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A Survey of HIV/AIDS Awareness and Risky Sexual Behaviour in a Vulnerable Population in Sri Lanka

*International Centre for Ethnic Studies
Kandy, Sri Lanka*



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HIV/AIDS is one of the most dreaded diseases known to humans. Although drugs are available to fight the disease there is still no permanent cure for it. Researchers are also working hard to find a vaccine that would immunize people against the disease. But for now the best we could do is to take precautions against acquiring the disease.

It is well known that there are some groups that are more vulnerable than others to the disease and in almost every country the military is identified as one such group. Making the men and women in the military aware of the disease – the nature of the disease, how it spreads and methods of prevention – is one of the best ways to make them less vulnerable. To do so we need superior awareness programs. To design and produce such awareness programs we have to gain an accurate understanding of the level of knowledge of military personnel on HIV/AIDS, their sexual behaviour patterns and how best such awareness programs could be delivered to them. This research project was undertaken with a view to assisting the Sri Lankan military to design such an awareness program.

This research project was carried out between the period June 2007 and December 2008 by an interdisciplinary research team from the International Centre for Ethnic Studies (ICES), Kandy Sri Lanka under the direction of Professor Stanley W. R. de A. Samarasinghe of the Payson Center for International Development of Tulane University, New Orleans, USA and former Executive Director of ICES. The other members of the team were Dr. Ganga Pathirana, Dr. Sanjeewa Gunasekara, Dr. Seela Aladuwa, Dr. R. Jagath, Ms. Rachel Gallagher, Mr. Josh Rodd, Mr. Vasantha Premarathne, Mr. Sarath Doolwela and Ms. Udani Rathnayake. Professor Tudor de Silva and Dr. Sandy Johnson served as consultants to the project.

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Stanley. W R de A. Samarasinghe
Project Director

List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
BSS	Behavioural Surveillance Survey
CO	Commissioned Officer
CSW	Commercial sex worker
FHI	Family Health Initiative
HPV	Human Papilloma Virus
HSV	Herpes simplex virus
HIV	Human Immunodeficiency Virus
MSM	Men who have sex with men
NCO	Non-commissioned officer
NGI	Non-gonococcal infection
STI	Sexually transmitted infection
STD	Sexually transmitted disease
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organisation

1. Executive Summary

Despite a current low HIV prevalence, there are concerns that Sri Lanka could face an impending HIV/AIDS epidemic in the future. As in other countries, the military is considered a vulnerable group in terms of HIV/AIDS. The primary objectives of this study were to assess the level of knowledge of HIV/AIDS in the Sri Lankan military and the extent to which personnel were engaged in risky sexual behaviours.

Using a descriptive, cross-sectional survey, we collected data from over 900 rank-and-file soldiers serving in the Sri Lankan army who were passing through transit camps at Anuradhapura or Ratmalana en-route to operational areas. These soldiers were drawn from a range of geographical regions and military units and were considered more than likely to be a representative sample of the Sri Lankan military. To the best of our knowledge, this is the largest such study to have been undertaken in the Sri Lankan context.

The respondents were young (mean age of 29.7 years) and mainly from rural areas. Just over half (59%) were married while the majority (59%) reported 'O' levels as their highest level of education. The mean length of service in the military was 10.1 years. Nearly all respondents had previously served in [operational](#) areas. The usual length of time spent away from home when on operational duty was 2-3 months.

The overall level of knowledge about HIV/AIDS among soldiers in the Sri Lankan military was reasonably good, however there are some important knowledge deficits. While the majority of soldiers were able to correctly identify the major modes of HIV transmission, there is greater knowledge of some modes of transmission than others. Over 90% correctly selected heterosexual intercourse with an infected woman as a mode of transmission but just 63% identified homosexual intercourse with an infected man as a mode of transmission.

Despite this level of knowledge, considerable stigma remains in relation to how soldiers perceive those afflicted with HIV/AIDS. Over half of respondents felt that an HIV-infected teacher should not be allowed to keep teaching. Half the respondents felt that an HIV-infected co-worker should not be allowed to continue working, a particularly interesting finding given that just 1.2% identified [that](#) working with an infected person as a possible way to transmit HIV.

A small minority of soldiers are engaged in risky sexual [behaviours](#). Nearly one-fifth of heterosexually active soldiers reported more than one sexual partner during the past 12 months. Eleven percent admitted to having sex with a CSW during the previous 12 months while 53% reported sex with a casual acquaintance or girlfriend they did not live with during the past 12 months. Of married respondents, nearly one-fifth admitted to having had sex with someone who was not their spouse while they were married.

Condom use is generally low but appears to vary according to the type of sexual relationship. Of those admitting sex with a CSW during the past 12 months, the majority (67%) reported always using condoms. However, of those reporting sex with a casual acquaintance or girlfriend they did not live with during the past 12 months, just 21% reported always using condoms. Of married men, just 7.7% reported using a condom during their last sexual encounter with their wife. The most important preferred sites to obtain condoms were the military camp, a familiar shop and a familiar pharmacy.

However, one-third of respondents reported that condoms were not freely available from their camp. Stress of the job was the factor most commonly identified as promoting risky sexual behaviours while the bond with the wife and family were the factors most commonly identified as inhibiting risky sexual behaviours.

Over 30% of all respondents reported having ever had a homosexual encounter, though over the past 12 months, 53% of them had not had homosexual sex. During this period, 28% reported having one partner, 8% reported two partners and 4% reported more than two homosexual partners. More than two-thirds of homosexually active respondents reported 'never' using a condom (69.6%) compared with 20% reporting 'sometimes' using a condom and just 6% reporting 'always' using a condom.

Alcohol and drug use do not appear to be major sources of concern in terms of increasing risk for HIV/AIDS in the population we surveyed. While over 90% have used alcohol, just 7% report using alcohol when they last had sex. Over half the respondents report ever having used drugs but just 6% reported using drugs when they last had sex. Less than 1% of all respondents reported having ever injected heroin.

Despite a reasonable knowledge of HIV/AIDS and ways to reduce the risk of transmission, a small but significant proportion of men in the Sri Lankan military are engaged in behaviours that can be categorized as putting them and their sexual partners at increased risk of HIV/AIDS. Of particular concern is the infrequent use of condoms associated with homosexual sex.

The findings of this study should be used to inform and improve existing awareness programmes which should be provided to all recruits to the armed forces. There is an urgent need to ensure whether the ongoing HIV/AIDS awareness programmes highlight the dangers of unprotected homosexual sex and to correct ingrained misperceptions as they think that this type of sex is less risky than heterosexual sex. Other steps that should be considered include making condoms freely and widely available in military camps.

2. Introduction

2.1 The global context

HIV/AIDS is increasingly viewed as more than just a public health issue. Its potential to undermine economic growth, governance, political institutions and social stability has propelled HIV/AIDS to the forefront of the international health and development agenda.

Recently, controversy has arisen over the number of people worldwide that are infected with HIV. In its latest report, the UN has sharply reduced its estimate of the number of people worldwide infected with HIV from 39.5 million cases in 2006 to 32.7 million in 2007.¹ This reduction has been attributed to improved methodology, better surveillance by countries and changes in the key epidemiological assumptions used to calculate the estimates, particularly in the case of India. However, critics claim that the numbers were deliberately exaggerated to get more funding and support for HIV/AIDS programmes. Nevertheless, there is still little room for complacency. According

¹ UNAIDS. AIDS epidemic update. December 2007: [available from http://data.unaids.org/pub/EPISlides/2007/2007_epiupdate_en.pdf]

to the recently released UN figures, an estimated 4.9 million people in Asia were living with HIV in 2007, including 440,000 people newly infected in the past year. Although the proportion of people living with HIV in India is lower than previously estimated, the epidemic continues to affect an estimated 2.5 million people in India.

The global AIDS epidemic is driven by a complex combination of social, cultural and economic factors which are additionally compounded by conflict and emergency situations. As HIV continues to spread through the world, it has become increasingly apparent that the epidemic does not follow a set course in all societies. Rather, it affects different geographical areas and population sub-groups in different ways and at different times.²

Across the world, military forces are generally recognized as a particularly vulnerable group for HIV/AIDS. Several intrinsic group characteristics are relevant when considering HIV risk in the military. The stressful nature of the job, lengthy periods spent away from home and infrequent leave during deployment all contribute to make this group vulnerable for HIV/AIDS. In addition, most military personnel tend to be in the age group at greatest risk for HIV infection (sexually active and under 25 years). Furthermore, military personnel and camps tend to attract sex workers and those who deal in illicit drugs. A male dominated environment in which young men work and live for extended durations in the absence of significant female company also tends to increase the likelihood of risky sexual behaviours. Also of note is a military culture that tends to excuse or even encourage risk-taking behaviour on the battlefield, an attitude that, when combined with various other group characteristics, may extend to risky sexual behaviour.³

Nevertheless, there are other characteristics that make the military an ideal group in which to conduct an effective and efficient HIV/AIDS prevention and control operation. These characteristics include discipline, a strong and unified command hierarchy, the ability to take swift action, and training for rapid situational analysis, assessment and response.

2.2 HIV/AIDS and the Sri Lankan context

For much of the past 25 years, Sri Lanka has been embroiled in a protracted armed conflict. It is believed that over 70,000 persons,⁴ the majority of them civilians, have died since the conflict began in 1983, and several tens of thousands remain internally displaced. The roots of the conflict are complex and a detailed analysis is beyond the scope of this paper.⁵

² WHO. 2000. Second Generation Surveillance for HIV: The Next Decade. [Available from <http://www.emro.who.int/gfatm/guide/tools/unaidssurveillance/unaidssurveillance.pdf>]

³ UNAIDS. AIDS and the Military: UNAIDS point of view, May 1998; and UNAIDS. HIV/AIDS and uniformed services. Factsheet. August 2003

⁴ IISS Armed Conflict Database: Sri Lanka [available from http://acd.iiss.org/armedconflict/MainPages/dsp_ConflictSummary.asp?ConflictID=174]

⁵ For a background to the conflict, see the following: Uyangoda, Jayadeva Ethnic Conflict in Sri Lanka: Changing Dynamics, East West Center, Washington, D.C. 2007; Richardson, John Paradise Poisoned: Learning About Conflict, Terrorism and Development from Sri Lanka's Civil War, International centre for Ethnic Studies, Kandy, Sri Lanka, 2005; Peiris, G. H. Twilight of the Tigers, Peace Efforts and Power Struggles in Sri Lanka, Oxford University Press, Delhi, 2009.

Notwithstanding the armed conflict, Sri Lanka is currently classified as a low HIV prevalence country, with an estimated adult prevalence rate of less than 0.1%.⁶ This estimate is based on a methodology developed in collaboration with an international group of experts⁷ and is derived from trends in HIV/AIDS surveillance in various populations. At present, the prevalence of HIV in Sri Lanka appears to be low even in high risk populations such as sex workers. Combined data from the 2004 and 2005 sentinel surveillance surveys found that the HIV prevalence was 0.1% among female sex workers (N = 2633) and 0.06% among both STD clinic attendees (N = 4875) and patients with tuberculosis (N = 3184).⁸ However, these data may not be based on truly representative populations and it is possible that emerging pockets of transmission may have been missed.

At the end of 2005, the number of people living with HIV/AIDS in Sri Lanka was estimated as 5000,⁹ although some experts believe the number to be as high as 8500.¹⁰ As of the end of 2007, 957 persons had been officially reported as HIV positive in Sri Lanka.¹¹ This low number of officially reported cases compared with the total number of estimated cases is due to a variety of factors including the limited availability of HIV/AIDS counselling and testing, the fear associated with seeking HIV/AIDS services and the stigma and discrimination associated with being identified as HIV positive. Furthermore, the majority of persons with HIV may simply not be aware that they have the virus. Nevertheless, there has been a steady increase in the number of reported cases over the years (see Figure 1).

To date, heterosexual transmission remains the dominant mode of spread of HIV in Sri Lanka, accounting for 85% of reported cases.¹² Homosexual transmission accounts for 11% of cases. Perinatal transmission accounts for just 3% of the reported cases and to date, no instances of HIV transmission via sharing of infected needles has been reported in Sri Lanka. The majority of persons diagnosed with HIV in Sri Lanka are in the 30-39 year age groups, with a male: female ration of 1.3:1. HIV positive cases have been reported from all provinces, though the majority (60%) have been reported from the Western province.

Despite an estimated low HIV prevalence, there are concerns that Sri Lanka could face an impending HIV/AIDS epidemic in the future, due to a number of factors. These include having a large number of

⁶ UNAIDS/WHO. Sri Lanka: Epidemiological Fact Sheet on HIV/AIDS and sexually transmitted infections, December 2006 [Available from http://www.who.int/GlobalAtlas/predefinedReports/EFS2006/EFS_PDFs/EFS2006_LK.pdf]

⁷ This estimate is based on methods and on parameters that are informed by advice given by the UNAIDS Reference Group on HIV/AIDS Estimates, Modelling and Projections.

⁸ From HIV sentinel sero-surveillance survey in Sri Lanka, National STD/AIDS Control Programme, 2006, as reported in Ministry of Healthcare and Nutrition. Review of the National Response to Sexually Transmitted Infections and HIV/AIDS in Sri Lanka. WHO 2007. [Available from http://www.searo.who.int/LinkFiles/Publications_SRL_Review_Report.pdf]

⁹ UNAIDS/WHO. Sri Lanka: Epidemiological Fact Sheet on HIV/AIDS and sexually transmitted infections, December 2006

¹⁰ Perera A. Sri Lanka: AIDS Numbers Low - Risk High, IPS News, 2005; Available from <http://ipsnews.net/news.asp?idnews=28986>

¹¹ UNAIDS 2008 Country Report – Sri Lanka. [Available from http://data.unaids.org/pub/Report/2008/sri_lanka_2008_country_progress_report_en.pdf]

¹² Review of the National Response to Sexually Transmitted Infections and HIV/AIDS in Sri Lanka. WHO 2007. [Available from http://www.searo.who.int/LinkFiles/Publications_SRL_Review_Report.pdf]

at risk groups such as commercial sex workers (CSWs), migrant workers, military personnel, internally displaced persons and drug users, and a high prevalence of sexually transmitted infections (STIs).¹³ In addition, it is generally believed that traditional sexual behaviour patterns are changing, particularly amongst youth, with greater numbers of young people engaging in premarital casual sex, though existing behavioural data are limited.

Estimates of the size of the female CSW population in Sri Lanka range from 3,000 to 50,000.¹⁴ However, sex work is covert in Sri Lanka and these estimates are not based on systematic mapping, so these figures should be interpreted with caution. In the latest UNAIDS Sri Lanka Country Report, the authors report that previous estimates of CSWs are likely to have been excessively high and point to recent BSS mapping estimating a CSW population of 6000.¹⁵ Nevertheless, it is widely believed that the number of CSWs is increasing due to the deteriorating socioeconomic conditions and prevailing poverty.

Migrant workers, including those that travel overseas and those that shift from rural to urban areas, are another group that are particularly vulnerable to HIV/AIDS. Removal from traditional social structures, such as family and friends, has been shown to foster unsafe sexual practices, such as having multiple sexual partners and engaging in casual and commercial sex, as well as to increase the vulnerability of women and girls to sexual abuse. It has been estimated that there are approximately 96,000 workers in the Free Trade Zones in Sri Lanka, the majority of **them** are women. And more than 660,000 Sri Lankan women work abroad as domestic workers, the majority in the Middle East.¹⁶

Internally displaced persons are another group that are particularly vulnerable to HIV/AIDS due to a breakdown of essential services and a disruption of social structures. As of June 2007, at least 235,500 people in Sri Lanka were victims of conflict-induced displacement, making up one of the largest displacement crises in Asia in terms of the proportion of the population displaced, though this figure has since come down following an intensive resettlement programme in the Eastern province.¹⁷

¹³ Centre for Policy Alternatives, HIV/AIDS in Sri Lanka: A Profile on Policy and Practice, July 2007, [Available from http://www.cpalanka.org/research_papers/HIV-AIDS.pdf]

¹⁴ World Bank. HIV/AIDS in Sri Lanka. August 2007. [Available from <http://siteresources.worldbank.org/INTSRILANKA/Country%20Home/20535957/HIV-AIDS-brief-June2005-LK.pdf>]

¹⁵ UNAIDS 2008 Country Report – Sri Lanka.

¹⁶ Human Rights Watch. Exported and Exposed: Abuses against Sri Lankan Domestic Workers in Saudi Arabia, Kuwait, Lebanon, and the United Arab Emirates. November 2007. [Available from <http://hrw.org/reports/2007/srilanka1107/>]

¹⁷ It is difficult to determine the exact numbers of internally displaced people in Sri Lanka today. According to estimates, however, around 235,500 people remained displaced in Sri Lanka in June 2007, though over 100,000 of these have since returned to their areas of origin in the Eastern Province following a major government-sponsored resettlement programme. For further details see the UNHCR website (www.unhcr.lk) or the Internal Displacement Monitoring Centre website ([http://www.internal-displacement.org/8025708F004CE90B/\(httpCountries\)/0BB9CBD990450F5F802570A7004C148F?OpenDocument](http://www.internal-displacement.org/8025708F004CE90B/(httpCountries)/0BB9CBD990450F5F802570A7004C148F?OpenDocument))

While injecting drug users are not a large group in Sri Lanka, this group is at high risk of HIV because of needle-sharing. It is estimated that there are currently about 45,000 regular users of heroin in Sri Lanka, of which an estimated 1–2 % are injecting drug users.¹⁸ A substantial change in drug-use patterns to more injecting drug use would clearly increase the number of people who are likely to be exposed to HIV. However, at present, robust surveillance to monitor changing drug use patterns and supply trends is lacking.

Gender-based discrimination heightens the vulnerability of Sri Lankan women to HIV/AIDS (primarily through reduced power to negotiate sex and/or condom use).

