HIV/AIDS knowledge, risk behaviour and the prevalence of STIs among MSM in the district of Anuradhapura, Sri Lanka

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1. INTRODUCTION

Sri Lanka could manage to remain as a one of the low prevalent countries in South-East-Asia even after two decades of HIV history. It is unlikely that Sri Lanka will develop a generalized HIV epidemic, but concentrated HIV epidemics among female sex workers (FSW), Men who have Sex with Men (MSM) and their sex partners cannot be ruled out with precision. Insufficient focus on MSM was identified as one of the major gaps in the 2006 external review of the National Programme.

Country Statistics

Category	Value
Land area	62,705 Sq km
Population	20 million
Year of first HIV case reported	1987
Cumulative number of HIV cases reported at the end of 2008	1,059
Estimated number of HIV cases	3,800
HIV sero-positivity rate	0.03%

2. METHOD

Cross sectional study was carried out by using an interviewer administered questionnaire for 225 MSM, recruited by Respondent Driven Sampling Technique (RDS) from a population of men who had anal sex with another in the past twelve months in the urban area of the Anuradhapura district. The study was carried out during the period from 1st February 2008 to 31st July 2008. Data were analysed by using the statistical package for respondent driven sampling technique RDSAT v6 and SPSS v13.

Study Setting

Category	Value
Study area	Anuradhapura District
Land area	6,664 Sq km
Percentage land area	10.63%
Population	809,000
Cumulative number of HIV cases reported at the end of 2008	19

1.1. GENERAL OBJECTIVE

To determine the HIV/AIDS knowledge, risk behaviour, and the seroprevalence of sexually transmitted infections among Men who have Sex with Men (MSM) in the district of Anuradhapura, Sri Lanka.

1.2. SPECIFIC OBJECTIVES

1. To describe the socio-demographic characteristics of MSM.

2. To determine the level of knowledge and attitudes about HIV/AIDS.

3. To determine the level of HIV risk behaviour among study group such as unprotected anal intercourse and condom use.

4. To determine the seroprevalence of Syphilis, HIV, Hepatitis B and Herpes simplex type 2 infections and prevalence of major symptoms/signs of sexually transmitted diseases such as genital or anal discharge, genital or anal ulcer, scrotal swelling, genital or anal growths.

2.1. DATA ANALYSIS

Data were entered initially to SPSS v13 then imported to RDSAT (Respondent Driven Sampling Analysis Tool).

For descriptive and inferential statistics, sample was analysed by using RDSAT to calculate SPP, EPP, ESD and confidence intervals

Sample population proportion (SPP)
This is calculated by dividing the number of respondents with the property of interest by the total sample size. It represents the estimation that might be found in a regular chain referral sample .

Estimated population proportion (EPP)
These are the proportion estimates calculated using RDSAT. If all of the RDS assumptions and requirements are met, it represents the characteristics found in the target population.

Equilibrium sample distribution (ESD)
The ESD is an estimate of the sample proportion at the time of convergence. It is the state whereby limited sample variation (within 2%) will occur no matter how many more waves are recruited.

3. RESULTS

Response rate and coverage: were 100%
Network size: self reported median network size was 10 (mean=46.4, SD=91).

