Community Action for Preventing HIV/AIDS — ADB/JFPR 9006

Country Report — Cambodia

Baseline Surveys & Assessments for Monitoring and Evaluation

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Contents of Report

1. Introduction

National HIV/AIDS programmes world wide comprise a variety of interventions or actions aimed at reducing spread of HIV, providing care & support to the affected and alleviating socio-economic and human impact [1]. Resources are always limited, and being able to decide which interventions are most appropriate and cost-effective (and thus to be given highest priority) is of critical importance. Different types of trials or operational research have been used to demonstrate effects of a given intervention conducted in a particular setting (efficacy). The "gold standard" for determining the efficacy of specific interventions is randomised controlled trials (RCT). A RCT gives information about effects of interventions under trial conditions, and these effects might differ substantially when implemented as programs, i.e. the effectiveness of the intervention. Effectiveness studies are still few since they are requiring prospective approaches. However, the effectiveness of HIV prevention is influenced by the local epidemiological context, i.e. the stage of the epidemic, risk and its distribution in different population groups [2]. Furthermore, both the cultural and socio-economic contexts influence the distribution of risk, and the sharp contrasts in risk distribution world wide makes assumptions of globally relevant approaches very questionable.

A framework for the monitoring and evaluation of HIV programs has been developed [3-4]. Systems of monitoring and evaluation trying to employ this framework are evolving in many countries (especially as a response to the newly mobilised international funds). The potentials of these systems, if carefully designed, are among others to better analyse the effectiveness of different prevention programs. The prerequisite is that information on inputs and outputs of various components of programs are collected prospectively. Since the application of this type of system has been very limited in the past, there are few data to demonstrate the extent to which actual changes resulted directly from particular programs implemented.

The "Community Action for prevention of HIV/AIDS Project" in Cambodia, Laos and Vietnam for the period 2002-2004 was established to support a comprehensive set of HIV prevention activities in strategically important areas. Furthermore, to strengthen the capacity of national and local HIV authorities and selected NGOs to develop community-based prevention and care programs [9]. This report will focus on the development of instruments for monitoring and evaluation and their actual use.

The epidemiological context in Cambodia

From HSS and BSS, and other publications, Cambodia is one of the few countries in South East Asia where the major route of transmission is through heterosexual contact [1]. The 2002 report based on HIV sentinel surveillance (HSS) concludes that incidence started to decline already around 1995 and with a substantial decline among men and later among women [6]. The estimated overall HIV prevalence dropped from 3.3% in 1997 to 2.6% in 2002, and the contributions to this drop was both a decline in incidence and increasing mortality. However, the HIV prevalence is still high among sex workers: direct sex workers (DFSW) 28.8%, down from 42.6% in 1998, indirect sex workers (IDFSW) 14.8%, down from 19.2% in 1998). A parallel decline in sexually transmitted infections (STI) has been found [7]. The HIV prevalence showed stability among antenatal clinic (ANC) attendees at a level of 2.8% since 1998 [6]. The geographical distribution of ANC-derived prevalence rates is showing an association between high prevalence rates the closer the distance is to the boarder of Thailand [6].

Significant and rapid changes in risk behaviours have been given as the major explanations to these declines in the spread of HIV in Cambodia [6, 8]. This is documented through behavioural sentinel surveys (BSS) conducted among different population groups and in the general adult population. They are indicating reductions in the proportion of men having sex with sex workers together with rising condom protection among both sex workers and their clients. The data suggest that the main transmission routs (from the very beginning) occurred from sex workers to male clients and later from the clients to their regular partners or other casual partners. A change over time in the relative importance of routs of transmission is likely to have taken place [8]. As a result of effective reduction in transmission from sex workers to their clients, new transmissions are now more likely to occur from husband to spouse, male from wife, or male to other casual partners (mistresses). Continuous surveillance of risk distribution and their determinants is of great importance.

2. Results from initial work done for the preparation of a focused paper

It was decided to initiate writing a focused paper in an international journal, see the draft abstract below being prepared on the basis of preliminary analyses.