A high prevalence of sexually transmitted infections (STIs) has heightened concerns about the vulnerability of Sri Lanka to an HIV/AIDS epidemic. It is estimated that around 60,000 – 200,000 new episodes of **curable** STIs occur annually, though only about 15% of those affected seek treatment at government medical clinics.¹⁹ Figure 2 shows the trends in selected STIs in Sri Lanka between 1992 and 2002. The apparent rise of genital herpes and non-gonococcal infections may be due to a number of factors including increased awareness, better facilities for diagnosis, better reportage and/or genuine increases in incidence. STIs facilitate the spread of HIV infection and serve as indicators for low condom use and other high-risk sexual behaviours. In one study, 45% of female sex workers experienced multiple STIs, and 70% of male patients at STI clinics reported frequenting sex workers.²⁰

There are limited reliable data on rates of condom use in Sri Lanka, especially among high-risk populations. A few studies conducted in the urban areas of Sri Lanka suggest low condom use among men. For example, in 1997, only 4.7% of men between the ages of 15 and 49 in the rural area of Matale and 9.6% of men in the capital of Colombo reported ever using condoms, although about two thirds of them had heard about them.²¹ Among men who stated that they have had sex with casual partners during the last year, only 26.3% in Matale and 44.4% in Colombo reported using a condom.²² STD clinics and NGOs working with sex workers report moderate-to-high rates (50–80%) of condom use but these data were not collected in a systematic fashion and are therefore not likely to be representative.²³ In a study of female sex workers in Colombo, consistent condom use was low, with only 38% of brothel-based CSWs always using condoms.²⁴

¹⁸ According to the National Dangerous Drugs Control Board (NDDCB), as reported in Reid G and Costigan G, Revisiting 'The Hidden Epidemic' A Situation Assessment of Drug Use in Asia in the context of HIV/AIDS, The Centre for Harm Reduction, The Burnet Institute, Australia, 2002. [Available from http://www.ahrn.net/library_upload/uploadfile/Rapidassessment.pdf]

¹⁹ WHO. Sexually transmitted infection in Sri Lanka. [Available from URL http://searo.who.int/LinkFiles/Reproductive_Health_Profile_sexually.pdf]

²⁰ Study referred to in World Bank, HIV/AIDS in Sri Lanka, August 2006. [Available from <http://siteresources.worldbank.org/INTSAREGTOPHIVAIDS/Resources/HIV-AIDS-brief-August06-LK.pdf>]

²¹ Ibid.

²² Ibid.

²³ Ministry of Healthcare and Nutrition. Review of the National Response to Sexually Transmitted Infections and HIV/AIDS in Sri Lanka. WHO 2007. [Available from http://www.searo.who.int/LinkFiles/Publications_SRL_Review_Report.pdf]

²⁴ Samarakoon S, Thayaparan P, Sivayogam S. Int Conf AIDS. 2004 Jul 11-16; 15: abstract no. ThPeC7412

As stated already, military forces are generally considered a vulnerable group in terms of HIV/AIDS, mainly due to risky sexual behaviour. In Sri Lanka, the military has undergone a transformation from a relatively small organisation that performed a largely ceremonial role during the first three decades following independence to one that has come to assume a pivotal role in ensuring national security. From a force strength of 12,000 in 1983, the army has expanded to an estimated current force strength of over 120,000.²⁵ In the November 2007 budget, the government of Sri Lanka allocated an unprecedented 166.4 billion rupees (US\$1.48 billion) towards defence expenditure. While there are sharp differences of opinion in terms of the use of the military option as a strategy to resolve the conflict, the welfare of the military and their families is clearly a matter of significant national importance. A Directorate of Welfare was established in the army in 1989 and is the main body entrusted with ensuring the welfare of the army and their families. Subsequently, a Directorate of Additional Welfare was established to specifically address the welfare needs of families who have had soldiers killed, wounded or missing in action.²⁶

While the Directorate of Medical Services has been conducting HIV awareness programmes for soldiers since the mid 1990s, data evaluating HIV/AIDS awareness and risky sexual behaviour in the Sri Lankan military are limited. A 1998 study found a high degree of awareness but was limited to a sample of just 200 soldiers.²⁷ The need for accurate information has assumed even greater importance since 2004 when Sri Lankan soldiers began serving in Haiti as part of the UN peacekeeping mission. With an HIV prevalence rate of 3.8%,²⁸ the highest outside of sub-Saharan Africa, a major concern is that Sri Lankan soldiers may be exposed to HIV while on deployment in Haiti. Such fears have been strengthened by recent reports that a few Sri Lankan peacekeepers in Haiti may have engaged in transactional sex while on deployment.

The primary goals of this study were to assess the level of knowledge of STIs and HIV/AIDS and the extent of risky sexual behaviours in the Sri Lankan army. Secondary goals included a review of existing STIs and HIV/AIDS policy and programmes in the military. Behavioural surveys have been shown over several years to make an important and useful contribution to informing national responses to HIV.²⁹ We hope that the results from this study will assist with the identification of the specific needs for future HIV/AIDS awareness and prevention programmes in the Sri Lankan military and will contribute to the development of appropriate educational and training material. Although military personnel are highly susceptible to HIV/STI infections as a group, the structure of the military also offers a unique opportunity for HIV/AIDS prevention and education - large audiences living in a disciplined, highly-organized setting. Details of specific objectives and research questions are provided in the next section.

²⁵ Jane's Information Group. Army (Sri Lanka), Sentinel Security Assessment - South Asia, , October 2007, Available from <http://www.janes.com/extracts/extract/sassu/srils110.html>

²⁶ See Sri Lanka Army Website at <http://www.army.lk/welfare.php>

²⁷ Samarakoon S. Int Conf AIDS. 1998; 12: 923 (abstract no. 43395)

²⁸ UNAIDS Factsheet. Caribbean 2006. [Available from http://data.unaids.org/pub/GlobalReport/2006/200605-FS_Caribbean_en.pdf]

²⁹ Family Health International. Behavioral Surveillance Surveys: Guidelines for repeated behavioural surveys in populations at risk of HIV, 2000. [Available from <http://www.fhi.org/en/topics/bss.htm>]

3. Project Objectives

The main objectives of this study were to assess the level of knowledge of **STIs** and HIV/AIDS and the extent of risky sexual behaviours in the Sri Lankan army.

3.1 Specific objectives

1. To assess the level of knowledge of military personnel regarding STIs, HIV/AIDS and prevention methods.
2. To assess the attitudes of military personnel regarding STIs, HIV/AIDS and prevention methods.
3. To identify the risky behaviours in which military personnel engage.
4. To investigate the socio-demographic and other factors that may influence these behaviours.
5. To determine the accessibility and availability of prevention measures to military personnel.
6. To assess the actual use of prevention methods.
7. To ascertain the health-seeking behaviours of military personnel in the treatment of **STIs** and HIV/AIDS
8. To review current **STIs**/HIV/AIDS control policies, programs and projects.
9. To make recommendations for improvement of knowledge, accessibility and use of prevention measures based on this research.
10. To prepare, based on the research findings and in collaboration with the military health authorities, some HIV/AIDS awareness material and resources for use by the military.

3.2 Research questions

The above objectives can be re-formulated into the following main study questions:

1. What knowledge do military personnel have regarding **STIs** and HIV/AIDS and prevention methods?
2. What attitudes do military personnel have towards persons with HIV/AIDS?
3. What are the risky behaviours engaged in by military personnel?
4. What do military personnel do to reduce these risks?
5. To what extent do military personnel employ effective prevention methods and what determines that use?
6. What are the risks of infection to soldiers' wives and families?
7. To what extent do military personnel seek treatments for **STIs** and HIV/AIDS?
8. What can be done to improve effectiveness of current policies and **STIs**/HIV/AIDS control strategies?

9. What is/are the self-reported **STIs** and/or HIV prevalence rates within Sri Lankan security forces?

4. Methodology

4.1 Armed forces structure

The Sri Lankan armed forces are composed of three services – the army, navy and air force. Of these, the army is the largest branch and has a force strength of approximately 120,000 regular personnel, including 15,000 National Guardsmen. The army is organized into 11 divisions, one air-mobile brigade, one commando brigade, one special forces brigade, one independent armoured brigade, three mechanized infantry brigades and 4 infantry brigades.³⁰ Each division is responsible for a particular area and is commanded by a General Officer Commanding in the rank of Major General.

Sri Lanka is divided into 9 provinces and 25 districts (Appendix 1). Soldiers going to, or returning from, operational areas in the North and the East of the country generally pass through transit camps. Major transit points are located in Ratmalana in the Western Province, Anuradhapura in the North Central Province and Trincomalee in the Eastern Province (see Figure 3).

4.2 Study population

The primary study population was drawn from the Sri Lankan army, the largest branch of the Sri Lankan armed forces. We were principally interested in rank and file soldiers and non-commissioned officers (i.e. those that were below officer level). As in any army, these personnel comprise the largest group.

This project was officially sanctioned by the military authorities who were keen to use the findings to develop and inform existing military awareness programmes for HIV/AIDS. As such, we were provided with exemplary cooperation and enjoyed a remarkable extent of academic freedom. While we designed the research methodology and the survey instrument, senior military officers provided us with valuable advice on how to adapt these to suit the special conditions that prevail in a military environment in the Sri Lankan context. To the best of our knowledge, this is the first time that research into HIV/AIDS involving such a large number of personnel in the military has been conducted in Sri Lanka.

While time constraints and the ongoing war situation meant that in some cases our field research methods deviated somewhat from textbook practice, we believe that overall, our research methodology was robust.

Possible study limitations, including sources of bias, are considered below. In many instances, these limitations were unavoidable, given the type of research being conducted.

4.3 Study design and methods

This was a descriptive, cross-sectional behavioural survey of military personnel. Detailed information on the knowledge and attitudes regarding STIs and HIV/AIDS and risky behaviour patterns were

³⁰ Jane's Information Group, Army (Sri Lanka), Sentinel Security Assessment - South Asia, October 2007.

elicited from a sample of the entire population of the Sri Lankan military. Information on some socio-demographic factors that could have possible explanatory values or confounding effects was also obtained. The main sample survey of soldiers for the study took place between October and December 2007. The commercial sex worker survey was conducted in June and July 2008 and the focus group discussions were conducted in November 2008.

For survey of the soldiers a questionnaire was developed based on the FHI/UNAIDS questionnaire for behavioural surveillance.³¹ This was adapted for local use and extensively modified following pilot testing and focus groups (see Appendix 2). In view of practical considerations, it was decided to administer the questionnaire to groups of respondents rather than conduct one-on-one interviews. Based on the results of pilot testing, it was decided to divide the questionnaire into two parts. Information that was not deemed highly personal/confidential was included in Section I which was then read out to each group by one of the interviewers. The more personal/confidential questions were included in Section II, which the respondents were asked to complete on their own (i.e. these questions were not read out to the group). During the administration of both Part I and Part II, a team was available to provide assistance to the respondents by way of clarifying any confusion relating to the questions. Particular care was taken to ensure that researchers did not guide respondents into their answers.

Prior to the commencement of each survey session, a 30 minute explanation was provided to each group of soldiers by a senior member of the research team. This explanation included the nature of the study, the general objective of the study and the anticipated benefits to the military as well as to the broader society. Respondents were also assured that their responses would be completely anonymous and confidential. Questionnaires did not ask for their names or other identifying information. Respondents were informed that once the results had been entered into a computer, the paper-based questionnaires would be destroyed. This introduction also included an explanation of the questionnaire format and how to correctly indicate answers to the questions.

Seven additional questions relating to risky sexual behaviour (see Appendix 3) were added part way through the study and were included with Part II of the main questionnaire.

In November 2008 we also conducted four focus groups – number of respondents in each 08, 09, 06 and 08 – with non-commissioned male soldiers to further verify the validity of the results of our main survey. The mean age of the focus group participants was 30.2 years as against the mean age of 29.7 in the main sample. The mean length of service of the soldiers in the focus groups was 14.5 years whereas in the sample it was 10.1 years. The slightly higher maturity of the focus group participants was an advantage because we felt that they were more likely to be frank in their discussion of a sensitive subject. The results of this survey have been referred to in the discussion below where appropriate.

4.4 Selection of study areas and study population

Army transit camps at Anuradhapura in the North Central Province and Ratmalana in the Western Province were selected as the primary locations for this study. Soldiers being deployed to or

³¹ Family Health International. Behavioral Surveillance Surveys: Guidelines for repeated behavioural surveys in populations at risk of HIV, 2000.

returning from, duty in operational areas in the North-East pass through these transit camps. These soldiers are drawn from a range of geographical regions and units. We were primarily concerned with rank and file soldiers and NCOs (all ranks below officer level).

4.5 Sample size

For the study to be adequately powered with respect to most of the key parameters, it was estimated that a minimum sample of 750 from the transit camp population was adequate. However, taking into account an approximately 20 percent refusal rate in these types of surveys, the total sample size from the transit camps was increased to 900.

4.6 Sampling methods

We made multiple visits to army transit camps at Anuradhapura and Ratmalana where we endeavoured to administer the survey to all the soldiers who happened to be in transit at the camp on that given day. Soldiers who were permanently stationed at the transit camp and those who were due to be imminently deployed and awaiting transport were excluded.

All eligible soldiers at the camp were asked to participate. While it was not feasible for us to obtain troop rosters or information on the exact number of soldiers at the base for use in sampling, close to 100% of eligible soldiers participated on any given day, based on our observations and given the military culture whereby subordinates take orders from their superiors. In this sense, we attempted to conduct a complete census of all troops who fit the eligibility criteria and were present at the base on a given day.

An unknown but very small number of eligible soldiers (<5%) may have not been able to participate for a variety of reasons such as being assigned to tasks off-base or being in the infirmary.

The soldiers we included from the transit camps were being deployed to operational areas in the Northeast, and were drawn from a range of geographical regions and military units. In this sense, they were more than likely to be a representative sample of the Sri Lankan military. There is no evidence that the soldiers present on the dates the interview team visited were different to soldiers elsewhere. However, we recognise that ours is a convenience sample drawn from two major transit camps that supplied soldiers to operational areas. Thus the sexual behaviour pattern of these soldiers may well differ from those that do not deploy in operational areas. To that extent caution should be exercised in generalising the results of our survey to the soldiery of the entire military.

4.7 Potential strengths and constraints

4.7.1 Validity of self-reported data

A general concern of all behavioural surveillance studies relates to the validity of self-reported data about sex and drug taking. Checks were built into the questionnaire in such a manner as to validate the responses obtained. Inconsistent responses were identified and not included in the relevant analysis.

Growing experience in collecting data on sexual behaviour indicates that people do not generally lie.³² However, they are more likely to tell the truth in some situations than in others. Considerable effort was made to provide an environment which was maximally conducive to eliciting honest responses. Privacy and confidentiality were assured, questions were non-judgemental and research staff of the same sex and age bracket were available during each session. Wherever possible, seating arrangements were made to ensure that the soldiers were seated sufficiently separately from each other to ensure privacy when answering the questionnaire. In a few instances, however, space constraints meant that the soldiers were seated in close proximity to each other. While senior officers were sometimes present during the introduction session, they were generally not present when the survey was being conducted.

Cultural factors are also likely to be an impediment in a Sri Lankan setting where frank discussion of sexual matters has traditionally been taboo. However, specific efforts were made during the introductory session to address this concern in an attempt to get the respondents to be as forthcoming in their responses as possible.

4.7.2 Recall bias

There was the possibility of recall bias resulting in incorrect answers to certain questions such as age at first sexual contact, number of sexual partners, use of condoms etc. To mitigate these limitations, certain checks were built into the questionnaire to validate responses obtained. In addition, the study procedures adopted were standardised and made uniform for all respondents. Once again, this problem is inherent to all studies of this type.

4.7.3 Sampling bias

A potential limitation in our study design relates to the method of sampling from the transit camps. While we attempted a census of all soldiers who were in transit, we were not able to obtain troop rosters or information on the exact number of soldiers at the base on any given day for use in sampling. Nevertheless, all eligible soldiers present were asked to participate. Given the military culture and based on our observations, we estimate that close to 100% of those eligible to participate did so. While a small proportion may have been missed, we estimate this at less than 5%. As far as we can determine, there is no evidence of systematic bias in the exclusion of troops from the transit camp samples.

While we have identified and sought information relating to various possible confounders such as socio-demographic characteristics and military experience, there may be other confounders that result in the soldiers surveyed from each camp being different from each other (and/or different from the wider population). Nevertheless, the soldiers whom we collected data from at transit camps were drawn from range of geographical regions and military backgrounds.

4.7.4 Refusal bias

It is important to consider the potential for refusal bias in any survey asking about personal and often illegal behaviours. Refusal bias arises when those who refuse to participate have different behaviours than those who agree. It is particularly relevant to our study, given the Sri Lankan

³² Family Health International. Behavioral Surveillance Surveys: Guidelines for repeated behavioural surveys in populations at risk of HIV, 2000.

military setting and culture in which context the study was conducted. As researchers we were fully aware of the importance of obtaining informed consent from the soldiers who were included in the sample. However, we also had to abide by the rules of the Sri Lankan military that adheres to a strict command structure. The compromise we reached was to fully explain to the soldiers in the sample the nature, goal and anticipated outcomes of the research as well as the guaranteed confidentiality and use of the information that they provided only for the research at hand, and orally inform the soldiers who participated in the sample that they have the complete freedom to answer or not answer any or all of the questions in the questionnaire.

Although no soldiers refused to take part, refusal bias could have manifested itself by respondents choosing to not answer questions or by deliberately sabotaging their responses by providing nonsensical or blatantly false information. This type of bias may well have contributed to an underestimation of true levels of risky behaviour (it is reasonable to assume that failure to disclose information relating to risky behaviour is more likely to occur in those engaging in risky behaviours than those who are not).

During data entry, questionnaires – 23 out of a total of 932 - in which respondents had not provided any answers or were otherwise deemed to be void were discarded. However, within questionnaires that were included in the overall data analysis, there were certain sections (and certain questions within sections) that had a relatively high non-response rate. It is likely that refusal to participate contributed to these instances although other reasons might include incomprehension or misinterpretation of the instructions. A particularly high proportion of non-responses was noted in the section relating to homosexual behaviour.

4.7.5 Measurement bias

Some degree of measurement bias is likely, arising from confusion over the survey forms. Although every effort was made to ensure the questionnaire was clearly worded, there was still a degree of confusion apparent among a proportion of respondents when collecting data during each session. Researchers attempted to provision clarifications to the whole group at once in order to minimize the entrance of bias into the study. But some respondents who were confused did not seek clarification, either out of embarrassment or disinterest.

Significant confusion was noted relating to the questions about the number of days spent at transit camps and the frequency of leave. This seemed to arise primarily because most of the soldiers had served in multiple operational areas and were not clear of which instance to refer to when providing their answers. The possibility of measurement bias was compounded due to a relatively low level of literacy in some of the soldiers. As these questions had no direct impact on the knowledge, attitudes and behaviour sections of the study, the influence of those questions had minimal effect on the results of the research study.

Data was entered by a team of experienced data entry operators. Resources did not permit double data entry but spot checks were conducted to ensure accuracy of data entry. Next, the data were cleaned using a defined protocol. All nonsensical and inconsistent responses were discarded and not included in the relevant analysis. This was done on a section by section basis although questionnaires that had not been answered at all were discarded.

4.7.6 Interviewer bias

To minimise the potential for this type of bias, data need to be obtained using a standardised format. While every effort was made to ensure that researchers followed a standardised procedure when administering the questionnaire, some degree of variability was inevitable. Individual presenters had their own style and method. While attempting to be as neutral as possible when reading out questions and options, some degree of influencing/guiding of respondents may have occurred. It was apparent that in some cases, researchers simply read out the question and options as stated in the questionnaire while in other cases, researchers elaborated on the options, providing their own additional explanations clarifications. But whenever such an instance noted, the leaders of the research team took rectifying measures to minimize the influence and took measures not to recruit those team members thereafter to read out the questions or to give clarifications.