3.1. Socio-demographic Characteristics:

3.1.1. Age distribution:
Sample was predominantly a young sample and mean age was 26 years (95%CI=25.1-26.9),

3.1.2. Marital status:
Marriage seems to be uncommon, 69.3 % of them were single, while 25.8 % were married.

Table 3.1:
Shows distribution of socio-demographic factors in the sample

Table 3.1
Socio-demographic characteristics

Variable	Category	Frequency	Percent (%)
Age	18-22	87	38.7
	23-27	66	29.3
	28-32	40	17.8
	33-37	14	6.2
	38-42	10	4.4
	43-47	4	1.8
	> 48	4	1.8
Marital status	Single	156	69.3
	Living together	8	3.6
	Married	58	25.8
	Divo/Sep	3	1.3
Ethnicity	Sinhalese	212	94.5
	Sri Lankan Tamil	1	0.5
	Moor	12	5.1
Religion	Buddhist	206	91.6
	Christian	6	2.6
	Islam	12	5.3
	Hindu	1	0.4
Ability to read and write	Yes	221	98.2
	No	4	1.8
Level of Education	Preschool	2	0.9
	Primary	7	3.1
	Year 6-10	64	28.4
	Ordinary Level	106	47.1
	Advanced Level	43	19.1
	Higher Education	3	1.2
Employment Status	Not employed	58	25.8
	Part time or casual	90	40.0
	Full time	77	34.2

3.2. Knowledge on HIV/AIDS

Almost all 99.1% had heard of HIV. Response to all five UNGASS knowledge question showed that level of knowledge was poor among the group of <25years and >=25 years and it was 5.2% and 9.2% respectively

3.3. Attitudes about HIV/AIDS

This group had more stigmatizing attitudes towards people living with HIV, they didn't like to live (51.1%), work (47.1%) buy foods (57.9%), and accept for sending an asymptomatic student to school (30.9%). However, majority like to give care for a sick relative with HIV (81.6%)

3.4. HIV risk behaviour

3.4.1. First sexual behaviour
Mean age at first sexual intercourse was 17.8 years (Mdn=18 years, SD=3.2 years). First sexual partner was a male in 53.3% of them. It has been shown that 10.8% of MSM in the age group 20-24 had their first sexual intercourse before the age of 15 years.

3.4.2. Condom use: Condom use with first sexual intercourse was significantly low (22.2%).

3.4.3. Sexual intercourse with male partners
Majority were insertive partners (94.2%) while 28% were receptive and 22.2% were both, they had mean number of 1.7 (Mdn=1, SD=2.5) regular partners and 6.9 (Mdn=3, SD=21.1) non regular partners during the previous year (Graph 3.1).

3.4.4. Sexual intrcourse with female partners
MSM were bisexuals, 85.8% of them had sexual intercourse with female partners during last 12 months. They had mean number of 1.05 (Mdn=1, SD=0.26) regular partners and 4.8 (Mdn=3, SD=6.7) non regular partners during the previous year (Graph 3.1).