Draft abstract

Objectives: To study HIV risk behaviours among sub-population groups, linkages to bridge populations, and to examine factors affecting such behaviours and links.
Methods: Ten different population groups in four provinces in Cambodia were selected and surveyed. The population groups included were: direct and indirect commercial sex workers (DCSW and IDCSW), males and females in the general population, i.e. at household level and among youths in vocational training, and some assumed high-mobility male groups (fishermen, tuk tuk drivers, police, military, casino workers and deminers. Stratified random cluster sampling was employed for all groups, and interviews were conducted to collect information on socio-demographic characteristics, mobility, risk behaviours and exposure to services.
Results: Contrasts in links to SWs appeared within the different male groups: in the high-mobility category 20-51% reported to have had such sex links during the past year, whereas between 5-10% in the other male groups. Contrast were less evident regarding levels of other non-regular sex, and the pattern in terms of regular condom use was closely the same across groups: consistently very high levels when sex with SWs, and significantly lower when sex with other non-regular partners. However, a relatively low proportion stated “condoms are available when needed” (ranged between 16- 65%). High mobility, i.e. on travel >1month last year, appeared as a consistent determinant of high risk behaviours across groups, i.e. either reporting sex with sex worker or reporting a high number of non-regular partners (adjusted OR ranged between 1.7-3.5 for sex with SWs). The female groups representing the general population did not report casual sex or having used condoms, although they “had their boyfriends”. As many as 41% of the married women surveyed at the household level were worried about “being infected by their husbands”.
Conclusions: HIV surveillance has shown HIV prevalence among SWs and at a level of about 2.6% in the adult population. Although SWs might still act as significant bridge as transmitters of HIV to the general population, other casual sex or regular sex might becoming more important due to the relatively low condom use and apparently

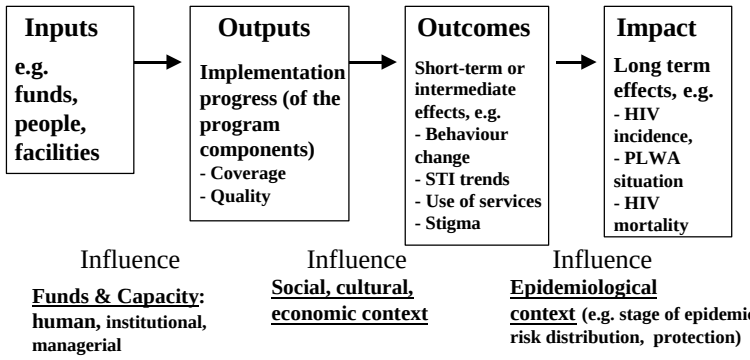
limited condom availability in such acts. The high mobility among males appeared to have a significant effect on risk behaviours.

3. A framework for monitoring and evaluation

Important clarifications were made during the 1990s regarding a useful framework for planning, monitoring and evaluation of national HIV/AIDS programs [2]. The framework applied here is illustrated in Figure 1. Available funds, human capacity and facilities will influence the outputs of and intervention, i.e. outputs are telling the story about what was implemented such as the coverage of the services (communities and population groups reached) and their quality. A preventive implementation can be considered to have an immediate outcome in terms of change in risk behaviours. It might also have a consequent impact on the HIV transmission measured by incidence. The social, cultural, economic context is postulated to influence the immediate effect, and they can thus be expected to differ from one population group to another depending on differences in opportunities, vulnerabilities or attitudes. Accordingly, HIV preventive programs will have to address unfavourable socio-economic conditions.

Significant outcomes could imply significant impact, but it is not necessarily the case. Whether or not an outcome translates into an impact depends on the epidemiological context. The relations between these two measurement levels of effects are not considered to be linear [2]. If the implementation was targeted at the wrong population group we can expect that a significant outcome will translate into a minimal impact. For example a substantial increase in condom distribution/use might have little impact on transmission of HIV until condom use is reaching very high

Figure 1. A framework for monitoring, evaluation of HIV programs: indicator levels and contextual factors