5. Results

We collected data on socio-demographic characteristics of the respondents and on their military background and experience. We used this information in cross-tabulations of the primary data and in the multivariate analysis.

5.1 Background characteristics of the sample

5.1.1 Socio-demographic characteristics

Table 1 includes key socio-demographic characteristics of the sample population we surveyed. The respondents were quite young, with a mean age of 29.7 years. Over 75% were aged below 35 years. The majority (59%) were married while 37% reported being unmarried. Only a small proportion (<1%) reported being separated or divorced. Only 1.8% of respondents reported living together with a partner while being unmarried, a figure that is consistent with the general social patterns in Sri Lanka.

Nearly all respondents (97%) reported their religion as Buddhism while the remaining few were either Catholic or non-Catholic Christians.

In terms of home setting, by far the majority of respondents (84%) were from rural areas. The high proportion of respondents with a rural background mirrors the overall pattern of recruitment into the Sri Lankan army, in which recruits are drawn predominantly from the rural areas.

The majority of the respondents (nearly 60%) reported O levels as their highest level of education. This represents the equivalent of having around 10 years of formal education and corresponds to having completed Form 5 or Grade 10. Nearly a quarter of respondents reported having only reached Grade 8. This corresponds to having completed only 8 years of formal education and is currently the minimum level required for recruitment to the Sri Lankan army. Given the difficulty in comprehension and basic literacy we observed in a few respondents, we suspect that actual education level for some of the population may have been even less than Standard 8. We understand that in some instances, new recruits lacking the required level of education falsely report having achieved Standard 8 on the application forms. Just 13% of the population sampled reported achieving A level (equivalent to 13 years of formal education) or above.

5.1.2 Military background and experience

In addition to socio-demographic factors, we collected data on military background and experience (Table 2). A greater proportion of respondents served in the regular force (59.7%) compared with the volunteer force (39.3%). All respondents served in the army and were most commonly enlisted in the infantry (62.3%). Mean length of service in the military was 10.1 years. Most of the respondents (88.8%) were ranked lower than officer level. Of these, privates accounted for 45.5% while NCOs (Lance Corporal, Corporal, Sergeant and above) accounted for 45.4%.

Specific questions were asked relating to frequency and pattern of leave. Extended periods of time away from family have been described as contributing to an increased risk of engaging casual sexual activities in the military. Additional questions were asked relating to time spent at transit camps. In Sri Lanka, sex workers have been known to congregate in cities where there are major military transit camps. It is thought that soldiers in transit with time on their hands and cash in their pockets are particularly vulnerable to engaging in sex with CSWs.

Nearly all the respondents (95.5%) had served in operational areas. The data suggest that the usual length of time soldiers spend away from home when on duty in operational areas is around 2-3 months. Over half of the respondents reported serving for 2-3 months continuously (53.2%) while 31.0% reported serving for 4-5 months continuously. Only a small minority (7.7%) served continuously for 6 months or more. This is broadly consistent with the response to the question asking how often respondents went home when last deployed in an operational area. Over 70% reported going home after 2-3 months while 13.6% reported going home only after 4-5 months.

The vast majority of respondents (94.2%) indicated that when they had a holiday, they most often spent it at home. A small group (3.9%) indicated that they most often spent their holidays with a friend.

Questions relating to duration spent at transit camps reveal some interesting findings. Table 12 describes the mean length of time at each transit camp when going to, and returning from, operational duty. There are clear differences between transit camps, in addition to notable differences between those going to operational areas versus those returning from operational areas.

A considerable proportion of respondents transiting through Trincomalee en-route to their operational area stayed several days. For example, 13.3% stayed 3 days, 13.5% stayed 4 days, 14.1% stayed 5 days and 15.9% stayed 6 days or more. Many of those transiting to Anuradhapura en-route to their operational area also stayed more than one day (19.1% stayed 2 days, 15.3% stayed 3 days and 6.5% stayed 4 days but only 6.7% stayed 5 days or more).

Interestingly, respondents returning from duty via Trincomalee and Anuradhapura spend considerably less time in these cities than when in transit en-route to their operational area. For instance, of those returning via Trincomalee, just 3.2% spent 3 days or more compared with 56.8% of those spending 3 days or more when en-route to their operational area. Of those returning via Anuradhapura, just 0.9% spent 3 days or more compared with 28.5% of those en-route to their operational area.

5.2 Knowledge

As in most countries, the main mode of HIV transmission in Sri Lanka is through sexual relations. Due to the nature of its spread, knowledge about HIV/AIDS obviously begins with an understanding of sexual matters. However, given a relatively conservative cultural environment, exposure to information about sexual matters in Sri Lanka has traditionally been limited. This in turn has restricted exchange of information regarding related issues such as STDs or HIV/AIDS. An appreciable level of knowledge of the modes of transmission of HIV and how to prevent it can mitigate risky sexual behaviours associated with the spread of the disease. This study attempted to assess respondents' exposure to information on sex, STDs and finally HIV/AIDS, and to ascertain how this information translates into individuals' attitudes and behaviours.

5.2.1 Knowledge about sexual matters

Soldiers were asked to rank the three most reliable sources of information on sex to determine the most popular sex information outlets for military men. As shown in Table 4, the majority (22.4%) of respondents identified books as their most reliable source of information on sex. Very few selected pornographic publications (1.9%), magazines (6.4%) or other print media (8.6%) as a source of information on sex. Fifteen percent ranked government doctor as their most reliable source of information on sex. Approximately 10% cited military awareness programs as their most reliable source of information on sex, 12% identified it as their second most reliable, and 10% identified it as their third most reliable source of information on sex. Nine percent of respondents ranked their partner as being a source of information on sex.

As already mentioned, sex in the Sri Lankan setting is traditionally not openly discussed outside of marriage, if at all. HIV prevention campaigns often face the daunting challenge of breaking social barriers that hinder discussion of the sensitive issues surrounding sexual behaviour. Peer education has been found to work well in the spread of information about HIV/AIDS and in achieving behaviour change.³³ In order for this to work, the population must already be engaged in some sort of dialogue about sexual matters. The majority of respondents in this study (85.9%) say that they exchange information about sex with friends, 59.8% of which judge this information 'somewhat reliable' (Table 5). Only 14.5% of those who discuss sex with friends find the information 'very reliable'. The remaining respondents find the information either 'not reliable' (2.5%) or are 'not sure' (9.5%) whether the information is reliable or not. A majority of military men cited that they have access to pornographic publications (63.1%) and 75.8% of respondents have the opportunity to watch blue films. These outlets may provide soldiers with some information on sex and may influence their sexual behaviours.

³³ UNAIDs, Peer education kit for uniformed services: Implementing HIV/AIDS/STI peer education for uniformed services, 2003, [Available from http://data.unaids.org/Publications/IRC-pub05/JC928-EngagingUniServices-PeerEd_en.pdf]

5.2.2 Knowledge about STDs

International studies have shown that military personnel are a population group at special risk of exposure to STIs.³⁴ In peace time, STI infection rates among armed forces are generally 2 to 5 times higher than in civilian populations. This discrepancy is even greater during times of conflict.³⁵

To assess how and where Sri Lankan military men obtain information about STDs, soldiers were asked to identify the three most reliable sources of information on STDs. As shown in Table 6, military awareness programs (17.1%), books (22.4%), government doctor (12.0%) and television (15.1%) were chosen as the most reliable sources of information on STDs. Second most reliable sources included television (14.5%), military awareness programs (10.0%), newspaper (9.1%) and books (8.9%). A cumulative total of 8.6% of respondents selected 'other print media' (magazines 5.3%, booklets 0.1%, leaflets 2.5%, handouts 0.7%) as their most reliable sources of information on STDs.

To determine level of knowledge with respect to STDs, several questions regarding the recognition of male and female STD symptoms were asked. As shown in Table 7, just 29.4% knew that a woman with an STD can have no symptoms while just 24.6% knew that a man with an STD could have no symptoms. Participants were asked to separately identify male and female STD symptoms from a list of options. Soldiers were generally more able to recognize male STD symptoms than female STD symptoms. However, more than half of respondents were unable to recognize the correct symptoms for either males or females. Twenty-three percent of the respondents said that they 'did not know' male STD symptoms, while 31.1% 'did not know' female STD symptoms.

5.2.3 Knowledge about HIV/AIDS

A selection of questions was included to assess knowledge of HIV/AIDS. Almost all (98.5%) of the respondents reported having heard about HIV and/or AIDS, the majority of those recognizing that there is some relationship between the two (68.8%). As outlined in Table 8, approximately 27.8% of soldiers could not identify the correct relationship between HIV and AIDS. Twenty-seven percent of respondents knew of a relationship between HIV and AIDS, but did not know what that relationship was. One-fourth of the respondents incorrectly believed that 'HIV and AIDS are the same thing'. Forty-two percent were able to correctly identify that you can get AIDS from HIV.

The majority of the surveyed soldiers were aware that a blood test is the appropriate test for HIV/AIDS (86.7%). Approximately two-fifths of respondents understand that there is no cure for HIV/AIDS (43%), and a similar proportion knew that there is a way to live a relatively normal life with the disease (36.2%), as shown in Table 9.

When asked with whom they discussed HIV/AIDS, 34.8% of respondents reported that they don't speak about HIV/AIDS with anyone. Otherwise, 40.8% discussed it with a friend, while 24.4% discussed it with their wife. Discussion about sex is infrequent among other female sex partners, girlfriends, health care workers and other people.

³⁴ UNAIDS, AIDS and the military, May 1998.

³⁵ *ibid.*

The most important sources of information on HIV/AIDS are reported to come from books (19.9%), television (24.1%) and military awareness programmes (21.3%), with newspapers identified as an important secondary source (11.3%) as shown in Table 9. Information regarding soldiers' preferred sources of information on HIV/AIDS revealed similar findings. The most preferred sources of information on HIV/AIDS are reported to come from books (13.6%), television (19.5%), and military awareness programs (22.2%). Additionally, 13.6% of participating soldiers expressed a preference for HIV/AIDS information obtained from government health doctors. The second most preferred sources include newspapers (10.7%). These findings clearly indicate that some men involved in this study are already receiving information on HIV/AIDS from their preferred sources.

To determine knowledge on HIV transmission, soldiers were asked to select correct modes of HIV transmission from a list of options. As shown in Table 10, the majority of respondents were able to identify the correct modes of HIV transmission but some modes are better known than others. While over 90% of soldiers correctly identified sexual intercourse with an infected woman as a mode of transmission, considerably fewer (62.6%) identified homosexual sex with an infected man as a mode of transmission, clearly a cause for concern. A minority of respondents had misconceptions about HIV transmission (see Figure 4). Over 16.9% identified kissing an infected person as a mode of transmission and 10.4% identified sharing clothes with an infected person as a mode of transmission. Only, 1.1% of respondents said that they did not know any modes of transmission. Sixty-eight percent of respondents know that a healthy-looking person can still be infected with HIV. Overall, it would seem that there appears to be reasonable knowledge on HIV transmission though some important knowledge deficits remain.

To determine knowledge on HIV/AIDS prevention, members of the military were asked a selection of questions about the generally accepted methods used to prevent HIV. Results are summarised in Table 11. Seventy-four percent of respondents correctly identified that HIV can be prevented by using a condom correctly every time during sex. This indicates a great awareness of the purpose of condoms to prevent disease. Ninety percent are also aware that having one trusted sex partner can also decrease the risk of becoming infected with HIV. Eighty-eight percent believe that there are ways to avoid getting HIV. One question asked respondents to write in their own answers regarding ways to protect oneself from HIV. The majority (45.7%) cited that faithfulness to one partner is a way to avoid HIV infection. Approximately one-third mentioned that avoiding contact with a prostitute is a way to prevent HIV infection. The majority of military men (82.8%) were aware that HIV-infected mothers can transmit HIV to their child during pregnancy, but most (86.8%) were not aware that mother-to-child transmission can be prevented.

The focus group discussions generally confirmed the results of the survey reported above on the knowledge of HIV/AIDS.

5.2.4 Attitudes towards persons with HIV/AIDS

Questions regarding soldiers' attitudes towards HIV-infected people were asked to ascertain level of stigma and discrimination that currently exists in Sri Lankan society. Results are shown in Table 12. Out of the military men we sampled, only half indicated that they would be willing to care for a family member infected with HIV. One-third said that HIV-infected colleagues should not be able to work. A majority (70%) cited that they would not buy food from an HIV-infected food seller or shopkeeper. When asked whether they believed an HIV-infected teacher be allowed to continue

teaching, only 29.8% said they should. There is clearly a marked level of stigma towards those who would be infected with HIV. Most did not know anyone with HIV or who has died of AIDS but a considerable minority (6.6%) claimed to have done so. This figure is implausibly high given the low HIV prevalence in the country. We suspect that respondents were referring to recent high profile cases that had disclosed their condition to the media or were mistakenly attributing the condition to those diagnosed with other illnesses.

The majority (77.9%) of respondents were willing to be tested for HIV. Those who did not wish to be tested cited the fact that they trusted their sexual partner and therefore had no fear of HIV infection as the most common reason (56.6%) for not wanting or needing to be tested for HIV.

5.3 Heterosexual history and behaviour

The survey included a number of questions relating to respondents' heterosexual history and behaviour, with a view to identifying risky sexual behaviours that contribute to an increased risk of HIV/AIDS. Despite the sensitive nature of the questions, response rates were generally good, with non-response rates of less than 5% for most of the questions about sexual history and behaviour. The main results from this section are summarised in Table 13.

The vast majority (88.8%) of respondents had experienced sexual intercourse. The mean age at first sexual intercourse was 21.4 years. The most common type of partner during first sexual intercourse was present wife (24.4%). The next most frequent types of first sexual partner included girlfriend (21.2%), relative (13.3%) and casual acquaintance (14.5%). The focus group participants in general believed that premarital sex was more prevalent among military personnel among ordinary people in civil society.

Information was collected on the number and type of partners, with a focus on the past 12 months. Multiple partners are a risk factor for HIV/AIDS. Of all respondents, 696 reported having had sexual intercourse with one or more partners during the previous 12 months and are thus considered to be sexually active. While the majority of respondents reported having only one sexual partner during the past 12 months (67.2%), nearly one-fifth (19.1%) reported having more than one sexual partner during this period.

Specific questions regarding sex with CSWs and casual sex partners during the last 12 months were added part way through the sampling. Sex with CSWs and casual sex partners constitutes a higher risk than sex with a regular, cohabiting partner. Results from 426 respondents that received these questions are also included in Table 13. Despite the highly sensitive nature of the issue of sex with CSWs, 33 of 303 sexually active respondents (10.9%) reported having paid for sex during the past 12 months. Of these, a considerable proportion (21 respondents; 63.6%) reported having more than one CSW. Notably, 10 respondents (30.3%) reported having 3 or more CSW partners in the past 12 months. Of particular note was a surprisingly low non-response rate to questions about CSWs. Fewer than 3% of those who reported having sex during the past 12 months didn't provide a response when asked about whether they had paid for sex during this period. However, the small number of overall responses means these data should be interpreted with caution.

One hundred and sixty one respondents (53.1%) reported having had sex with a casual acquaintance or girlfriend they didn't live with during the past 12 months. Of these, nearly two-thirds (102 of 161;

63.4%) reported having one casual partner while 47 of 161 (30%) reported having more than one casual partner.

Specific questions were directed at married respondents only (n=534). Data from these questions show that a considerable proportion of soldiers (58.4%) had engaged in premarital sex, although the most common first sexual partner (reported by 34.6%) was their present wife, either before or after marriage. What is notable is that 23.4% selected girlfriend as first sexual partner, 22.1% selected a female relative as first sexual partner and 25.0% selected someone that they knew as first sexual partner.

Of the married respondents, nearly one-fifth (18.7%) admitted to having had sex with someone who was not their spouse while they were married, with the most common type of partner in these cases being 'someone that you know' (34.0%). The proportion of married men reporting extramarital sex with a female relative was also notable (24.0%). Eight percent of married respondents reported having sex with a CSW while married.

We also asked all respondents about what factors might be influencing their sexual behaviour in an attempt to gain insight into what was promoting or controlling risky sexual behaviour. Results are summarised in Table 14. Out of a host of possible factors, a clear pattern emerged in which the role of the family was paramount, particularly in terms of controlling sexual behaviour. The bond with wife and family was most frequently identified as a factor controlling sexual behaviour (469 respondents). The next most common factors controlling sexual behaviour included fear of STDs (217 respondents) and fear of HIV/AIDS (151 respondents). Religious teachings were identified by only 70 respondents. In terms of factors that promote sexual behaviour, by far the most commonly identified factor was stress from the job (430 respondents). However, the second most common reason was the option 'limitations for a normal family life' which was selected by 208 respondents.

While it is often said that traditional religious beliefs play an important role in influencing sexual behaviour patterns in the Sri Lankan context, these results would seem to suggest that the overriding factor in relation to mitigating risky sexual behaviour relates to the strength of the family unit. Also of particular interest is the prominence of job-stress as the main self-identified factor promoting sexual behaviour.

5.3.1 Condom use

Several questions were designed to evaluate patterns of condom use, a key factor in determining risk of transmission of HIV/AIDS and also STDs. Data relating to condom use are given in Table 15. Of all respondents that have ever had sex, 66.9% reported having ever used a condom.

A more reliable measure of the extent to which respondents practiced safe sex was ascertained by what proportion of them used condoms the first and last time they had sex. Interestingly, the vast majority of respondents who have ever had sex did not use a condom during either their first (78.4%) or last (72.2%) sexual encounter. Just 19.7% and 26.3% of respondents reported using a condom during their first and last sexual encounter, respectively.

What is particularly important is the differential level of usage by type of sexual relationship. The data would suggest that respondents are least likely to report condom use with a spouse whereas respondents tended to report higher levels of condom usage with non-cohabiting partners, casual

partners and CSWs. For instance, of married respondents, just 7.7% reported using a condom during last sexual encounter with their wife. But of 100 married respondents that reported extramarital sex, 29 reported using a condom (29.0%). Similarly, of 312 married respondents who reported premarital sex, 84 reported using a condom (26.9%). The overall level of condom use, however, is still alarmingly low.

Of great interest is the pattern of condom use in those who have paid for sex (see Figure 6). Of the 33 respondents that reported having paid for sex during the last 12 months, 22 reported always using condoms (66.7%), 6 reported sometimes using condoms (18.2%) and 5 reported never using condoms (15.2%). Similarly, of 161 respondents reporting sex with a casual acquaintance during the past 12 months, 33 reported always using condoms (20.5%), 34 reported sometimes using condoms (21.1%) and 90 reported never using condoms (55.9%). Unprotected sex with a CSW or casual acquaintance represents a high risk behaviour and as such, these findings are clearly of concern, though the absolute numbers are too small to make definitive conclusions.