Graph 3.1
Mean number of partners with whom participants had sexual intercourse in the previous 12 months
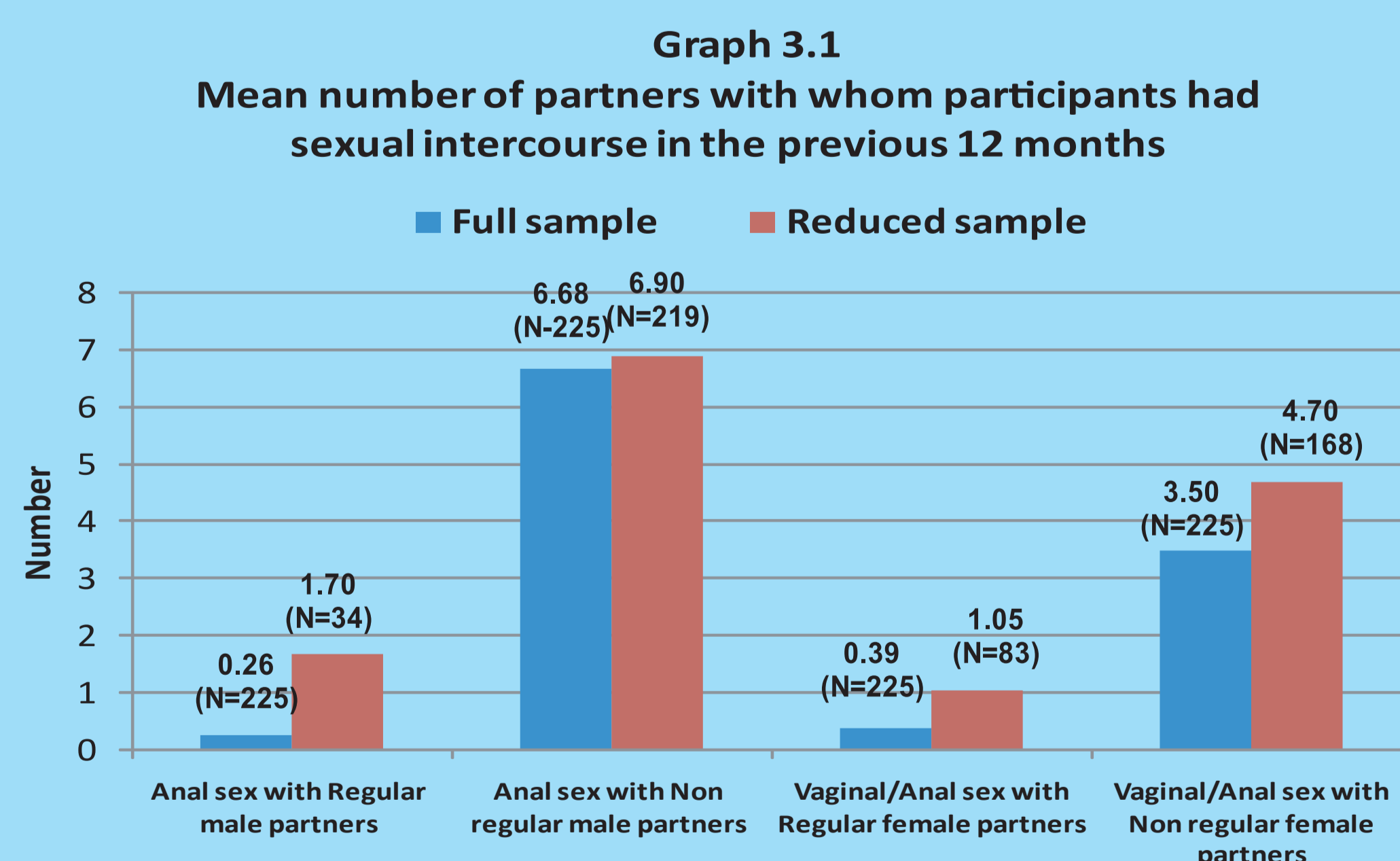
3.4.5. Condom use with male partners:
Consistent condom use was 26.5% with regular partnersand 15.1% with non regular partners during the previous year (Graph 2) . Lubricant use was uncommon in this group (10.6%).

3.4.6. Condom use with female partners:
Consistent condom use for vaginal sex was 2.4% with regular partners and 20.8% with non regular partners during the previous year (Graph 3.2)

