, how much alcohol did you drink?
- |   |   |
|---|---|
| Never sex with FSW.....                                   | 0 |
| A lot (more than 6 small beers or 3 glasses of wine)..... | 1 |
| Some (3-6 small beers or 1-3 glasses of wine).....        | 2 |
| A little ( 1-3 small beers or 1 glass of wine).....       | 3 |
| No alcohol.....   | 4 |
| Don't remember.....                                       | 5 |
43. In the past year (12 months) did you have sex with anyone that was not your wife, regular sweetheart, (or mistress) or sex worker – a casual or non-regular sex partner?
- |                |   |
|----------------|---|
| Never sex..... | 0 |
| Yes.....       | 1 |
| No.....        | 2 |
44. In the past year did you ever have discharge from your penis (or urinate pus)?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |
45. Where did you first go for treatment the last time you had discharge from your penis?
- |                                 |   |
|---------------------------------|---|
| Never had discharge.....        | 0 |
| Pharmacy.....                   | 1 |
| Private clinic.....             | 2 |
| Public Hospital/STD clinic..... | 3 |
| Traditional doctor.....         | 4 |
| Clinic NGO.....                 | 5 |
| Didn't get care.....            | 6 |
| Other.....                      | 7 |
46. Have you received HIV/AIDS education and/or information in the past 6 months?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |
47. Through what method have you received HIV/AIDS education and/or information in the past 6 months?
- |                             |    |
|-----------------------------|----|
| Never get information.....  | 0  |
| TV.....                     | 1  |
| Radio.....                  | 2  |
| Newspaper.....              | 3  |
| Billboard.....              | 4  |
| Poster.....                 | 5  |
| Booklet.....                | 6  |
| Lecture/Training.....       | 7  |
| Focus group discussion..... | 8  |
| Counseling.....             | 9  |
| Others (Specified).....     | 10 |
48. From whom have you received HIV/AIDS education and/or information in the past 6 months?
- |                            |   |
|----------------------------|---|
| Never get information..... | 0 |
| NGO staff.....             | 1 |
| PAO staff.....             | 2 |
| STD clinic staff.....      | 3 |
| Peer educator.....         | 4 |
| VTC staff.....             | 5 |
| Private clinic/doctor..... | 6 |
| Other (Specified).....     | 7 |

49. Have you ever had an HIV test?  
 Yes.....1  
 No.....2
50. The last time you had a HIV test, where did you go for testing?  
 Never have HIV test.....0  
 Private clinic.....1  
 Public Hospital.....2  
 VTC.....3  
 Government test (HIV sentinel surveillance).....4  
 Other.....5
51. The last time you had a HIV test, did you receive counseling?  
 Never had HIV test.....0  
 Yes.....1  
 No.....2
52. The last time you had a HIV test, why did you get the test?  
 Never have HIV test.....0  
 Getting married.....1  
 Family member has HIV or AIDS.....2  
 Feel unwell.....3  
 Have symptom.....4  
 Had sex with someone they think had HIV.....5  
 Worried about HIV.....6  
 Other.....7
53. Would you like to be tested for HIV?  
 Yes.....1  
 No.....2
54. Do you have a close relatives or close friends who is infected with HIV or who has died of AIDS?  
 Close relatives.....1  
 Close friends.....2  
 Close relatives/Close friends.....3  
 No.....4
55. Do you know anyone sick with AIDS or who has died from AIDS?  
 Yes.....1  
 No.....2
56. If a member of your family becomes ill with AIDS, would be willing to care for him/her in your household?  
 Yes.....1  
 No.....2
57. If you know that a shopkeeper or food seller had HIV/AIDS, would you buy vegetables from him/her?  
 Yes.....1  
 No.....2
58. If a female teacher has HIV/AIDS virus but is not sick, should she be allowed to continue teaching in school?  
 Yes.....1  
 No.....2
59. If a member of your family becomes infected with HIV, would you want it to remain a secret?  
 Yes.....1  
 No.....2
60. How long have you lived in this city or village?..... years (1= 1 year OR less than 1 year)

Some people have tried different drugs. Which of the following, if any, have you tried? :  
 (ask one by one – CIRCLE YES OR NO)

	Yes	No
61. Marijuana	1	0
62. Heroin that is smoked	1	0
63. Heroin that is injected	1	0
64. Yamma (amphetamine)	1	0
65. Opium smoked	1	0
66. Opium injected	1	0
67. Other	1	0

Interviewer: "Thank you very much for answering these questions. Let me repeat that your answers are totally confidential and there is no way anyone will learn what you told me. Here is a token of our appreciation" -- (give respondent a health pack or something)