We also collected data to help us understand why respondents either chose to use or chose not to use condoms, in addition to asking questions about usual and preferred source of condoms. Respondents were asked to identify the three most important reasons for generally not using a condom from a list of options, and were also asked to rank these in order of importance. The option 'reduces pleasure' was chosen as the most important reason by the greatest number of respondents (117). This was followed by the options 'other' (90 respondents) and unavailability (74 respondents) as the most important reasons for not using condoms. Interestingly, expense was not a significant factor with only 4 respondents ranking this as the most important reason to not use condoms.

Conversely, when evaluating why respondents that used condoms actually did so, the most frequently given reason was for STD prevention (249 responses). This was followed by for birth control with their wife (210 responses) and for STD prevention when having sex with a prostitute (172 respondents), which was included as a separate category. The next most common reasons for using a condom were for birth control with their girlfriend (146 responses) or another woman (113 responses).

Respondents were also asked to identify the three most important actual sources of condoms from a list of options, and had to rank these in order of importance (Table 16). The most important source of condoms was from a familiar pharmacy/shop (selected by 196 respondents). This was followed by an unfamiliar pharmacy/shop (97 respondents) and the military base (90 respondents). Of those who didn't identify either a familiar pharmacy/shop, unfamiliar pharmacy/shop or military base as their most important option, these options were frequently selected as the second- or third-most important option. Interestingly, when all the most important health-related sources were combined (public health worker, STD clinic, family health worker, medical officer and nurse), they amounted to a total of 125 respondents, still less than the familiar pharmacy/shop option.

In response to a question about whether military camps provided free condoms for service personnel, 32.7% of all respondents stated that they did whilst 54.0% stated that they didn't.

It is useful to compare sources where condoms are actually obtained with preferred sources to obtain condoms, and separate questions were included to elicit this information. Interestingly, the preferred sources of condoms (Table 17) broadly mirrored the actual sources. The most frequently

preferred option was the military camp (rated as most important by 141 respondents). The familiar shop/pharmacy was rated as the most important sources by 130 respondents. However, when the most important health-related sources are combined (public health worker, STD clinic, family health worker, medical officer and nurse), these collectively accounted for 210 respondents, clearly indicating a level of comfort with obtaining condoms from health personnel.

5.4 Homosexual history and behaviour

Men who have sex with men have been identified as an at-risk group for HIV/AIDS. This is at least partly due to an HIV transmission rate through anal sex that is approximately 10 times higher than by vaginal sex. As such, we included specific questions that were designed to capture information regarding homosexual behaviour, with a focus on the number of partners and condom use during the last 12 months. Data on homosexual history and behaviour are summarised in table 18.

It is notable that non-responder rates for questions relating to homosexual behaviour were considerable. This would suggest that participants were not comfortable about disclosing information relating to homosexual activity. It is likely that in many instances, the activity is not consensual and the shame and stigma surrounding homosexual sex may have contributed to the marked non-response rates in this section. The focus group respondents broadly agreed that homosexual relationships are higher in the military than in regular civil society.

Of the entire sample, nearly one-third (30.8%) reported that they had ever had a homosexual relationship. This is a striking proportion but consistent with the general belief that homosexual activity is widespread in the Sri Lankan military. Just over half of the entire sample (56.8%) stated that they had not had a homosexual relationship while non responders to this question accounted for a sizeable 12.4%. If we assume that the non-responders were more likely to have ever had a homosexual relationship than to have not done so, the actual proportion having had a homosexual encounter is likely to be greater than the figure of 30.8%.

Of those that reported ever having a homosexual relationship, the largest proportion (52.9%) reported not having had any homosexual partners in the past 12 months, suggesting that the homosexual activity was historical. Of the remainder, 28.2% reported having one partner in the past 12 months, 7.9% reported having two partners in the past 12 months while 3.9% reported having more than two partners in the past 12 months (see Figure 7).

In terms of condom use during homosexual sex in the last 12 months, considerably more respondents reported 'never' using a condom (69.6%) than those reporting 'sometimes' using a condom (19.6%) or 'always' using a condom (6.3%). This information is broadly consistent with the pattern of condom use during the last homosexual encounter (see Figure 8), where nearly eight times as many participants reported not having used a condom (76.1%) compared with those who used a condom (9.6%). These figures are clearly cause for concern. An apparently infrequent use of condoms during homosexual sex represents a high risk sexual behaviour in terms of transmission of HIV/AIDS and STDs.

We also sought information about whether a respondent's homosexual partner served in the military. Of those who reported one or more homosexual partner during the previous 12 months,

41.1% reported having a homosexual partner in the military in the last 12 months while 50.0% claimed to have not had a homosexual partner serving with them in the military during this period.

An attempt to elicit information relating to why respondents' chose not to use a condom during homosexual sex did not lead to any clear pattern emerging. The most commonly identified reason - because there is no risk of pregnancy - was identified by just 33 respondents. Other notable reasons for not using condoms included unavailability when needed (30 respondents) and a reduction in pleasure (26 respondents).

5.5 Alcohol and drug use

Several questions were designed to collect information on alcohol and drug use. Intoxication, whether by alcohol or drugs, is associated with risky sexual behaviour, primarily due to impaired judgement and disinhibition. In addition, specific questions were directed towards ascertaining injecting drug use. The shared use of needles is a well known risk factor for HIV, though to date this mode of transmission of HIV has not featured in the Sri Lankan context. Table 19 includes data obtained relating to alcohol and drug use. Response rates were generally high for all questions relating to this section, with non-response rates generally less than 5%.

The overwhelming majority of respondents (93.5%) reported having ever used alcohol. Yet just 21.2% reported having the opportunity to drink alcohol in their camps. The apparent lack of alcohol consumption in the camp is corroborated by the responses given to the question about where alcohol is consumed. The most frequent places given among respondents that selected only one option included at home (35.8%), at a party/celebration (29.0%) and at a friend's home (18.0%). Within the military camp was selected by just 1.0% of respondents.

Alcohol was reportedly used as a sexual stimulus in 9.2% of respondents, and 6.7% of respondents reported using alcohol when they last had sex. The respondents in the focus group suggested that the use of alcohol as to improve their sexual desire may be somewhat higher than what the survey data reveal.

Over half of the respondents (56.3%) reported having ever used ganja, madana modaka or babul (the last two are traditional drugs). But just 21 respondents (2.3%) reported ever having used heroin. When asked whether they had ever injected heroin or other drugs, 7 respondents reported they had done so. The small numbers of persons reporting the behaviour (generally fewer than those not responding) make it difficult to interpret these data. But the proportion of injecting heroin users (7 of 21; 33.3%) is of concern, given the current estimates which suggest that only 1-2% of heroin users in Sri Lanka are injecting. Fewer than 10% of respondents reported using drugs as a sexual stimulus, and just 6.1% reported using drugs when they last had sex.

5.6 Health-seeking behaviour

We included specific questions to evaluate respondents' health-seeking behaviour with respect to HIV/AIDS. This information is useful in expanding our understanding of issues relating to stigma and fear of HIV/AIDS and should be interpreted in conjunction with the sections on knowledge and attitudes relating to HIV (sections 5.2.3 and 5.2.4). Table 20 summarises information relating to whether respondents have been tested for HIV.

Of all participants surveyed, 13% reported having had a blood test for HIV/AIDS. A question designed to elucidate the reasons respondents sought an HIV test showed that around a third of those getting tested (34.7%) had decided to do so on their own. The next most common reason for getting an HIV test was because respondents were going to serve with the UN (18.6%) and this was closely followed by impending travel overseas (17.8%). Of those who had been tested for HIV, 72.0% had been informed of the results but nearly a quarter (23.7%) claimed to have not been told the results, clearly a cause for concern.

All respondents were also asked whether they would want to be tested for HIV in the future. The largest proportion, 35.6%, indicated that they would want to be tested for HIV. This is an encouraging finding given the high levels of fear and stigma surrounding HIV/AIDS. Nevertheless, 30.1% reported not wanting to be tested in future and 11.6% were unable to say.

5.7 Multivariate analyses

5.7.1 Predictors of Condom Usage

Multivariate modelling to determine associations with the dependent variable ‘Condom Use at Last Heterosexual Sex’ found that married/partnered soldiers were significantly less likely to have used condoms in their last sexual encounter (OR: 0.209; 95% CI: 0.101-0.431; p-value: <.001) when controlling for military rank (enlisted/NCO status), rural/urban origin, age, knowledge of HIV, knowledge of heterosexual sex as a possible transmission route for HIV, knowledge of condom use to reduce risk of HIV transmission, and ever having had homosexual sex in the last 12 months.

Multivariate modelling found no significant predictors for condom use at last sex with the respondent’s wife among the variables for military rank (enlisted/NCO status), rural/urban origin, age, knowledge of HIV, knowledge of heterosexual sex as a possible transmission route for HIV, knowledge of condom use as a protection against HIV transmission, and having had homosexual sex in the last 12 months.

Multivariate modelling found no significant predictors for condom use at last sex with another man among the variables for military rank (enlisted/NCO status), rural/urban origin, age, married/partnered or unmarried/unpartnered status, knowledge of HIV, knowledge of homosexual sex as a possible transmission route for HIV, knowledge of condom use as a protection against HIV transmission, ever having had sex with a woman, and having had homosexual sex in the last 12 months.

Among respondents reporting having had sex with a ‘casual or non-cohabiting partner’ in the last 12 months, the following independent variables were significantly associated with ‘Sometimes or Always’ using condoms (as opposed to ‘Never’ using condoms).

Variable	Odds Ratio	95% Confidence Interval	p-value
Married	37.809	3.127-457.138	.004
<i>Unmarried</i>	-	-	-
<i>Separated, Divorced, Other</i>	1.2	.883-1.433	N/S
Knowledge of ways to avoid HIV	.042	.002-.720	.029
Adjusted for: military rank, rural/urban origin, age knowledge of HIV, knowledge of heterosexual sex as risk of HIV transmission, knowledge of condom use to protect against HIV transmission, homosexual sex in last 12 months.			

Interestingly, knowledge of HIV and prevention methods was not significantly associated with condom usage. Also interesting was the finding that married men are far more likely to use condoms with a ‘casual’ heterosexual partner than unmarried men, but this is not the case for homosexual contacts. This is consistent with the relatively low knowledge of homosexual sex as a risk factor for HIV transmission in this sample.

5.7.2 Men Who Have Sex with Men

Among married or partnered men, 30.1% reported having had sexual contact with another man compared to 42.8% of unmarried and unpartnered men. Married or partnered men were found to be statistically significantly less likely to report sexual contact with another man with an OR of 0.599 (95% CI: 0.443–0.809; p-value: .001) when analyzed with Mantel-Haenszel chi square test.

Using multivariate modelling to examine other factors associated with ever having had sexual contact with another man revealed the following statistically significant associations:

Variable	Odds Ratio	95% Confidence Interval	p-value
Married or Partnered	.552	.394–0.775	.001
Ever having had sexual contact with a woman	2.030	1.069–3.856	.030
Knowledge of homosexual sex as a transmission route for HIV	1.714	1.223–2.403	.002

Adjusted for: military rank, rural/urban origin, and age.

The above is interesting. Married/Partnered men are significantly less likely to have ever had a male sexual partner, but ever having sex with a woman is associated with ever having had sex with a man as well. There is also an association between knowledge of homosexual sex as a transmission risk and having had sexual contact with another man. However, a large percentage of married/partnered men do report having had a sexual encounter with another man, suggesting that such sexual behaviour is not limited to men who engage exclusively in MSM contacts. This is confirmed when we look at soldiers reporting having had sex with another man in the last 12 months.

Among married or partnered men, 28.2% of men who reported having had a male sexual partner reported having sexual contact with another man within the last twelve months compared to 37% of unmarried and unpartnered men. This result was also statistically significant when analyzed with Mantel-Haenszel chi square test, with an OR of 0.265 (95% CI: 0.157–0.448; p-value: <.001) for married or partnered men having had a male sexual contact in the last twelve months. Using multivariate analysis to control for enlisted/NCO status, rural or urban origins, age, ever having had heterosexual sex, knowledge of HIV, and knowledge of homosexual sex as a possible transmission route for HIV, the adjusted OR for married or partnered men having had a male sexual contact in the last 12 months is .238 (95% CI: .132-.431; p-value: <.001).

Again, married/partnered men are significantly less likely to have had sex with a male partner in the last 12 months, but a fair percentage has. Given the general non-usage of condoms among men who have sex with men in this sample, this is of clearly of public health concern.

5.8 Commercial Sex Workers and the Military

In section 5.3 on heterosexual behaviour we stated that “Fewer than 3% of those who reported having sex during the past 12 months didn’t provide a response when asked about whether they had paid for sex during this period. However, the small number of overall responses mean these data should be interpreted with caution.” As a supplementary exercise to the main survey we also did a commercial sex worker survey to help us make a more accurate assessment of the sexual behaviour of the soldiers.

The sex worker sample was based on a snowball sample of 45 respondents from Anuradhapura (10) and Colombo (35), mainly from the Ratmalana area where the army camp that provided us a part of the military sample was located. Being a snowball sample, it has the usual weaknesses associated with that sampling technique. In this report we refer to the CSW survey only in so far as the results of the survey directly amplify the discussion based on the military sample.

The CSW survey revealed that in Anuradhapura the 10 CSW reported a total of 111 paid clients for the one week preceding the survey of whom 76 (68%) were from the military. In Colombo of the 655 reported 124 (19%) were from the military. In the day preceding the survey the Anuradhapura CSW had a total of 37 clients of whom 20 (54%) were from the military and the Colombo CWS had 118 clients of whom 14 (12%) were from the military. The latter – “last day” - set of data may be more reliable because of the usual recall problem associated with events in the past as time recedes. Both the one week data as well as the one day data suggest that military men are an important group of clients for CSW, especially in Anuradhapura. Anuradhapura is a relatively small town in an essentially rural region. Thus the transient military population and the more permanent military camp located in the area provide a relatively large percentage of the potential clientele. In contrast Colombo is Sri Lanka’s principal metropolitan city with a population of over one million. In the focus group discussion the respondents described Anuradhapura as the “hot spot” for buying sex.

In the weekly data Colombo figures show 26 non-paying clients of whom only one was from the military and in the Anuradhapura figures four were reported to be non-paying of whom two were from the military. There is no evidence to suggest that men in military demanded free sex from CSWs. However, it is useful to note that six of the 10 CSW in Anuradhapura did not respond to the question whether their non-paying “partners” were from the military and of the remaining four one said it was a military man. In Colombo 13 (37%) out of the 35 failed to respond and 5 said that they were military men. The high non-response rate may suggest that the CSW may be under-reporting the number of non-paying military partners that they have.

Condom use during last sex with a client is a high 93%. In Anuradhapura eight out of the ten (80%) CWS used a condom and in Colombo all but one. This suggests that women feel sufficiently empowered to suggest using a condom to their clients. However, the evidence also suggests that, as would be expected, the rate of condom use is less during sex with non-paying partners – just 9% reported always using condoms during the last month and 22% reported not using at all.

About a quarter (12) of all CWs reported they have “ever” been forced to have sex. Of the 12 three attributed the incident to a soldier. The numbers are too small to draw firm conclusions, but would clearly be a cause for concern because there is link between sexual abuse and prostitution (i.e. women who have been sexually abused are more likely to end up as CSW).

Knowledge of CSW about modes of transmission of HIV appears to be mixed. There is good awareness of the principal means of transmission. Nearly everybody (96%) identified correct use of condoms as being able to prevent AIDS. But as with the soldiers, there is clearly confusion relating to other modes of transmission. As with the soldiers, this population also has widespread misperceptions and stigma relating to persons with HIV.

From the analysis of the CSW survey data we can draw three important conclusions. First, a significant proportion of the CSW clientele is from the military. The Anuradhapura data suggest CSW are attracted to locations that have military camps because of the opportunity such locations offer for better earnings. The focus group discussion with the military men revealed that the men who buy sex do so mostly on their way home from operational areas. However, the recent practice of the military of sending the salaries direct to bank accounts has left them with less cash in hand to indulge in this practice.

Second, given the above situation, the high rate of use of condoms in sex involving CSW is a positive situation in so far as the fight against STDs is concerned. Third, just as much as soldiers CSW can also benefit from an improved level of knowledge of how HIV/AIDS is transmitted so that they can take more precautions against the disease.

6. Summary

This was a descriptive, cross-sectional survey of over 900 military personnel in Sri Lanka designed to elicit their knowledge and attitudes regarding HIV/AIDS, and to ascertain the extent to which they are engaging in at-risk behaviours. While we derived the primary survey instrument from the UNAIDS questionnaire, some deviation from 'textbook' research methodologies was required, given the context of studying the military in a developing country during a period of escalation in a civil conflict. Nevertheless, we are confident that the research methodology we used was robust. To the best of our knowledge, this is the largest such study to have been undertaken in the Sri Lankan context.

Knowledge about HIV/AIDS among soldiers in the Sri Lankan military was reasonably good. While the majority of soldiers were able to correctly identify the major modes of HIV transmission, there is greater knowledge of some modes of transmission than others. For instance, over 90% correctly selected heterosexual intercourse with an infected woman as a mode of transmission but just 63% selected homosexual intercourse with an infected man, a significant knowledge deficit. More than two-thirds of respondents also correctly identified sharing needles with an infected person as a mode of transmission. A reasonable level of knowledge is also supported by the relatively low proportion of respondents that identified incorrect modes of transmission for HIV. For instance, just 2% thought that HIV could be transmitted by eating food with an infected person and only 4% thought that it could be transmitted by sharing a toilet with an infected person. There was some degree of confusion relating to kissing, with 17% identifying this as a mode of HIV transmission. Interestingly, more than two-thirds of respondents correctly answered that a person who appears to be healthy could be infected with HIV, again suggestive of a reasonably sophisticated understanding of the illness. Knowledge of ways to prevent HIV was good with 90% believing that having only one trusted sex partner could reduce the chance of getting HIV and 74% believing that using a condom correctly every time during sex reduced the chances of getting HIV.

Despite the reasonable level of knowledge relating to HIV transmission and prevention, considerable stigma remains relating to those afflicted with HIV/AIDS. Over half of respondents felt that an HIV-infected teacher should not be allowed to keep teaching. Half the respondents felt that an HIV-infected co-worker should not be allowed to continue working, an interesting finding given that just 1.2% identified working with an infected person as a possible way to transmit HIV. Similarly, 70% said they would not buy food from an infected shopkeeper despite just 2.2% identifying sharing food with an infected person as a way to transmit HIV. These findings are particularly interesting. It would seem that knowledge alone is inadequate in terms of reducing the stigma associated with persons with HIV/AIDS. Soldiers identified books, military awareness programmes, government doctors and television as the most important sources of information on sexual matters, STDs and HIV/AIDS. It is important to take these findings into account when planning future awareness programmes.

While the majority of heterosexually active soldiers do not engage in risky behaviour, a small minority do so. Nearly one-fifth of sexually active soldiers reported more than one sexual partner during the past 12 months. Of all respondents asked about sex with a CSW during the past 12 months, 11% admitted to having done so. Of those asked about sex with a casual acquaintance or girlfriend they did not live with, 53% reported sex with this type of partner. Of married respondents, nearly one-fifth admitted to having had sex with someone who was not their spouse while they were married.