Graph 3.2
Condom use by different types of sex and partner in the previous 12 months
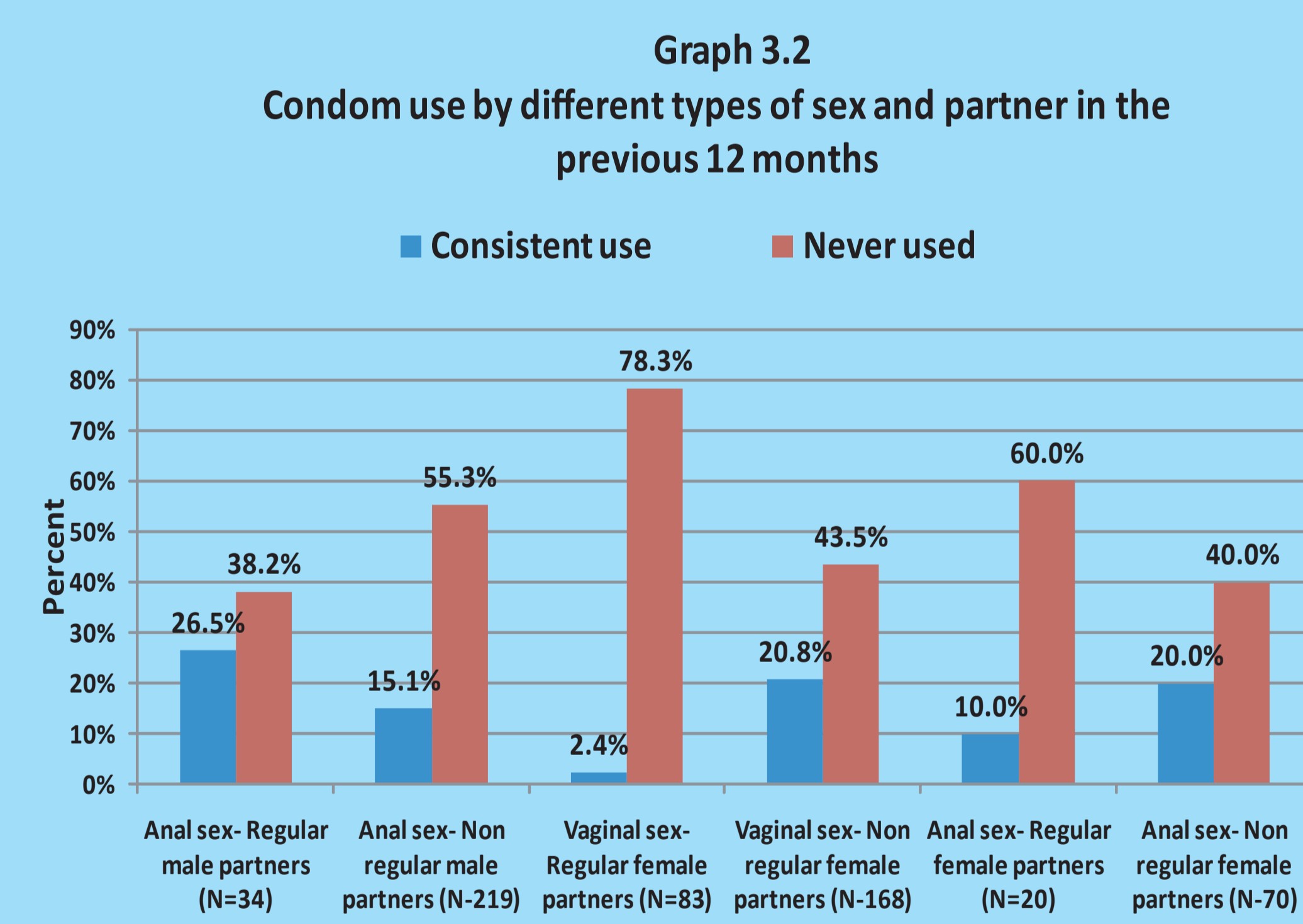
3.5. Sexually transmitted infections (STIs)

Only 11.1% (95%CI=3.1-10.6) had ever experienced symptoms of STI. During the previous 12 months, Urethral discharge (3.6%), genital warts (2.7%) and genital ulcers (2.2%) were the common.

Table 3.2: shows results of STI screening tests performed on 194 collected samples of serum.

Table 3.2
Sero-prevalence of sexually transmitted infections (N=194)

	Frequency	SPP (%)	ESD (%)	Prevalence estimate (95%CI)
HIV antibody detection by ELISA	0	0	0	--
VDRL	4	2.1	1.7	3.7 (0.0-10.3)
TPPA	4	2.1	0.7	0.4 (0.0-1.4)
HBsAg	0	0	0	--
HSV type 2 antibody detection	14	7.2	5.5	4.4 (2.3-8.7)

Categories are not mutually exclusive, SPP=Sample population proportion, ESD=Equilibrium sample distribution

4. CONCLUSION

Majority of MSM were unmarried, young, Sinhalese who have low level of HIV knowledge and stigmatizing attitudes towards PLWHA. Although they have low level of condom use and substantial amount of HSV 2 antibody prevalence, they have low level of partner exchange rate in multifocal limited wave networks. that may be the reason for low level of HIV prevalence among MSM. However, potential for the HIV epidemic cannot be ruled out.

9th ICAAP, BALI, INDONESIA 2009

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