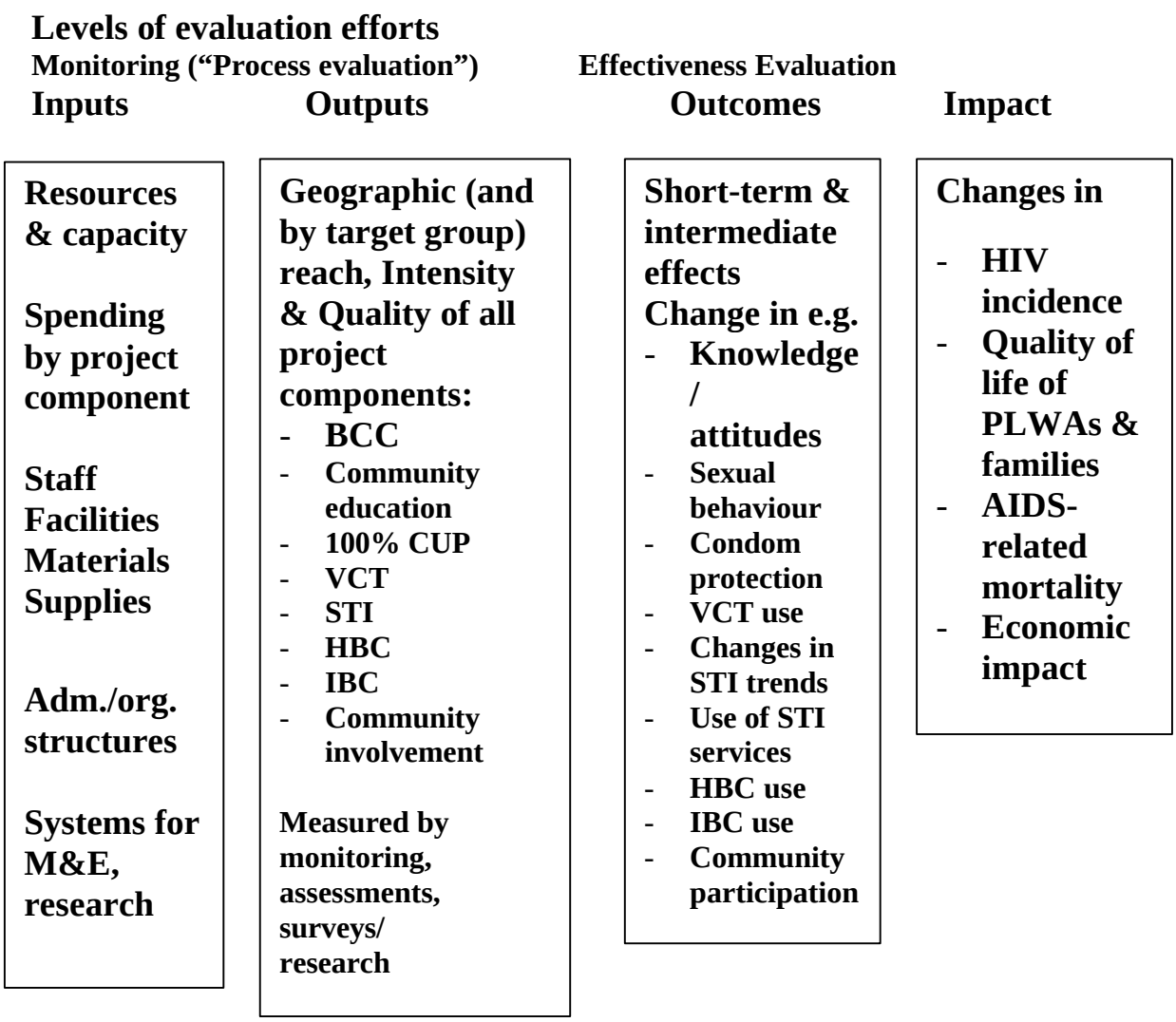
levels in sexual high risk partnerships. Thus, one should be careful in implementing preventive interventions only based on results from outcome measurement and not impact.

The importance of using different levels of indicators that corresponds to input, output, outcome and impact, for the monitoring of national HIV programmes has been clarified [4]. This clarification is based on observation of many different HIV epidemics of divergent magnitude and progress. The development of a second generation HIV surveillance has for example been crucial in providing a more proper basis for measuring outcome and impact related to preventive efforts [5].

Figure 2 gives more examples on levels of evaluation efforts relevant to the actual programme "Community Action for Preventing HIV/AIDS Project in Cambodia, Lao and Vietnam", see the illustration of project components below. The main role of monitoring and evaluation of national HIV/AIDS programs is primarily to measure the more generalised success. With a conglomerate of interventions being implemented simultaneously they will necessarily have overlapping effects. This makes the evaluation of the effects of single interventions rather tricky and often impossible. Any programme will have limited resources to put into monitoring, evaluation and research. The implication is that we are challenged to select only few, simple, robust and powerful indicators. "Powerful" is here given at least two different meanings. Firstly, that we are referring to indicators that can give the necessary information with regards to what is considered the core elements of the programme. Secondly, selected core indicators will be powerful per se - simply since they are measured and thus determine the focus of any discussion of "failure or success".