Interestingly, condom use appears to vary according to the type of sexual relationship. Of those admitting sex with a CSW during the past 12 months, the majority (67%) reported always using condoms. However, of those reporting sex with a casual acquaintance or girlfriend they did not live with during the past 12 months, just 21% reported always using condoms. Of married men, just 7.7% reported using a condom during their last sexual encounter with their wife. However, of those reporting extramarital sex, 29% reported using a condom during their last sexual encounter. This is consistent with generally low rates of condom use in Sri Lanka and anecdotal reports that condom usage is perceived as being associated with 'illicit' sexual activity. This is also consistent with our findings that the most frequently given reason by respondents for using a condom was to prevent STDs, though this was closely followed by for birth control.

While respondents identified the military camp, a familiar shop and a familiar pharmacy as the preferred places to obtain condoms, one-third of respondents reported that condoms were not freely available from their camp, a disparity which should be corrected. Interestingly, very few respondents identified hotels and bars as preferred sources of condoms, suggesting efforts to ensure condom availability in these such venues are a waste of time.

Of particular note were the responses to questions relating to factors promoting or inhibiting sexual behaviour. These were asked in an attempt to gain some insight into what was promoting or controlling risky sexual behaviour. Stress of the job was by far the most commonly identified factor promoting risky sexual behaviour while the bond with the wife and family was by far the most commonly identified factor mitigating risky sexual behaviour. These findings should be taken into consideration by authorities and those responsible for planning awareness programmes.

Over 30% of respondents reported having ever had a homosexual encounter, a striking proportion but consistent with the general belief that homosexual activity is widespread in the military. In most instances, it would appear that this activity is historical. Of those reporting homosexual sex in the

past 12 months, 28% reported having one partner, 8% reported two partners and 4% reported more than two partners. Of particular concern is the finding that homosexual sex is associated with low rates of condom use. More than two-thirds of homosexually active respondents reported 'never' using a condom (69.6%) compared with 20% reporting 'sometimes' using a condom and just 6% reporting 'always' using a condom. An infrequent use of condoms during homosexual sex represents a high risk sexual behaviour in terms of transmission of HIV/AIDS and STDs and is definitely an area of concern. Importantly, a considerable proportion of married or partnered men reported having had a sexual encounter with another man, suggesting that such sexual behaviour is not limited to men who engage exclusively in MSM contacts.

Alcohol and drug use do not appear to be major sources of concern in terms of increasing risk for HIV/AIDS. While over 90% have used alcohol, just 7% report using alcohol when they last had sex. Over half the respondents report ever having used drugs but just 6% reported using drugs when they last had sex. Just 22 respondents (fewer than 3% of respondents) reported having ever used heroin, though of concern is the finding that 7 of these reported having injected heroin. Nationally, it is estimated that only 1-2% of heroin users are injecting.³⁶

A few weeks before the field visits were conducted, allegations emerged of Sri Lankan peacekeepers in Haiti being involved in transactional sex, in some cases with minors. These reports may well have contributed to making the soldiers we surveyed less likely to disclose complete information relating to their sexual behaviours. Nevertheless, this development is not something we could control for. Every effort was made to reassure respondents that their responses would be completely anonymous and treated in absolute confidence.

This study showed that rank-and-file soldiers in the Sri Lankan army have a reasonable knowledge of HIV/AIDS and ways to reduce the risk of transmission. However, a small but significant proportion of men in the military are engaged in sexual behaviours that can be categorized as putting them and their sexual partners at increased risk of HIV/AIDS. The finding of greatest concern is the infrequent use of condoms associated with homosexual sex.

Based on our research, we outline several recommendations that we hope will be considered by decision planners and authorities responsible for providing HIV/AIDS awareness programmes in Sri Lanka.

7. Recommendations

1. The findings from this research should be widely disseminated to all relevant authorities including decision makers in the Sri Lankan defence and public health establishments and senior military commanders.
2. Existing HIV/AIDS awareness programmes in the military should continue and be expanded to ensure that coverage extends to all recruits. These programmes should ideally be offered

³⁶ According to the National Dangerous Drugs Control Board (NDDCB), as reported in Reid G and Costigan G, Revisiting 'The Hidden Epidemic' A Situation Assessment of Drug Use in Asia in the context of HIV/AIDS, The Centre for Harm Reduction, The Burnet Institute, Australia, 2002.

before new recruits are sent on operational duties and should be repeated at regular intervals.

3. Military awareness programmes should specifically address the current misperceptions regarding modes of transmission of HIV. In particular, they should give particular attention to **emphasising the dangers of unprotected homosexual sex** and correcting the misperception that homosexual sex is somehow safer than heterosexual sex.
4. The emphasis of military awareness programmes should be on behaviour change, with a specific goal of **increasing condom use** during every act of sexual intercourse.
5. Consideration should be given to making condoms more widely and freely available from military camps.
6. Where possible, measures should be taken to limit duration of service in operational areas and facilitate regular periods of leave so that healthy family life and marital relationships can be sustained.
7. Special attention should be given towards addressing the issue of stigma relating to persons living with HIV/AIDs.
8. Further research should look at how military awareness programmes complement other awareness programmes (e.g. those provided at school) to optimise resources and ensure consistency of messages.

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List of tables

Table 1. Socio-demographic characteristics

t=total number of respondents for each question	No.	% ^a
Age in years, t=902		
≤25	299	32.9
26–35	406	44.7
36–45	175	19.3
≥46	22	2.4
Mean age (years)		29.7 (SD=7.1)
Marital status, t=895		
Unmarried	339	37.3
Married	534	58.7
Separated/divorced	6	0.7
Unmarried and living together	16	1.8
Mean age at time of marriage (years)		26.4
Any children, t=535		
Yes	425	46.8
No	110	12.1
Mean number of children		1.7
Religion, t=898		
Buddhism	882	97.0
Catholicism	12	1.3
Non-Catholic Christian	2	0.2
Islam	2	0.2
Home setting, t=898		
Urban	134	14.7
Rural	764	84.0
Highest level of education, t=899		
Grade 8	214	23.5
O levels	541	59.5
A levels	120	13.2
Technical college/vocational training	10	1.1
University Degree	14	1.5
a=of total number of participants (N=909)		

Table 2. Military background and experience

t=total number of respondents for each question	No.	% ^a
Type of force served in, t=900		
Regular	543	59.7
Volunteer	357	39.3
Length of service in armed forces, t=909		
<5 years	277	30.5
5-10 years	238	26.2
11-20 years	351	38.6
21-30 years	40	4.4
> 30 years	3	0.3
Mean (years), mean		10.1
Branch of army, t=903		
Infantry	568	62.3
Armour	70	7.7
Artillery	41	4.5
Engineers	84	9.2
Signals	36	4.0
Logistics	17	1.9
Administration	31	3.4
Other ^b	56	6.2
Rank, t=865		
Officer	58	6.4
Other	807	88.8
Private	414	45.5
Lance Corporal	226	24.9
Corporal	123	13.5
Sergeant and above	64	7.0
Other	2	0.2
Served in operation areas, t=888		
Yes	868	95.5
No	20	2.2
Frequency of going home during deployment in operational area, t=875		
Once a month	50	5.5
After 2-3 months	672	73.9
After 4-5 months	124	13.6
Once in 6 months	5	0.6
After more than 6 months	4	0.4
Other	20	2.2
a=of total number of respondents (N=909)		
b= other non-specified categories		

Table 3. Duration spent at transit camps en-route to, and returning, from operational areas

Transit camp, (t=total number of responses)	Number of days spent in city of transit camp (mean)
RETURNING from operational service	
Ratmalana (t=85)	2.0
Trincomalee (t=568)	1.4
Anuradhapura (t=23)	3.0
Other (t=237)	5.1
GOING on operational service	
Ratmalana (t=423)	4.6
Trincomalee (t=563)	4.8
Anuradhapura (t=453)	3.1
Other (t=14)	2.9

Table 4. Sources of knowledge on sex

Sources of Information on Sex	Most reliable source (%)	2 nd most reliable(%)	3 rd most reliable (%)
Books	25.3	8.0	5.8
Magazines	7.3	7.4	6.3
Booklets	0.2	0.6	0.8
Leaflets	1.8	1.5	2.1
Handouts	0.4	1.1	1.1
Television	5.5	8.4	7.4
Newspaper	5.2	6.7	6.7
Radio	0.8	2.5	2.3
Internet	2.1	3.4	1.5
Blue Films	3.6	4.0	2.0
Partner	9.4	5.2	5.3
Friends	4.1	5.9	6.6
Peer	1.8	2.9	4.4
Colleague	0.1	0.6	0.8
Military awareness program	10.1	10.2	9.1
Other awareness program	1.5	3.9	5.3
Family member	0.6	0.4	0.8
Health Care worker	4.5	5.4	4.8
Government Doctor	11.2	5.5	5.6
Private Doctor	1.7	2.1	2.1
Pornographic public	1.5	1.5	2.2
Has no source	0.6	0.1	0.1
Other	0.2	0.1	0.1
Total^a	903	794	747

a=total number of responses

Table 5. Access to information about sex

	Yes (%)	No (%)	Total ^a
Exchange information about sexual experiences with friends	85.9	13.5	904
Judge this info to be:			
Very Reliable	14.5		
Somewhat reliable	59.8		
Not reliable	2.5		
Not sure	9.5		
Have access to pornographic publications	63.1	36.0	901
Get the opportunity to watch blue films	75.8	23.5	903

a=total number of respondents

Table 6. Sources of knowledge on STDs

Sources of Information on STDs	Most reliable source (%)	2 nd most reliable (%)	3 rd most reliable (%)
Books	22.4	8.9	7.0
Magazines	5.3	6.4	5.7
Booklets	0.8	1.1	0.7
Leaflets	2.5	2.5	3.5
Handouts	0.7	1.0	1.2
Television	15.1	14.5	15.1
Newspaper	5.6	9.1	8.7
Radio	1.4	4.6	5.9
Internet	1.0	1.3	1.0
Partner	1.5	2.0	2.6
Friends	2.5	4.5	4.4
Peer	1.5	1.7	3.4
Colleague	0.1	0.3	0.8
Military awareness program	17.1	10.0	10.3
Other awareness program	1.8	7.7	6.4
Family member	0.6	0.2	0.7
Health Care worker	4.2	6.7	5.5
Government Doctor	12.0	5.4	6.6
Private Doctor	2.5	1.8	3.0
Pornographic public	0.7	0.6	1.4
Other	0	0	0.1
Total^a	902	821	799

a=total number of responses

Table 7. Knowledge of STD symptoms

	%
Know that a woman with an STD can have no symptoms:	
Yes	29.4
No	19.6
Did not know	47.4
Total^a	901
Proportion who recognized Female STD symptoms:	
Abdominal Pain	9.4
Vaginal Discharge	44.5
Itching in Genital Area	54.0
Burning or pain when urinating	20.5
Pain During Sex	12.9
Open sores in genital area	39.2
Swelling in genital area	15.5
Blood in urine	13.8
Can't urinate	6.2
Weight Loss	9.4
Infertility	6.0
Don't know	31.1
Other	1.8
Total^a	865
Know that a man with an STD can have no symptoms:	
Yes	24.6
No	40.4
Did not know	32.0
Total^a	903
Proportion who recognized Male STD symptoms:	
Abdominal Pain	6.6
Discharge from male genital area	52.6
Itching in Genital Area	54.7
Burning or pain when urinating	30.0
Pain During Sex	15.1
Open sores in genital area	45.1
Swelling in genital area	24.3
Blood in urine	16.8
Can't urinate	9.5
Weight Loss	10.8
Sterility	9.5
Don't know	23.0
Other	1.5
Total^a	870

a=total number of respondents

Table 8. Knowledge of HIV/AIDS

	%
Proportion who have heard about the HIV virus or AIDS:	
Yes	98.5
No	0.7
Total^a	901
Proportion who have identified statement as the relationship between HIV and AIDS:	
HIV and AIDS are the same thing	25.7
There is no relationship between them	2.1
There is a relationship, but I don't know what it is	26.6
You can get AIDS from HIV	42.2
Total^a	888
Proportion who identify subject as the person with whom they discuss HIV/AIDS:	
Wife	24.4
Girlfriend	8.9
Other female sex partner	3.1
Homosexual partner	0.6
Friend	40.8
Family member	2.2
Health Care worker	8.0
Colleague	7.3
No-one	34.8
Other	2.4
Total^a	889
Believe there is a permanent cure for HIV/AIDS	
Yes	18.2
No	43.0
Don't Know	37.3
Total^a	906
Believe there is something that can be done to control symptoms and lead a relatively normal life if a person has HIV	
Yes	36.2
No	25.6
Don't Know	37.0
Total^a	908
Identified method used to detect an HIV/AIDS infection:	
Urine Test	7.9
Blood Test	86.7
Other	1.2
Total^a	882

a=total number of respondents

Table 9. Sources of knowledge on HIV/AIDS

Preferred Sources of Information on HIV/AIDS	Most preferred source (%)	2nd most preferred (%)	3rd most preferred (%)
Books	13.6	9.4	9.2
Magazines	4.0	8.0	5.0
Booklets	0.9	1.4	0.9
Leaflets	4.3	3.9	6.3
Handouts	1.8	3.1	3.4
Television	19.5	13.8	13.5
Newspaper	4.3	10.7	8.1
Radio	1.9	5.6	5.5
Internet	0.8	0.9	0.9
Partner	0.7	1.2	1.3
Friends	0.7	0.9	2.3
Peer	0.1	1.2	1.4
Colleague	0.1	-	0.3
Military awareness program	22.2	10.3	10.6
Other awareness program	5.4	10.1	5.7
Family member	-	0.3	0.6
Health Care worker	3.5	5.0	5.6
Government Doctor	13.6	5.4	7.5
Private Doctor	2.3	2.8	1.9
Pornographic public	0.4	0.3	0.7
Has no source	-	-	-
Other	0.8		
Total responses	916	856	824
Current Sources of Information on HIV/AIDS			
	Most important (%)	2nd most important (%)	3rd most important (%)
Books	19.9	8.9	8.3
Magazines	4.0	6.9	5.8
Booklets	0.6	0.7	1.0
Leaflets	2.5	4.8	4.1
Handouts	0.6	1.8	1.4
Television	24.1	18.2	11.3
Newspaper	6.3	11.3	10.6
Radio	2.3	6.8	6.5
Internet	0.7	0.6	0.6
Partner	0.4	0.9	1.4
Friends	2.3	3.0	4.6
Peer	0.4	1.8	2.1
Colleague	-	-	0.7
Military awareness program	21.3	10.5	11.6
Other awareness program	3.6	7.6	6.1
Family member	0.3	0.2	0.4
Health Care worker	2.3	3.3	5.0
Government Doctor	7.0	4.7	5.6
Private Doctor	1.0	0.8	1.5
Pornographic public	-	0.1	1.2
Other	0.2	-	0.1
Total responses	733	763	743

Table 10. Perception of various modes of HIV transmission

Modes of HIV Transmission option	%
Correct	
Using the same injection needle used by an infected person	68.4
Having sexual intercourse with infected woman	92.7
Having homosexual intercourse with infected man	62.6
HIV-infected mother to her unborn child	54.4
From HIV-infected mother's milk	38.7
Through blood transfusion	69.6
Exchanging razor with infected person	58.7
Incorrect	
Eating food with infected person	2.2
Sharing clothes with infected person	10.4
Sharing toilet with infected person	3.9
Working with infected person	1.2
Kissing an infected person	16.9
Coming into contact with infected blood	13.3
Don't know	1.1
Other	0.7
Total^a	895
Believe a healthy looking person can be infected with HIV:	
Yes	67.8
No	6.2
Don't know	24.3
Total^a	904

a=total number of respondents

Table 11. Knowledge of HIV prevention

	%
Think the chance of getting HIV can be reduced by using a condom correctly every time during sex:	
Yes	73.6
No	12.2
Don't know	12.4
Total^a	904
Believe the chance of getting HIV can be reduced by having only one trusted sex partner:	
Yes	89.7
No	3.3
Don't know	5.7
Total^a	905
Think there are ways to avoid getting infected with HIV/AIDS:	
Yes	88.0
No	2.6
Do not know	7.5
Total^a	809
Know ways to protect yourself from getting HIV/AIDS:	
Abstinence	18.2
Faithful to one partner	45.7
Use a condom	39.4
Not having sex with Prostitute	31.2
Not to re-use injection syringes	13.0
Take care with blood transfusion	11.4
Not to exchange razors	20.2
Other	20.1
No Answer Given	6.1
Total^a	886
<i>PMTCT Questions</i>	
Believe the HIV can be transmitted from an infected mother to a child before birth:	
Yes	82.8
No	2.0
Don't know	13.8
Total^a	907
Believe there is a way to avoid transmission of HIV from infected mother to baby:	
Yes	11.7
No	32.1
Don't know	54.7
Total^a	906

a=total number of respondents

Table 12. Attitudes toward HIV-infected people

	%
Personally knows someone infected with HIV or has died of AIDS:	
Yes	6.6
No	93.0
Total^a	905
Would be willing to care for a family member infected with HIV:	
Yes	51.8
No	22.2
Can't Say	25.4
Total^a	904
Believe an HIV-infected co-worker should be allowed to continue working:	
Yes	30.4
No	50.6
Can't Say	18.6
Total^a	905
Would buy food from an infected shopkeeper/foodseller:	
Yes	16.6
No	70.0
Can't Say	13.1
Total^a	906
Would keep a family member's HIV+ status as a secret:	
Yes	14.6
No	69.3
Can't Say	15.7
Total^a	906
Believe a healthy HIV-infected teacher should be allowed to continue teaching:	
Yes	29.8
No	54.1
Can't Say	15.4
Total^a	903
Willing to be tested for HIV/AIDS:	
Yes	77.9
No	21.6
Total^a	904
<i>Reason for not wanting to be tested:</i>	
Believe there is no need to be tested	31.1
Fear their marriage will break down	0
Trust their sexual partner	56.6
Other	0.1
Total^a	196

a=total number of respondents

Table 13. Heterosexual history and behaviour

All respondents (N=909)		
t=total number of respondents for each question	No.	%^a
Ever had sexual intercourse, t=893		
Yes	807	88.8
No	86	9.5
Age at first sexual intercourse (years), mean, t=792		21.4
Type of partner during first sexual intercourse, t=803		
Present wife	197	24.4 ^b
Present wife before marriage	77	9.5 ^b
Person you are living with	11	1.4 ^b
Girlfriend	171	21.2 ^b
Friend	61	7.6 ^b
Relative	107	13.3 ^b
CSW	55	6.8 ^b
Casual acquaintance	117	14.5 ^b
Other	7	0.9 ^b
Number of partners during last 12 months, t=807		
0	115	14.3 ^b
1	540	66.9 ^b
2	88	10.9 ^b
3	27	3.3 ^b
4	18	2.2 ^b
5+	19	2.4 ^b
Subset who were asked additional questions about sexual behaviour during past 12 months (N=426)		
Sexual intercourse during last 12 months, t=375		
Yes	303	71.1 ^c
No	72	16.9 ^c
Sex with CSW during last 12 months, t=296		
Yes	33	10.9 ^d
No	263	86.8 ^d
Number of CSW partners during last 12 months n, t=30		
1	9	27.3 ^e
2	11	33.3 ^e
3+	10	30.3 ^e
Sex with casual partner/girlfriend you don't live with during last 12 months, t=249		
Yes	161	53.1 ^d
No	88	29.0 ^d

All respondents (N=909)		
t=total number of respondents for each question	No.	%^a
Number of casual partners during last 12 months, t=70		
1	102	63.4 ^f
2	24	14.9 ^f
3+	23	14.3 ^f
Married respondents (N=534)		
Premarital sex, t=508		
Yes	312	58.4 ^g
No	196	36.7 ^g
Type of premarital sex partner		
Present wife	108	34.6 ^h
Live in partner	10	3.2 ^h
Girlfriend	73	23.4 ^h
Friend	33	10.5 ^h
Female relative	69	22.1 ^h
Prostitute	37	11.9 ^h
Someone that you knew	78	25.0 ^h
Casual acquaintance	26	8.3 ^h
Extramarital sex, t=502		
Yes	100	18.7 ^g
No	402	75.3 ^g
Type of sexual partner other than spouse		
Live in partner	6	6.0 ⁱ
Girlfriend	18	18.0 ⁱ
Friend	22	22.0 ⁱ
Female relative	24	24.0 ⁱ
Prostitute	8	8.0 ⁱ
Someone that you know	34	34.0 ⁱ
Casual acquaintance	17	17.0 ⁱ
a=of total number of respondents unless otherwise specified (n=909) b=of those reporting ever had sexual intercourse (n=807) c=of total number of respondents given additional questions (n=426) d=of those reporting sexual intercourse during last 12 months (n=303) e=of those reporting sex with a CSW during last 12 months (n=33) f=of those reporting sex with a casual acquaintance during the last 12 months (n=161) g=of total number of married respondents (n=534) h=of those reporting premarital sex (n=312) i=of those reporting extramarital sex (n=100)		

Table 14. Self-identified factors influencing sexual behaviour

	No.	% ^a
Factors that control your sexual behaviour		
Religious teachings	70	7.7
Fear of STDs	217	23.9
Fear of HIV/AIDS	151	14.4
Cultural and social values	148	16.3
Bond with wife and family	469	51.6
Fear of the law	36	4.0
Other	26	2.9
Factors that promote your sexual behaviour		
Influence of friends	50	5.5
Stress from job	430	47.3
Easy access to CSWs	31	3.4
Opportunities I get	103	11.3
Limitations for a normal family life	208	22.9
Alcohol use	35	3.9
Drug use	17	1.9
Other	40	4.4
a=of total number of participants (N=909); total percentage exceeds 100% as respondents may have given more than one answer		

Table 15. Patterns of condom use during heterosexual sex in respondents who have had sexual intercourse

All participants (N=909)		
t=total number of responses for each question	No.	%^a
Ever used a condom, t=799		
Yes	540	66.9
No	259	32.1
Used a condom during first sexual encounter, t=808		
Yes	159	19.7
No	633	78.4
Can't remember	16	2.0
Used a condom during last sexual encounter, t=806		
Yes	212	26.3
No	583	72.2
Can't remember	11	1.4
Subset of respondents given additional questions (N=426)		
Frequency of condom use during sex with CSWs in last 12 months, t=33		
Always	22	66.7 ^b
Sometimes	6	18.2 ^b
Never	5	15.2 ^b
Frequency of condom use during sex with casual partners in last 12 months, t=157		
Always	33	20.5 ^c
Sometimes	34	21.1 ^c
Never	90	55.9 ^c
Married respondents (N=534)		
Used a condom during last sexual encounter with wife, t=506		
Yes	39	7.7 ^d
No	466	91.6 ^d
Can't remember	1	0.2 ^d
Used a condom during premarital sex, t=293		
Yes	84	26.9 ^e
No	191	61.2 ^e
Sometimes	18	5.8 ^e
Used a condom during sex with someone other than spouse while married, t=99		
Yes	29	29.0 ^f
No	66	66.0 ^f
Sometimes	4	4.0 ^f
a=of total number of respondents reporting ever had sex unless otherwise specified (n=807) b=of those reporting sex with a CSW during last 12 months (n=33) c=of those reporting sex with casual acquaintance during last 12 months (n=161) d=of those reporting when they last had sex with their wife (n=509) e=of those reporting premarital sex (n=312)		

f=of those reporting extramarital sex (n=100)

Table 16. Actual source of condoms

	Most important		Second most important		Third most important	
	No.	% ^a	No.	% ^a	No.	% ^a
Public health care worker	45	5.0	17	1.9	16	1.8
STD clinic	11	1.2	10	1.1	18	2.0
Medical officer	16	1.8	14	1.5	15	1.7
Military camp	90	9.9	77	8.5	35	3.9
Family health worker	50	5.5	44	4.8	32	3.5
Nurse	3	0.3	1	0.1	4	0.4
Familiar shop/pharmacy	196	21.6	60	6.6	37	4.1
Unfamiliar pharmacy	97	10.7	88	9.7	38	4.2
Unfamiliar shop	7	0.8	50	5.5	41	4.5
Friend	7	0.8	31	3.4	46	5.1
Bar	-	-	-	-	1	0.1
Hotel	7	0.8	11	1.2	21	2.3
NGO	1	0.1	3	0.3	3	0.3
Other	8	0.9	-	-	1	0.1

a=of total number of participants (n=909)

Table 17. Preferred source of condoms

	Most important		Second most important		Third most important	
	No.	%	No.	%	No.	%
Public health care worker	60	6.6	32	3.5	37	4.1
STD clinic	29	3.2	29	3.2	28	3.1
Medical officer	37	4.1	36	4.0	34	3.7
Military camp	141	15.5	69	7.6	47	5.2
Family health worker	80	8.8	67	7.4	37	4.1
Nurse	4	0.4	7	0.8	7	0.8
Familiar shop/pharmacy	130	14.3	87	9.6	66	7.3
Unfamiliar pharmacy	79	8.7	76	8.4	36	4.0
Unfamiliar shop	7	0.8	50	5.5	53	5.8
Friend	8	0.9	25	2.8	35	3.9
Bar	2	0.2	3	0.3	1	0.1
Hotel	3	0.3	5	0.6	19	2.1
NGO	1	0.1	-	-	4	0.4
Other	18	2.0	-	-	-	-

Table 18. Homosexual sex

t=total number of respondents for each question	No.	%
Ever had a homosexual relationship, t=796		
Yes	280	30.8 ^a
No	516	56.8 ^a
Number of homosexual partners in the last 12 months, t=260		
Did not have any partners	148	52.9 ^b
One	79	28.2 ^b
Two	22	7.9 ^b
More than two	11	3.9 ^b
Condom use during homosexual sex in last 12 months, t=107		
Always	7	6.25 ^c
Sometimes	22	19.6 ^c
Never	78	69.6 ^c
Condom use during last homosexual encounter, t=240		
Yes	27	9.6 ^b
No	213	76.1 ^b
Homosexual partner(s) within the last 12 months in the military, t=102		
Yes	46	41.1 ^c
No	56	50.0 ^c
a= of all participants (N=909)		
b= of those reporting ever having had a homosexual encounter (n=280)		
c= of those reporting ≥1 homosexual partner in the last 12 months (n=112)		

Table 19. Pattern of alcohol and drug use

t=total number of responses for each question	No.	%^a
Ever used alcohol, t=901		
Yes	850	93.5
No	51	5.6
Opportunity to drink alcohol at camp, t=900		
Yes	193	21.2
No	707	77.8
Use alcohol during last sexual encounter, t=770		
Yes	61	7.6 ^b
No	709	87.9 ^b
Can't remember	13	1.6
Use drugs during last sexual encounter, t=622		
Yes	55	6.8 ^b
No	557	69.0 ^b
Can't remember	10	1.2
Ever used ganja, madana modaka or babul , t=858		
Yes	512	56.3
No	346	38.1
Ever used heroin, t=894		
Yes	21	2.3
No	873	96.0
Ever injected heroin or other drugs, t=897		
Yes	7	0.8
No	890	97.9
Used ganja, madana modaka or babul in the past 4 weeks, t=892		
Yes	245	27.0
No	647	71.2
Used heroin in the past 4 weeks, t=894		
Yes	9	1.0
No	885	97.4
a= of all participants unless otherwise stated (N=909)		
b=of all respondents who reported ever having sex (n=807)		

Table 20. Health-seeking behaviour

t=total number of respondents for each question	No.	%^a
Had a blood test for HIV/AIDS, t=754		
Yes	118	13.0
No	636	70.0
Reason for being tested, t=111		
Decided on your own	41	34.7 ^b
Going to serve with the UN	22	18.6 ^b
Going to travel overseas	21	17.8 ^b
Recommended by a doctor	6	5.1 ^b
Following a suspicious sexual encounter	5	4.2 ^b
You experienced symptoms	1	0.8 ^b
You suspect your partner has HIV/AIDS	3	2.5 ^b
Other	12	10.2 ^b
Been told results, t=113		
Yes	85	72.0 ^b
No	28	23.7 ^b
Wanted to be tested for HIV in the future, t=704		
Yes	324	35.6
No	275	30.1
Can't say	105	11.6
a = of all participants unless otherwise stated (N=909)		
b=of those who have been tested for HIV (n=118)		

List of figures

Figure 1. Reported HIV cases up to the end of 2007 (UNAIDS 2008 Sri Lanka Country Report)

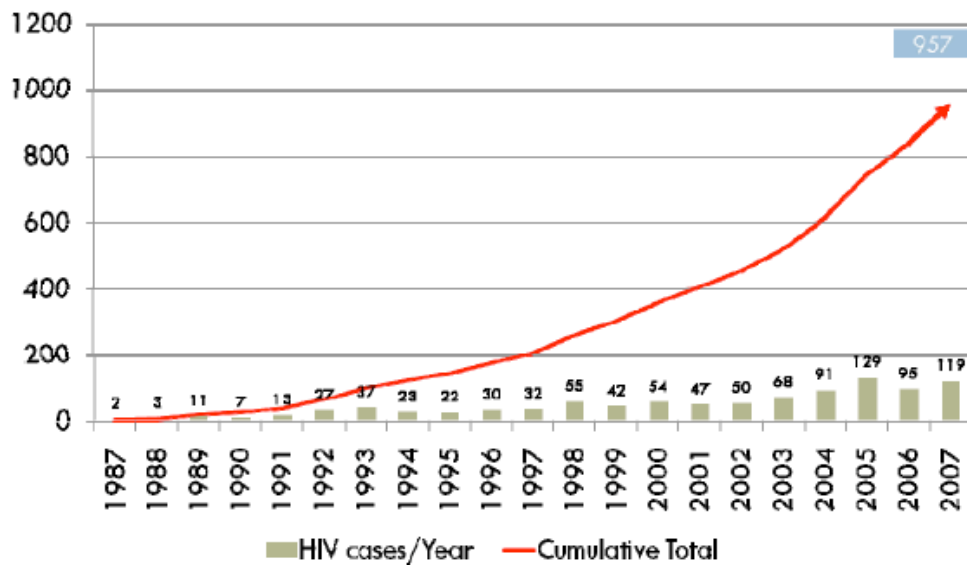


Figure 2. Trends in the rate of selected STIs in Sri Lanka (WHO, 2006)

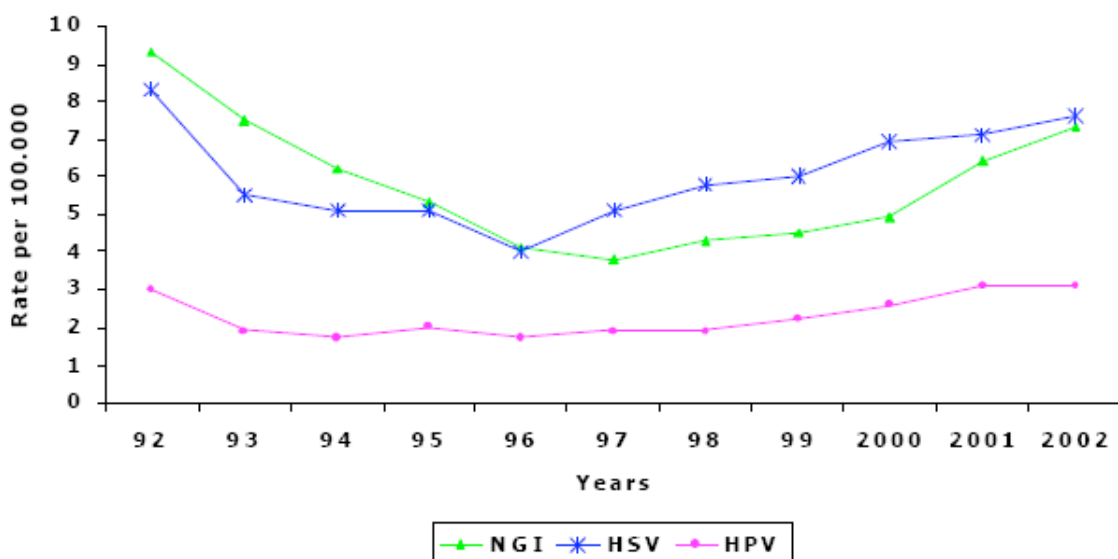


Figure 3. Map of Sri Lanka showing provinces and main cities



Figure 4. Knowledge of modes of HIV transmission

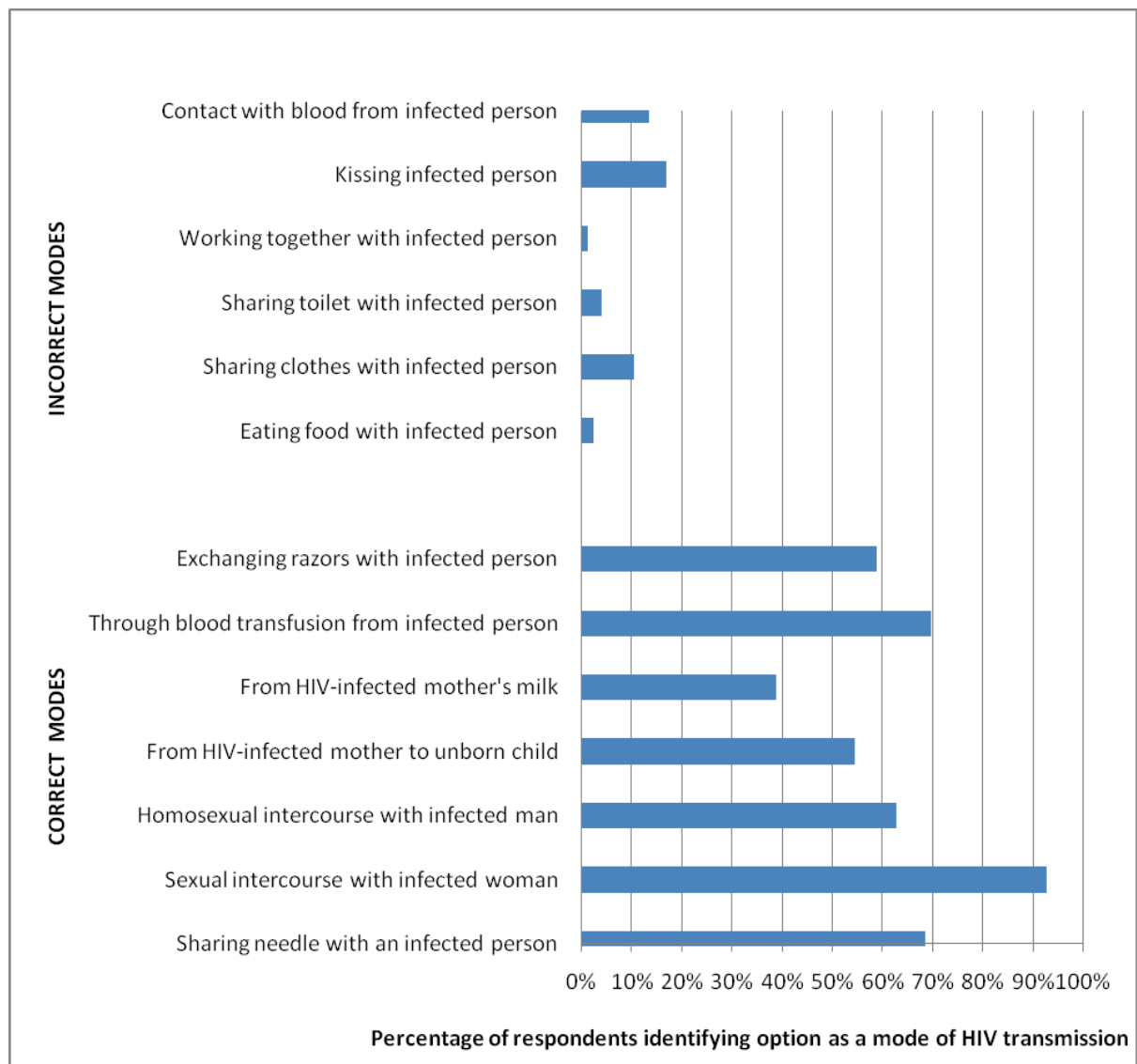


Figure 5. Number of heterosexual partners during last 12 months in those reporting ever having sexual intercourse

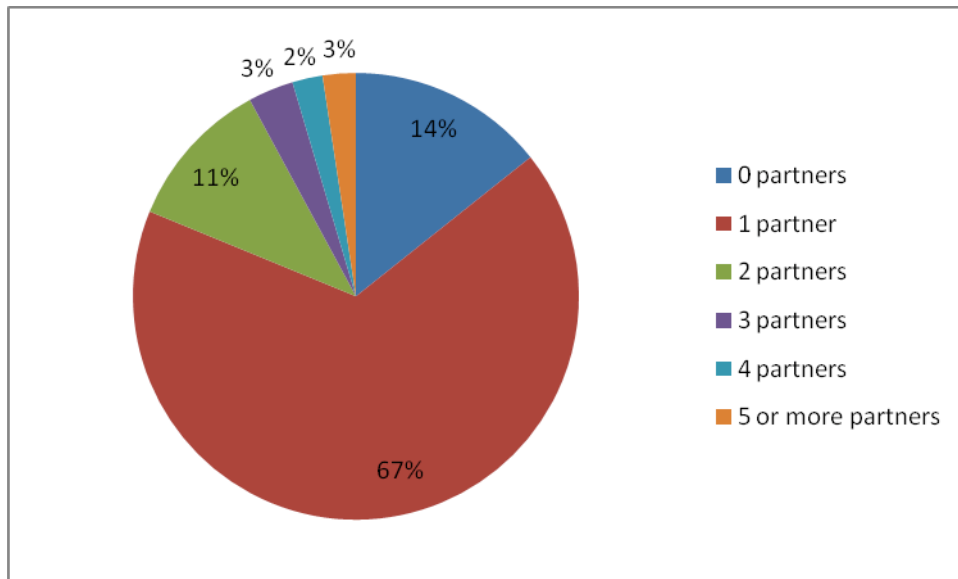


Figure 6. Frequency of condom use during sex with CSWs and casual partners in the last 12 months