M&E systems should be dynamic and serve many purposes. The establishment of baseline values for indicators and their determinants etc. means to conduct surveys and particular assessments. This means to generate new knowledge to guide priority setting, e.g. HIV spread, distribution of risks and their determinants, capacity/quality of services (baseline surveys/assessments). Another element is the monitoring of progress of implementation (process evaluation): to know what actually is implemented, "who are reached" and the quality. This is leading to the evaluation of effectiveness: 1) measuring "final" effects for the period (outcomes & impact), 2) to be related to "what was actually implemented".

Figure 2. Illustration of levels of evaluation efforts: the Community Action for HIV/AIDS prevention project.



4. Identification of core indicators and their measurement

The emphasis here will mainly be on output and outcome indicators:
The data system for providing the necessary information for evaluation are: i) behavioural surveys among different groups covering the geographic areas together with behavioural surveys and HIV sentinel surveys conducted as part of the national surveillance system; ii) continuous monitoring of activities within all program components; iii) assessments of services. The surveys and the particular assessments are to be repeated at the end of the program period.

Information on how the various program components are progressing (outputs):
Table 1 gives an overview of what has been selected as core indicators (and their baseline values taken from the assessments conducted) as based on information that can be related directly to program components, i.e. to tell the he story about progress of each component of the intervention. This information is collected by combining the continuous monitoring of activities with the detailed assessments of services at baseline vs. repeat. It should be noted that the conducted assessments of services are

far more detailed than captured by the few indicators given in the table. Since the effects of single program components are overlapping, the established indicators by component will not be possible to link directly with single indicators of outcome.

Core indicators of short-term/intermediate effects (outcomes):
Indicators on risk comprise mainly the proximate determinants of HIV transmission need to be properly measured, e.g. the probability of transmission per sex act (condom protection and occurrence of STIs), and the chance of at risk contacts (rate of sexual partner change, sexual mixing pattern, commercial sex worker contacts). An overview of all the core indicators selected is given in Table 2. This selection was done based on the results from the baseline surveys. Few indicators were found to be needed on knowledge about HIV since a high level was already achieved in this regard. Furthermore, for the risk indicators had to differ by population group being surveyed. This is seen from Table 3 which is presenting the baseline values for each indicator and population group.

Indicators of impact:
Mainly markers of incidence (derived from HSS: as change in prevalence in age group 15-24, see baseline for main groups in Table – will be generated for the 4 provinces (for trend assessment), but sample sizes are too small for studying changes in prevalence buy province.

5. References

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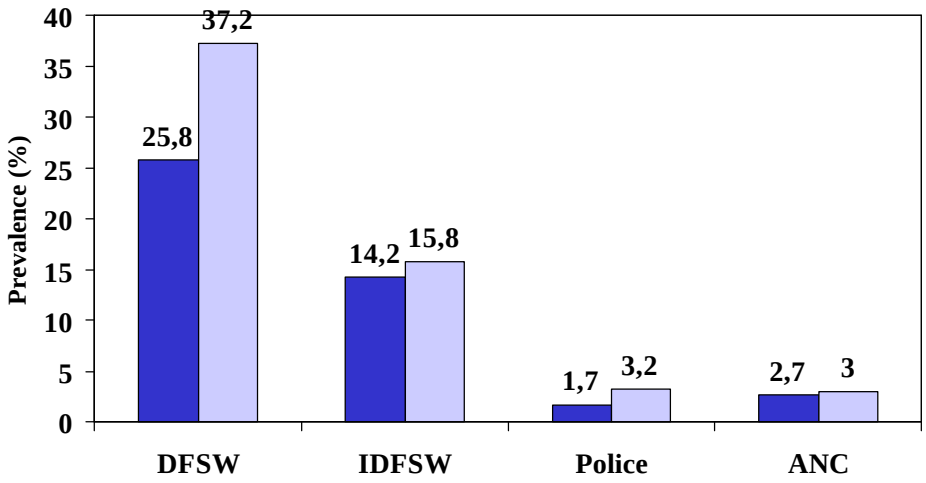
Figure 3. Crude prevalence of HIV among sentinel groups in Cambodia, 2002



Age-group 15-24 versus 25-49

Examples showing useful further analyses:

I) Sexual mixing patterns based on household survey among men in 3 provinces (giving % of such link or response)

Sexual partner	**All respondents**	**Married**	**Not married**
SW (past year)	5	4	7
Mistress sex past 3 months	7	2	17
Both SW and Mistress	2	1	4
SW or Mistress	11	5	20
No sex ever			
Age-group			
15-19	94	33	96
20-24	49	4	80
25-29	11	0	53
30-39	2	0	21
40-49	0	0	0

II) Results from logistic regression analysis to estimate the independent effect of mobility after adjustment for marital status, age and educational attainment

Variables in the model	**Independent variable: SW or Miss** **OR**	**SW** **OR**	**Mistress** **OR**	**>=2 sex partners (Yr)** **OR**
Mobile	2.1	1.6	3.6	1.9
Married	0.12	0.36	0.05	0.35
Age: 15-19/else	0.31	0.31	0.21	0.3
Years of schooling: <7/>6)	1.5	1.7	1.5	2.2

Table 1. Project components and information/indicators based on continuous monitoring of activities (MO) and assessments of services (AS).