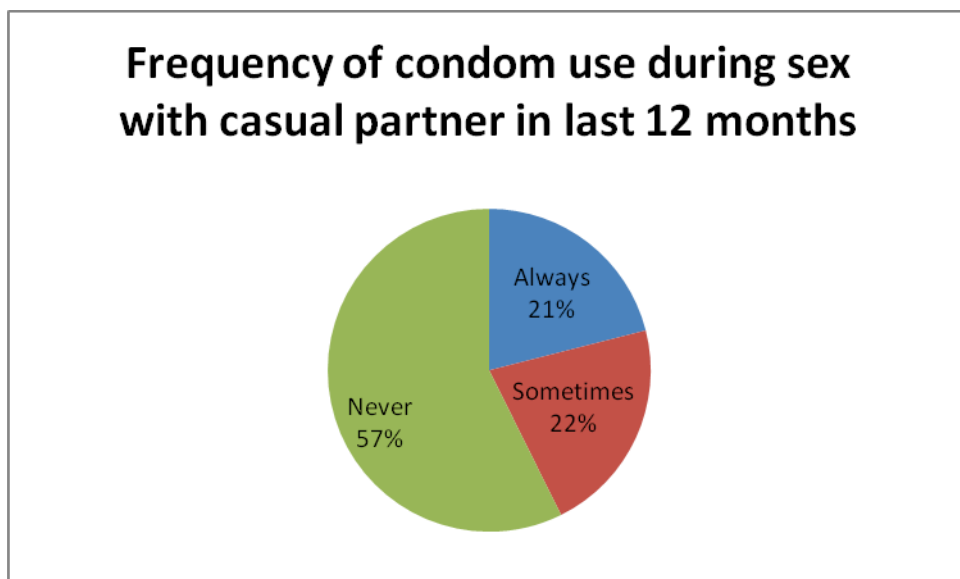
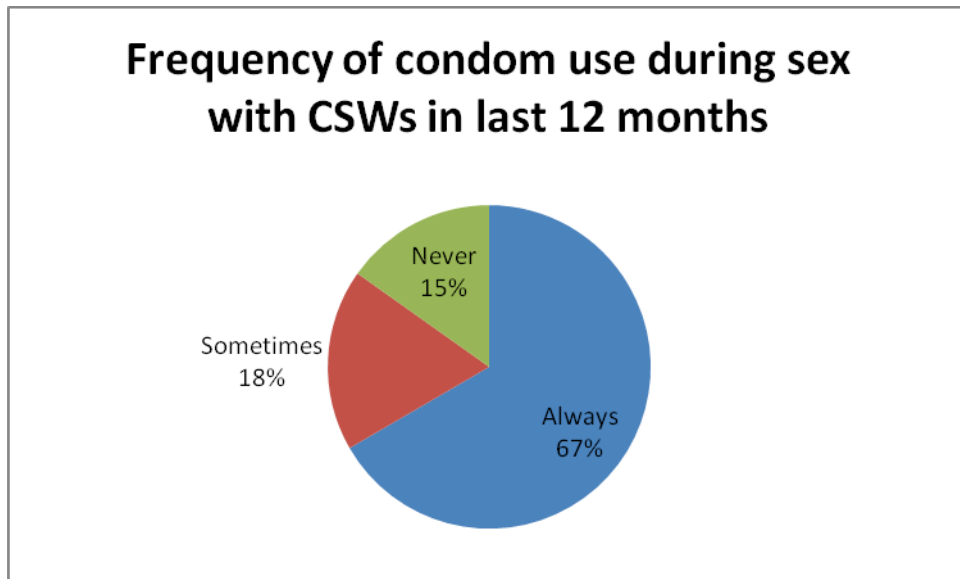


Figure 7. Homosexual sex and number of partners

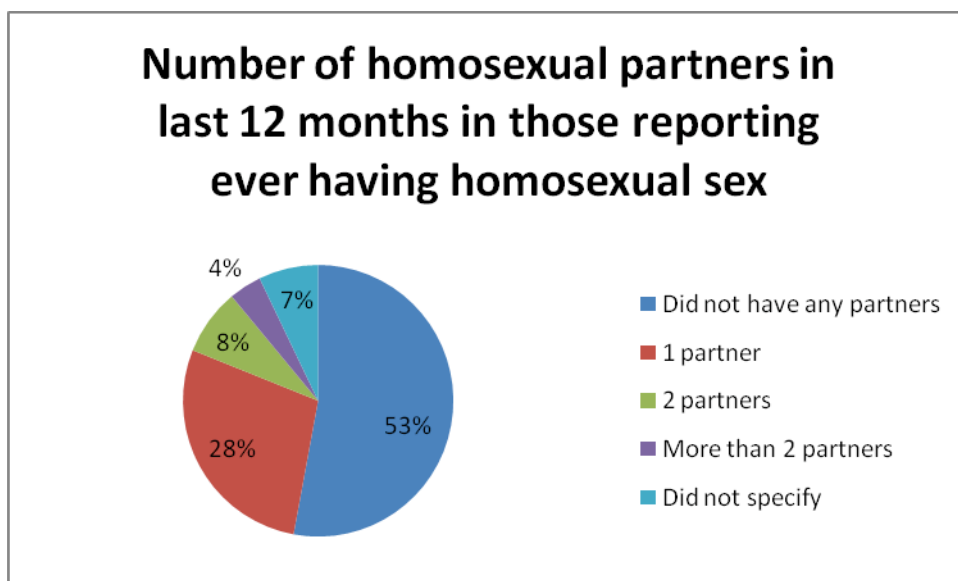
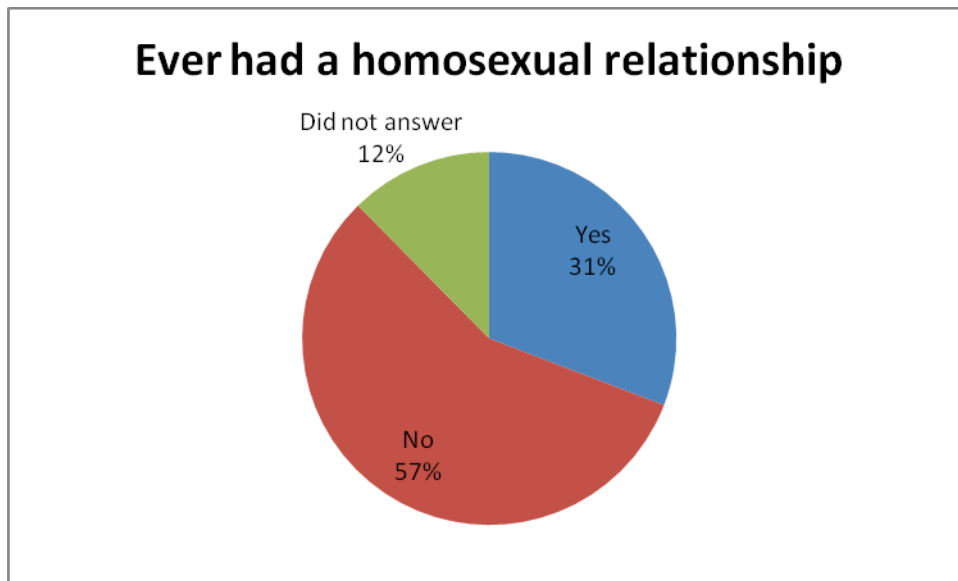
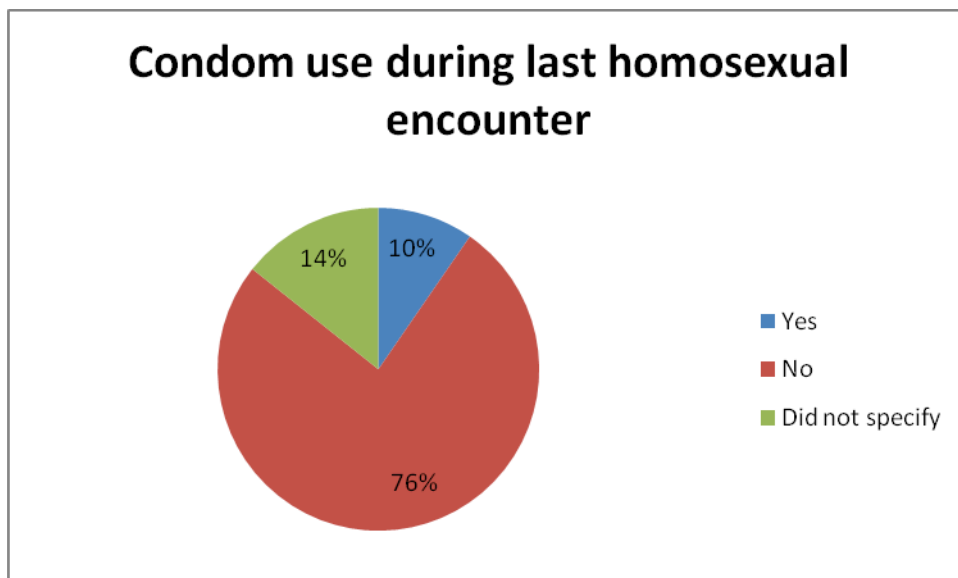
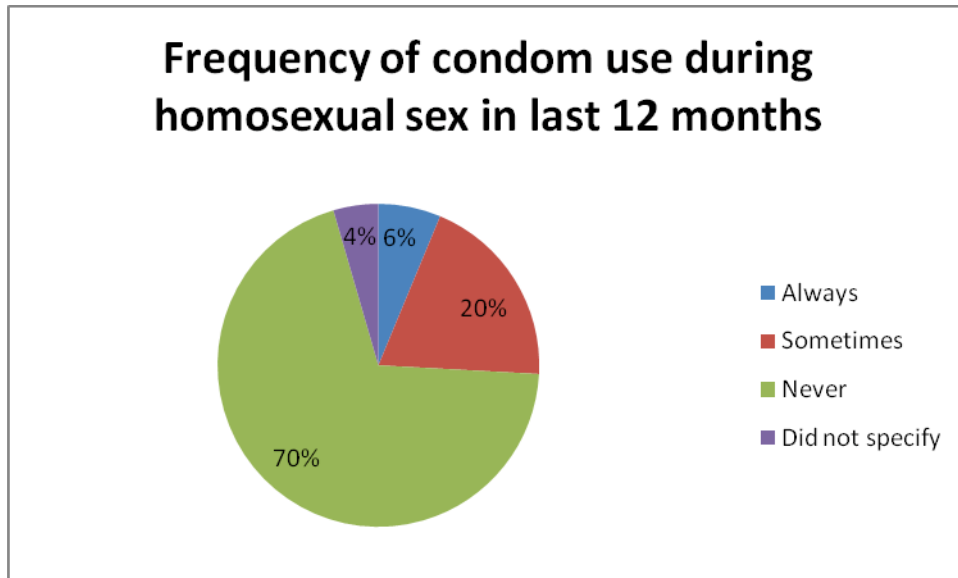


Figure 8. Condom use during homosexual sex



APPENDICES

APPENDIX 1: Administrative divisions in Sri Lanka: Province, Capital and District

	Province	Capital	Districts
1	Central	Kandy	Kandy, Matale, Nuwara Eliya
2	North Central	Anuradhapura	Anuradhapura, Polonnaruwa
3	Northern	Jaffna	Jaffna, Kilinochchi, Mannar, Vavuniya, Mullativu
4	Eastern	Trincomalee	Ampara, Batticaloa, Trincomalee
5	North Western	Kurunegala	Kurunagala, Puttalam
6	Southern	Galle	Galle, Hambanthota, Mathara
7	Uva	Badulla	Badulla, Monaragala
8	Sabaragamuwa	Ratnapura	Kegalle, Rathnapura
9	Western	Colombo	Colombo, Gampaha, Kaluthara

APPENDIX 2: The Main Questionnaire

Dear Sir / Madam,

We would like to thank you for joining in this noble task of filling this questionnaire.

The main objective of this program is to examine the knowledge of HIV/AIDS and prevention of the same among different communities living in Sri Lanka. The results from this research will be used to help in planning the programs for the prevention of the spread of HIV/AIDS Sri Lanka.

Some of the questions in this questionnaire are very personal. For the success of this research it is important that you provide us with honest/true answers to these questions. You are NOT required to provide your name or any other identification details. The information you provide is confidential and anonymous. The information you provide will only be used to prepare the final report.

To mark the correct option for each question, circle the number of the answer which applies. Where more than one option may apply, it will be specified in the question. Where the option other is given, please write your answer in the space provided. If the space provided is not enough, you can write your answer at the end of the page or at the side of the page and indicate the question number.

Part 1

As we try to make it easier for you to answer the questions, the questions will be displayed on the screen, and if things are not clear, we will explain it to you. Therefore, we'll answer the questions together as they are listed.

An example:

To Answer circle the correct number.

Sex

1 Male

2 Female

Section A: Background characteristics

First, we would like to ask you a few questions about yourself.

A1 What is your sex?

1. Male
2. Female

A2 Year of Birth _____

A3 Age in Years _____

A4 What is your religion?

1. Buddhist
 2. Catholic
 3. Non-Catholic Christian
 4. Hindu
 5. Islam
- Other (please mention) _____

A5 Marital status

1. Unmarried
 2. Married
 3. Separated
 4. Divorced
 5. Widow
 6. Unmarried and living together
- Other _____

A5.1 If you are married, at what age did you get married?

Age in years _____

A6 Do you have any children?

1. Yes
2. No

A6.1 If yes, how many children? _____

A7 Highest Education/Qualifications

1. Grade 8

2. O/L
3. A/L
4. Technical College/vocational training
5. Degree
6. Post graduate

A8

A8.1 What district are you from? _____

A8.2 How would you describe your home setting?

1. Urban
2. Rural

A9 What year did you first join the armed forces? _____

A10 Do you belong to the regular force or voluntary force?

1. Regular Force
2. Volunteer Force

A11 Which part of the military do you serve in?

Army (please select the correct option)

1. Infantry
 2. Armour
 3. Arty
 4. Engineers
 5. Signals
 6. Logistics
 7. Administration
- Other _____

Navy (please select the correct option)

1. Executive
 2. Patrolmen
 3. Engineering
 4. Comms
 5. Logistics
- Others _____

Air Force (please select the correct option)

1. Flying
 2. Regiment
 3. Logistics
- Others _____

A12 What is your rank?

1. Officer
2. Other ranks

A13 If you belong to other ranks, what is your designation?

Army (please select the correct option)

1. Private
2. Lance Corporal

3. Corporal
4. Sgt and above

Navy (please select the correct option)

1. Seaman
2. Able Seaman
3. Leading Seaman
4. Petty Officer and above

Airforce (please select the correct option)

1. Airmen
2. Leading Aircraftman
3. Corporal

A14 When you get a holiday, where do you spend your holiday most often?

1. Home
 2. With a friend
 3. With a relative
 4. In camp
- Other _____

A15 If you have ever served in a non-operational area, how often did you go home?

1. Daily,
 2. Weekly
 3. Fortnightly
 4. Once a month
 5. Haven't served in a non-operational area
- Other _____

A16 Have you ever worked in operational areas?

- 1 Yes
- 2 No

If you answered No, please stop answering until we instruct you to begin again

*If you have served in an operational area please answer from **A17** to **A24***

A17 Name the operational district that you are currently serving in.

If you are starting service in a new operational district please state the operational district that you served in before.

A18 State the time periods that you have served in this district

Year startedmonth.....
Year finished..... month

A19 During the last instance you were deployed to a non-operational area, how often did you go home?

1. Once a month
2. After 2-3 months
3. After 4-5 months

- 4. Once in 6 months
- 5. More than 6 months
- Other _____

A20 When you were moving to an operational area, what is the transit point that you use the most?
(Select only one or two answers)

- 1. Ratmalana
- 2. Trincomalee
- 3. Anuradhapura
- Other _____

A21 When you were going to your operational area, mention the general number of days you spent in the city where the transit point camp is situated.

- 1. Ratmalana – # of days _____
- 2. Trincomalee - # of days _____
- 3. Anuradhapura - # of days _____
- Other _____

A22 When you are returning from operational service, mention the general number of days that you spent in the city where the transit point is situated.

- 1. Ratmalana – # of days _____
- 2. Trincomalee - # of days _____
- 3. Anuradhapura - # of days _____
- Other _____

A23 When you come to the transit point city mentioned earlier, and if there are no means of transportation to get to your destination, where do you generally spend your time? (Rank 1 as place frequented the most, 2 less frequently than 1, 3 place frequented less than 2)

- Bus station
- Walking about town
- Friend's house
- Relative house
- Guest house
- Lodge
- Transit camp
- Camp situated close to city
- Not applicable
- Other _____

A24 When you go on operational duty, how long did you serve continuously?

- 1. Less than a month
- 2. 2-3 months
- 3. 4-5 months
- 4. 6 months or more
- Other

Everyone should start answering questions in section B, page # 8.

Section B: Knowledge about sex

Sexuality is a natural phenomenon, we shouldn't be shy about it. As responsible and intelligent adults, we should understand what sexuality is and face it. We are hoping that you would answer the questions in this section with this in mind. It is really important that you answer these questions thoughtfully.

B1 Name the three most reliable sources where you get information on sexual matters in order (e.g. most trustworthy 1, second trustworthy source 2, least trustworthy information source 3)

Books

Magazines

Booklets

Leaflets

Handouts.....

Television

Newspapers.....

Radio.....

Internet.....

Blue films

Partner

Friends

Peer groups

Colleagues.....

Government doctors.....

Private doctors.....

Awareness programs conducted for forces.....

Other awareness programs

Family member

Health care worker

Pornographic publications

I haven't heard or read about sexual matters

Other.....

B2 Do you exchange information about your sexual experiences with your friends?

1. Yes
2. No

B3 If you answered yes, do you think that this information is reliable or trustworthy?

1. Very reliable
2. Somewhat reliable
3. Not reliable
4. Not sure

B4 Do you have access to pornographic publications?

1. Yes
2. No

B5 Do you get the opportunity to watch blue films?

1. Yes
2. No

Section C: Sexually Transmitted Diseases

C1 Have you ever heard of STDs (example HIV/AIDS)?

1. Yes
2. No

If no – please stop answering here

C2 Name the most reliable sources where you get information on STDs in order (e.g. most reliable source 1, second most reliable source 2...)

Books

Magazines

Booklets

Leaflets.....

Newspapers.....

Handouts

Television.....

Radio.....

Internet.....

Partner

Friends

Peer

Colleagues

Family members

Health care workers

Government doctors.....

Private doctors.....

Pornographic Publications

Awareness programmes conducted for forces

Other awareness programs

Other.....

C3 Can a woman with an STD, have no symptoms?

1. Yes
2. No
3. Do not know

C4 In a woman, what are the signs of having an STD, these signs could be? (You can indicate more than one answer)

1. Abdominal pain
 2. Discharge from vagina
 3. Itching in genital area
 4. Burning or pain when urinating
 5. Pain during sex
 6. Open sores in genital area
 7. Swelling in genital area
 8. Blood in urine
 9. Can't urinate
 10. Weight loss
 11. Can't have children
 12. Don't know
- Other

C5 Can a man with an STD, have no symptoms?

1. Yes
2. No
3. Do not know

C6 In a man, what are the signs of having an STD, these signs could be? (You can indicate more than one answer)

1. Abdominal pain
 2. Discharge from vagina
 3. Itching in genital area
 4. Burning or pain when urinating
 5. Pain during sex
 6. Open sores in genital area
 7. Swelling in genital area
 8. Blood in urine
 9. Can't urinate
 10. Weight loss
 11. Sterility
 12. Don't know
- Other

Section D: Understanding of the HIV virus and AIDS, and other related issues

D1 Have you ever heard about the HIV virus or AIDS?

1. Yes
2. No

If no, please stop answering this section

D2 What is the relationship between the HIV virus and AIDS?

1. The HIV virus and AIDS is the same thing
2. There is no relationship between them
3. There is a relationship, but I don't know what it is
4. You can get AIDS from the HIV virus

D3 Name the most important sources where you get information on HIV virus/AIDS in order 1,2,3. (e.g. most important source 1, second most important source 2, and 3rd most important)

Books.....

Magazines

Booklets

Leaflets.....

Newspapers.....

Handouts

Television.....

Radio.....

Internet.....

Partner

Friends

Peer

Colleagues

Family members

Health care workers

Government doctors.....
Private doctors.....
Pornographic Publications
Awareness programs conducted for forces
Other awareness programs
Other.....

D4 In the recent past, with whom did you talk about HIV/AIDS? (If you have talked to more than one person, please select them.)

1. Wife
2. Girlfriend
3. Other female sexual partner
4. Homosexual partner
5. Friend
6. Family member
7. Health care worker
8. Colleague
9. Haven't talked to anyone
- Other

D5 What is the method used to detect an HIV/AIDS infection?

1. Urine test
2. Blood test
- Other.....

D6 How do you think that AIDS is transmitted from one person to another? (You may have more than one answer)

1. Eating food together with an HIV-infected person
2. Exchanging clothes with an HIV-infected person
3. Exchanging razors with an HIV-infected person
4. Using the same toilet as an HIV-infected person
5. Kissing an HIV-infected person
6. Using the same injection needles used by an HIV-infected person
7. Having sexual intercourse with an HIV-infected female
8. Having homosexual intercourse with an HIV-infected male
9. HIV-infected mother to her unborn child
10. From HIV-infected mothers milk
11. Receiving blood from an HIV-infected person
12. Coming into contact with blood from an HIV-infected person
13. Working with an HIV-infected person
14. Do not know
- Other

D7 Do you think that there are ways to avoid getting infected with HIV or the disease AIDS?

1. Yes
2. No
3. Don't know

D8 Write three ways you can protect yourself from getting HIV/AIDS?

- 1.....
- 2.....
- 3.....

D9 What's your most preferred source to get knowledge about HIV/AIDS from? (e.g. most preferred source 1, second most preferred source 2, and 3rd most preferred)

Books.....

Magazines

Booklets

Leaflets.....

Newspapers.....

Handouts

Television.....

Radio.....

Internet.....

Partner

Friends

Peer

Colleagues

Family members

Health care workers

Government doctors.....

Private doctors.....

Pornographic Publications

Awareness programs conducted for forces

Other awareness programs

Other.....

D10 Do you think that the chance of getting the AIDS virus can be reduced by using a condom correctly every time during sex?

1. Yes
2. No
3. Don't know

D11 Can the chances of getting the AIDS virus be reduced by having only one trusted sex partner?

1. Yes
2. No
3. Don't know

D12 Can the AIDS virus be transmitted from a HIV-infected mother to a child before childbirth?

1. Yes
2. No
3. Don't know

D13 If a mother is infected with the AIDS virus, is there any way to avoid transmission to the baby?

1. Yes
2. No
3. Don't know

D14 Can a healthy looking person be infected with the HIV virus?

1. Yes
2. No
3. Do not know

D15 Is there a permanent cure for HIV/AIDS?

1. Yes
2. No
3. Don't know

D16 If a person has the AIDS virus, is there anything he or she can do to control the symptoms of the disease and lead a relatively normal life?

1. Yes
2. No
3. Don't know

Section E: Attitudes regarding HIV-infected person

E1 Do you personally know anyone who has HIV or who has died from AIDS?

1. Yes
2. No

E2 If a member of your family became infected by AIDS, would you be willing to care for him or her?

1. Yes
2. No
3. Can't Say

E3 If a co-worker is infected by AIDS but is not sick, should he be allowed to continue working?

1. Yes
2. No
3. Can't Say

E4 If you knew that a shopkeeper or food seller is infected by AIDS, would you buy food or vegetables from them?

1. Yes
2. No
3. Can't Say

E5 If a member of your family became infected with the AIDS, would you want it to remain a secret?

1. Yes
2. No
3. Can't Say

E6 If your child's teacher is infected with AIDS but is not sick, should he or she be allowed to continue teaching in school?

1. Yes
2. No
3. Can't Say/no comment

E7 Are you willing to be tested for HIV/AIDS?

1. Yes
2. No

E8 If no, what is the reason?

1. There is no need to be tested
 2. You are afraid of being ostracized
 3. Afraid to face the truth
 4. Fear of your marriage breaking down
 5. Because I trust my sexual partner
- Other.....

Part Two

The questions in this section are very personal. The information you provide will remain anonymous and private and we do not want to know your identity. The purpose of this section is to collect accurate information about collective sexual behavior, which will help us to plan awareness program for you in the future. Therefore the information you provide in this section should be as truthful as possible. The awareness program planned for you will be successful only if they are based on accurate and honest answers. Please cooperate with us by providing honest answers to achieve this objective.

Section F: Alcohol and drug use

F1 Have you ever used alcohol?

1. Yes
2. No

F2 Do you get an opportunity to drink alcohol in your camp?

1. Yes
2. No

F3 Where do you drink alcohol?

1. Just after leaving the camp
 2. At home
 3. At friend's home
 4. At a party/celebration
 5. In a bar
 6. Within the camp
- Other.....

F4 Have you ever used ganja, madana modaka or babul [traditional drugs]?

1. Yes
2. No

F5 Have you ever used heroin?

1. Yes
2. No

F6 Do you inject heroin?

1. Yes
2. No

F7 Have you used ganja, madana modaka or babul [traditional drugs] at least once in the past 4 weeks?

1. Yes
2. No

F8 Have you used heroin at least once in the past 4 weeks?

1. Yes
2. No

Section G: Sexual behavior with a female

G1 Have you ever had sexual intercourse with a woman?

1. Yes
2. No

If no go to section H, page 27

G2 If yes, what is the age when you first had sexual intercourse?

Age in years.....

G3 With whom did you have sexual intercourse with for the first time?

1. Present wife
 2. With present wife before marriage
 3. With person you are living with
 4. Girlfriend
 5. Friend
 6. Female relative
 7. Prostitute
 8. Casual acquaintance
- Other.....

G4 Did you use a condom in your first sexual encounter?

1. Yes
2. No
3. Can't remember

G5 Did you use a condom in your last sexual encounter?

1. Yes
2. No
3. Can't remember

G5.1 Have you ever used a condom?

1. Yes
2. No

G5.2 If you don't generally use a condom, what are the reasons for not using a condom?

Mention the most important 3 reasons in order 1, 2, 3

Expensive

Not available in every store

Not available when you need it

Reduces the pleasure

There is no purpose in using it

The shop is full of people, so I can't ask for it

You don't know how to use it

Shy to purchase it

Other.....

G5.3 If you have ever used a condom what are the reasons? (Could be more than one answer, please select)

1. To stop wife from getting pregnant
2. To stop girlfriend from getting pregnant

3. To stop the person who other than your girlfriend or wife, from getting pregnant
 4. To stop from being infected by STDs
 5. To stop from getting STD when having a sexual relationship with a prostitute
 6. At our partners request
- Other

G6 From where do you get condoms? (Could be more than one answer) Rank 1 as place where you purchase condoms the most, 2

- Public health care worker
- STD clinic
- Medical officer
- Military camp
- Family health worker
- Nurse
- Familiar shop or pharmacy
- Shop that is not familiar
- Pharmacy not familiar
- Friend
- Bar
- Hotel
- NGO
- Other (specify)

G7 From where do you prefer to get/buy condoms? (Could be more than one answer, 1 as place that you most prefer)

- Public health care worker
- STD clinic
- Medical officer
- Military camp
- Family health worker
- Nurse
- Familiar shop or pharmacy
- Shop that is not familiar
- Pharmacy not familiar
- Friend
- Bar
- Hotel
- NGO
- Other (specify)

G8 Does your camp have free condom boxes, from which you can obtain condoms?

1. Yes
2. No

G9 When you leave the camp do you take condoms from the boxes provided?

1. Yes
2. No

G10 If no, Please select the reason.

1. Because others will see you taking them
 2. Because you don't need them
 3. They are expired, and you think they are useless
- Other

G11 Does the partner you last had sex with have other partners?

1. Yes
2. No
3. Don't know

G12 How many female sexual partners did you have in the last 12 months?

G13 Do you use alcohol as a sexual stimulus?

1. Yes
2. No

G14 Did you use alcohol when you last had a sexual encounter?

1. Yes
2. No
3. Can't remember

G15 Do you use drugs as a sexual stimulus?

1. Yes
2. No

G16 Did you use drugs when you last had a sexual encounter?

1. Yes
2. No
3. Can't remember

G17 In your last sexual encounter, did you use anything to prevent or delay pregnancy?

1. Yes
2. No

G18 If yes, what are the methods you used?

1. Used condoms
 2. Postinor pills
 3. Used birth control Pills
 4. Female was using a Loop
 5. Female had gotten the birth control injection
 6. Withdrawal (explained)
 7. Female partner has undergone sterility operation
 8. You have undergone sterility operation
 9. Rhythm
- Other.....

G19 What are the factors that control your sexual behavior?

1. Teachings in my religion
 2. Fear of STDs
 3. Fear of HIV/AIDS
 4. Cultural and social values
 5. Bond between you and your wife and your family
 6. Fear of the law
- Other.....

G20 What are the factors that promote your sexual behaviour?

1. Influence of your friends
 2. Stress from my job
 3. Easy access to prostitutes
 4. Opportunities that I get
 5. Even though I'm married, the limitations that are present in the normal family life
 6. Influence of using alcohol
 7. Influence of drugs
- Other.....

*If you are presently married or divorced, please answer these questions. If you are single, please go to **section H on page 28**.*

G21 When did you last have sexual relations with your wife?

1. Within the last week
2. Before 1 week
3. Before one month
4. Between 2-3 months
5. Before 6 months
6. Between 6 months and 1 year
7. Before 1 year

G22 Did you use a condom in the above instance?

1. Yes
2. No
3. Can't remember

G23 Did you have sexual encounters before marriage?

1. Yes
2. No

If no, go to G26

G24 With whom did you have those relationships? You can give more than one answer.

1. Present wife
 2. Person with whom you are living together with
 3. Girlfriend
 4. Friend
 5. Female relative
 6. Prostitute
 7. Someone that you know
 8. Casual acquaintance
- Other.....

G25 Did you use condoms in those instances?

1. Yes
2. No
3. Sometimes

G26 Have you ever had sex with someone who is not your spouse while you were married?

1. Yes
2. No

*If the answer is no, go to **Section H on page number 28***

G27 If the answer is yes, who was that person? You can give more than one answer.

1. Partner whom you did not marry but you were living together with
2. Girlfriend
3. Friend
4. Female relative
5. Prostitute
6. Someone that you know
7. Casual Acquaintance
- Other.....

G28 Did you use condoms in the instances above?

1. Yes
2. No
3. Sometimes

G29 When was the last time that you had sexual relations with someone who is not your wife?

(Select only one answer)

1. Within the last week
2. Before a week
3. Before a month
4. Between 2-3 months
5. Before 6 months
6. Between 6 months and 1 year
7. Before 1 year

G30 Did you use a condom in that instance?

1. Yes
2. No
3. Can't remember

Section H: Homosexual relationship with a male

H1 Have you ever had a homosexual relationship?

1. Yes
2. No

*If the answer is No, go to **Section J, Page 29***

H2 If the answer is yes, how many partners did you have in the last 12 months?

1. Did not have any partners
2. Only one
3. Only 2
4. More than 2 (please write.....)

H3 Did you use a condom in when you had homosexual relationship in the last 12 months?

1. Always
2. Sometimes,
3. Did not use

H4 If you did not always use condoms in your homosexual relationships what are the reasons?
(Could be more than one answer)

1. Because you won't get infected with STD and HIV/AIDS
2. Because the risk of getting pregnant is not there
3. It reduces pleasure
4. Because the partner does not like it
5. Other.....

H5 In your last homosexual encounter, did you use a condom?

1. Yes
2. No

H6 Does your homosexual partner (or partners) within the last 12 months, serve with you?

1. Yes
2. No

Section J: Sexually transmitted diseases

J1 Have you been circumcised?

1. Yes
2. No

J2 If you found out that you are infected with HIV what would you do? (Could be more than one answer)

1. Keep it as a secret
 2. Inform only the wife and family members
 3. Resign from duty
 4. Seek medical advice
- Other.....

J3 If you found out that you are infected with HIV, what would your relationship with your sexual partners be?

1. Seek medical advice
 2. Use condoms and engage in sexual activity
 3. Won't use condoms, but engage in sexual activities
 4. Stop all sexual activities
 5. Live separately
- Other.....

J4 Do you think that a woman should have the freedom to buy condoms?

1. Yes
2. No
3. No idea

J5 If you thought that you had an STD, what are the measures you would take to protect your partner from it?

J6 During the last 12 months, did you notice any signs or symptoms in your genital area?

1. Yes
2. No

If no go to J15

J7 In the last 12 months, was there a genital sore?

1. Yes
2. No

J8 In the last 12 months was there a genital discharge?

1. Yes
2. No

J9 If yes, did you inform your sexual partner?

1. Yes I informed
2. I did not inform
3. I did not have a sexual partner at that time

J10 When you had the genital discharge or sore did you stop having sex when you had the symptoms?

1. Yes
2. No
3. Can't remember
4. Not relevant

J11 When you had the genital discharge or sore did you use a condom when having sex?

1. Yes
2. No
3. Not relevant

J12 When this happened, did you seek any kind of advice or treatment?

1. Yes
2. No
3. Can't remember

If no, go to J15

J13 From where did you get advice or treatment?

1. Government hospital
 2. Private Hospital
 3. Private doctor
 4. Military hospital
 5. Health officer
 6. Ayurvedic doctor
 7. Pharmacist
 8. Friend or relative
 9. Treated myself
- Other

J14 How long after first experiencing symptoms did you seek advice from a health worker in a clinic or hospital?

1. As soon as I saw the symptoms
2. A week or less than a week
3. More than 1 week but less than 1 month
4. 1 month or more
5. Don't remember
6. Did not seek medical attention

J15 In the past 12 months, have you been diagnosed as having STDs?

1. Yes
2. No

Section K: Attitudes regarding HIV infected persons

K1 From where can you get a blood test done to test yourself for HIV/AIDS? (Could be more than one answer)

1. Military hospital/clinic
 2. Pharmacy
 3. Military camp
 4. STD clinic
 5. Private hospital
 6. Field assistant/officer?
 7. Do not know
- Other.....

K2 If you are infected with HIV/AIDS from where can you get treatment?

1. At home
 2. Gov hospital
 3. Private hospital
 4. Ayurvedic hospital
 5. Specialized treatment centers
- Other.....

K3 Have you had a blood test for HIV/AIDS?

1. Yes
2. No

K4 If yes, give the reason. (If you haven't been tested, go to **K7 page 33**)

1. You decided to be tested on your own
 2. You were going to serve with the UN forces
 3. Because you were going to travel overseas
 4. A doctor recommended
 5. After a suspicious sexual encounter
 6. Because you experienced symptoms
 7. You suspect that your partner has HIV/AIDS
- Other

K5 Have you been told the results?

1. Yes
2. No

K6 Whom did you tell the test results?

1. Wife
 2. Girlfriend
 3. Female Sex partner
 4. Homosexual partner
 5. Friend
 6. Family member
 7. Health care worker
 8. Colleague
 9. Did not tell anyone
- Other.....

K7 Would you want to be tested again for HIV in the future?

1. Yes
2. No
3. Can't tell

L section: Regarding service in Haiti

L1 Have you served in Haiti?

1. Yes
2. No

L2 The time period you served in Haiti.

Month and year of departure.....

Month and year of return

L3 Were you tested for HIV/AIDS before you left to serve in Haiti?

1. Yes
2. No

L4 After your return, how many times were you tested for HIV/AIDS?

1. Not even once
 2. Once
 3. Twice
 4. Three times
- Other.....

L5 Did you have any sexual encounters with a female while you were in Haiti?

1. Yes
2. No
3. Sometimes

L6 If the answer is yes, with how many partners? Number.....

L7 Did you use condoms when you had sexual relations in Haiti with a female?

1. Yes
2. No
3. Sometimes

L8 If the answer is yes, from where did you get them?

1. Bought in Haiti
2. Given free from your military base
3. From friends
4. Bought in Sri Lanka and brought to Haiti
5. Other

L9 Did you have any homosexual relationships when you were in Haiti?

1. Yes
2. No

L10 If the answer is yes, with whom did you have those relationships?

1. With Sri Lankans
2. With foreigners

L11 Did you use condoms?

1. Yes
2. No
3. Sometimes

L12 If the answer is yes, from where did you get them?

1. Bought in Haiti
 2. Given free from your military base
 3. From friends
 4. Bought in Sri Lanka and brought to Haiti
- Other

Thank you providing your answers.

APPENDIX 3: Additional questions about risky sexual behaviour

Have you had sexual intercourse in the last 12 months? Yes/No

In the past 12 months, did you ever pay for sex?

Yes

No

How many commercial sex partners did you have in the past 12 months? _____

How often did you use a condom with a commercial sex partner in the past 12 months?

Every time

Sometimes

Never

Don't Know

In the past 12 months, did you have sexual relations with a casual sex partner or girlfriend (that you do not live with)?

Yes

No

How many of these casual sex partners (girlfriends) have you had in the past 12 months?

How often did you use a condom with casual sex partner (or girlfriend that you do not live with) in the past 12 months?

Every time

Sometimes

Never

Don't Know