Project components	Information collected by source – and baseline values of some core indicators
BCC	**MO:** N of TV broadcasts, N of Radio broadcasts, N of Campaigns by target groups, Type and number of materials produced. Idea: assess media outputs?
Peer & Community education & outreach	**MO:** N of PEs trained, N of community groups trained, N of outreach target groups reached. What can be measured based on Established Guidelines?
Condom distribution	**MO:** Sales (N), Outlets (N), Distributed (N), N of 100% CUPs launched, N of CUMEC meetings.
VCT	**MO:** Establishments (N), staff trained (N), N of clients. **AS:** Baseline values: N of facilities: 3; N of lab tech.: 10; N of counsellors: 10; N of clients pre-test vs. post-test counselled past 3 months: 695 vs. 648. Quality of counsellors and laboratory technicians: criteria established and used in the baseline assessment.
STI	**MO:** N of upgrades, N of staff trained & N of refreshers, N of clients **AS:** Drug supply (baseline values of stock-out >1 week in the last 6 months established at various levels) Indicator on client advice: Clients (at HCs) advised properly on condom use (baseline: 47%) and partner notification (baseline value: 67%) by all clients. Quality: Clients diagnosed and treated correctly according to standards: baseline values established
Home-based care	**MO:** Teams established (N), team members trained (N), N of clients. **AS:** % of team members trained according to standards (baseline: 50%) % of team members who can recognise serious symptoms (baseline: 50%), % of teams being supervised (established, not reported), N of patients visited by the team past month (baseline: 198)
Community support groups	**MO:** N of groups established, N of members
Institutional care	**MO:** Establishments (N), staff trained (N), N of patients **AS:** N of patients coming for OI treatment (baseline: 100 in the last 3 months) % of staff trained in OI management (baseline: 25%) % of wards stocked with OI and prophylactic drugs (baseline established - but complex)

MO: The monitoring system provides, on a continuous basis, core information on what has been implemented (intensity, coverage).
AS: Assessment of services has been done at baseline (STI, VCT, Institutional care) and gives the basis for defining core indicators related to both to capacity (facilities, staff and their level of training) and quality of services provided. Baseline values are to be compared with results from repeated assessments at the end of the period.

Table 2 Indicators of outcomes being measured in the baseline surveys and later by the follow-up surveys: the Community Action for Prevention Project, Cambodia

	Indicators for males	Male groups
	Sexual behaviours and protection	**1. Moto-taxi drivers**
1	Sex partners last year: % with 2 or more	**2. Military**
2	Sex partners last month: % with 2 or more	**3. Police**
3	Sex with SW past year	**4. Deminers**
4	Used a condom always last 3 months sex with SW	**5. Casino workers**
5	Sex with girlfriend past year	**6. Men in the general population**
6	Sex with girlfriend past 3 months	**7. Vocational students**
7	Always condom girlfriend 3 months	**8. Fishermen**
8	Condom use last sex with girlfriend	
	Condom availability	
9	Condoms are available in this area	
	HIV testing and counselling	
10	Tested for HIV ever	
11	Counselled when HIV tested	
	STI symptoms and treatment	
12	Self-reported STD (discharge)	
13	Treated at the public or private clinic/hospital	
	Knowledge	
14	Appearance of a person tells if he or she is HIV infected	
15	HIV can be transmitted from mother to the unborn child	
16	HIV can be transmitted through sharing syringes/needles	

	Indicators for females	Female groups
	Sexual behaviours and protection	**1. Direct female sex workers (DFSWs)**
1	Months as SW or in this work	**2. Indirect female sex workers (IDFSW)**
2	Mean N of clients (last working day) for DFSW	**3. Casino workers**
3	Condom used with the customer last time	**4. Females in the general population**
4	Condoms use always last week with customers	
5	Have regular customers now	
6	Condoms used always last month with regular customers	
7	Had a boyfriend past year	
8	Condom used always last week with boyfriend	
9	Condom used last time with boyfriend	
10	Sex for money past year	
11	Condom used last time sex for money	
12	Worried being infected by husband (married only)	

	Condom availability	**5. Vocational students**
13	Condoms are available in this area	
	HIV testing and counselling	
14	Tested for HIV ever	
15	Counselled when HIV tested	
	STI symptoms and treatment	
16	Self-reported STD (discharge)	
17	Treated at the public or private clinic/hospital	
	Knowledge	
18	Answered no to: Appearance tells if a person is HIV infected	
19	HIV can be transmitted from mother to the unborn child	
20	HIV can be transmitted through sharing syringes/needles	

Table 3. Core indicators and their values (given in %) among groups of males as measured in those baseline surveys being conducted in addition to the national behavioural surveys. The Community Action for prevention of HIV project in Cambodia

Indicators	Moto drivers	Military	Police	De-miners	Casino Workers	Men In the GP	Voc-students	Fisher-men
Sexual behaviours and protection								
Sex partners last year: % with 2 or more	-	-	-	-	-	5	7	10
Sex partners past month: % with 2 or more	9	9	9	9	13	1	1	2
Sex with SW past year	20	22	23	30	51	5	8	10
Used a condom always last 3 months when sex with SW	92	93	91	88	96	91	100	57
Sex with girlfriend past year	14	11	7	7	30	-	-	-
Sex with girlfriend past 3 months	-	-	-	-	-	7	1	9
Always condom girlfriend 3 months	60	69	37	-	20	20	33	17
Condom use last sex with girlfriend	73	70	54	40	53	68	71	68
Condom availability								
Condoms are available in this area	52	65	65	27	62	16	48	26
HIV testing and counselling								
Tested for HIV ever	17	39	66	35	33	4	7	9
Counselled when HIV tested last time	9	8	18	11	23	1	2	4
STI symptoms and treatment								
Self-reported STD (discharge)	4	6	5	3	1	1	1	1
Treated at the public or private clinic/hospital	56	56	68	67	-	14	45	75
Knowledge								
Answered no to: Appearance tells if a person is HIV infected	89	87	91	92	67	89	96	63
HIV can be transmitted from mother to the unborn child	35	28	35	9	4	28	100	7
HIV can be transmitted through sharing syringes/needles	63	75	79	52	45	59	100	32

Table 4. Core indicators and their values (given in %) among groups of males as measured in those baseline surveys being conducted in addition to the national behavioural surveys. The Community Action for prevention of HIV project in Cambodia

	Indicators	DFSWs	IDFSWs	Casino Workers	Females in the GP	Vocational Students
	Sexual behaviours and protection					
	Mean N of months working as SW	**13**	**-**	**-**	**-**	**-**
	Mean N of clients (last working day) for DFSW	**1.6**	**-**	**-**	**-**	**-**
	Condom used with the customer last time	**92**	**-**	**-**	**-**	**-**
	Condoms use always last week with customers	**86**	**-**	**-**	**-**	**-**
	Have regular customers now	**60**	**-**	**-**	**-**	**-**
	Condoms used always last month with regular customers	**87**	**-**	**-**	**-**	**-**
	Had a boyfriend past year	**48**	**54**	**16**	**4**	**8**
	Condom used always last week with boyfriend	**63**	**-**	**-**	**-**	**-**
	Condom used last time with boyfriend (BF)	**60**	**63**	**No sex BF**	**No sex BF**	**No sex BF**
	Sex for money past year	**-**	**37**	**0**	**-**	**-**
	Condom used last time sex for money	**-**	**90**	**-**	**-**	**-**
	Worried being infected by husband (among those married)	**-**	**-**	**-**	**41**	**-**
	Condom availability					
	Condoms are available in this area	**96**	**73**	**61**	**35**	**69**
	HIV testing and counselling					
	Tested for HIV ever	**74**	**62**	**23**	**5**	**5**
	Counselled when HIV tested	**16**	**12**	**3**	**1**	**1**
	STI symptoms and treatment					
	Self-reported STD (discharge)	**66**	**44**	**21**	**29**	**4**
	Treated at the public or private clinic/hospital	**75**	**46**	**35**	**46**	**63**
	Knowledge					
	Answered No to: Appearance tells if a person is HIV infected	**62**	**65**	**61**	**72**	**72**
	HIV can be transmitted from mother to the unborn child	**45**	**36**	**100**	**100**	**100**
	HIV can be transmitted through sharing syringes/needles	**67**	**58**	**100**	**100**	**100**