

INTEGRATED BIOLOGICAL-
BEHAVIORAL SURVEILLANCE
SURVEYS AMONG FEMALE SEX
WORKERS AND MEN WHO HAVE SEX
WITH MEN IN TIMOR-LESTE, 2016-2017

FINAL REPORT



ashm



ACRONYMS

BCC	Behavior Change Communication
CI	Confidence intervals
CT	Chlamydia trachomatis
DIC	Drop in Center
FTH	Fundasaun Timor Hari'l
FSW	Female sex workers
GARPR	Global AIDS Response Progress Reporting
GFATM	Global Fund to fight AIDS, TB and Malaria
HIV	Human Immunodeficiency Virus
IBBS	Integrated Biological and Behavioral Surveillance
MSM	Men who have sex with men
NAP	National HIV/AIDS & STIs Control Programme
NG	Neisseria gonorrhoeae
NGO	Non-Governmental Organization
PLHIV	People living with HIV
RDS	Respondent Driven Sampling
RDSA	Respondent Driven Sampling Analyst
STI	Sexually Transmitted Infection
TG	Transgender persons
VCCT	Voluntary Confidential HIV Testing and Counselling

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EXECUTIVE SUMMARY

BACKGROUND

This report presents the findings of the second round of Integrated Biological and Behavioural Surveillance (IBBS) surveys conducted in 2016-2017 among female sex workers (FSW) and men who have sex with men (MSM) in Dili and Baucau, Timor-Leste. The previous round was conducted in 2011 among the same populations and found an HIV prevalence of less than 5%. The present study is primarily aimed to track the HIV epidemic, monitor sexual risk behaviours, and to measure access to intervention programs in responding to HIV.

METHODS

Respondent driven sampling (RDS) was employed to recruit a sample of FSW and MSM in two selected cities (Dili – 200 each for FSW and MSM; Baucau – 100 each for FSW and MSM). Eligibility criteria for FSW was that they be biological females, aged 17 to 49 years and exchanged sex (anal and/or vaginal) for money or other items of value, to at least two clients, over the past 12 months; and for MSM was that they be biological males, aged 17 years and over, had anal sex with a male in the past 12 months. All participants had to also be currently residing in the study area. After providing informed consent, each eligible participant completed two components: a structured questionnaire used to collect information on socio-demographics, sexual behaviors, knowledge and practices related to HIV/AIDS and sexually transmitted infections (STI), access to the services; And a biological component: blood specimens to test for HIV and syphilis. Proportion estimates were calculated by using the RDS II estimator after adjusting for participants' probability of recruitment and differential network sizes in RDS Analyst software.

SURVEY RESULTS

Female Sex Workers

A total of 202 FSW participated in Dili and 110 in Baucau. The majority of FSW in both sites were below the age of 25 years and the median age of first sex work was 19 years in Dili and 20 years in Baucau. About half of them in both sites reported having at least one child. More than 80% of FSW in Dili and 63% in Baucau relied primarily on sex work income. The monthly income was markedly different between the sites; two third of FSW in Dili reported earning a monthly income of more than 200 dollars whereas 64% of FSW from Baucau had an income of less than 200 dollars per month.

The reported number and type of recent sexual partners varied between FSW in Dili and Baucau: overall client volume in the last 7 days was 2 in Dili and 4 in Baucau; almost all Baucau FSW had one or more

regular or casual partner whereas a sizeable percentage of FSW in Dili (35% and 90% respectively) reported having no regular or casual partner in the last week. Regarding the type of sexual contacts in the last 12 months, about 45% of FSW from both Dili and Baucau reported having anal sex with clients in addition to vaginal intercourse. In both sites, the reported condom use was low and varied between the partners: around half of all respondents had ever used condom at the time of survey; condom use during last sexual intercourse was higher with commercial sex partners (43% in Dili and 48% in Baucau) than with non-commercial sex partners (around 20% in Dili and above 30% in Baucau) but inconsistent during the last 12 months. More than one third of FSW in both Dili and Baucau never tried to convince their clients to use condom throughout their sex work and more than 20% of them reported ever having sex without a condom to received extra money.

FSW in Baucau had moderately higher awareness of STI and knowledge about HIV transmission compared to Dili FSW (awareness of STI 53% in Dili and 74% in Baucau, comprehensive knowledge on HIV prevention- 11% in Dili; 54 % and 35% in Baucau). Just above 20% of Dili FSW and 37% to 48% in Baucau received prevention commodities from an outreach worker in the last 12 months. Although only 33% of FSW in Dili and 52% of FSW in Baucau reported ever having an HIV test, the majority of them from both sites (79% in Dili and 90% in Baucau) had an HIV test in the last 12 months and, among which almost all of them received their test results and indicated their last HIV status. The survey revealed no HIV infection among FSW in either city. Few FSW in Dili (4%) and none in Bacau had positive results for active syphilis at the time of survey.

Men who have Sex with Men

In total, 205 MSM in Dili and 105 MSM in Baucau participated in the survey. The vast majority of recruited MSM from both sites were under the age of 25 (72% in Dili and 84% in Baucau), unmarried (92% in both sites), unemployed (81% in Dili and 86% in Baucau), and had a secondary and above level of educations (82% in Dili and 74% in Baucau). Almost all MSM reported their gender identity to be male and the majority identified themselves as straight or strong man (73%in Dili and 91% in Baucau). The median age of first sex was 16 years among MSM in both sites.

Generally, high proportions of MSM from both sites reported having a sexual relationship with multiple types of male, as well as female partners, in the last 12 months. A substantial percentage of MSM in Dili (83%) and in Baucau (86%) also reported selling sex in the past 12 months. However, the reported recent condom use with those different partners was inconsistent and especially low among Dili respondents– ranging from the highest last time condom use of 39% in Dili and 58% in Baucau to the

lowest of 5% in Dili and 14% in Baucau. Under 10% of MSM in both Dili and Baucau always used lubricant with or without condom when having sex with male partners in the last 12 months. As in the FSW results, the proportion of MSM in Baucau reported having higher awareness of an STI than Dili MSM (56 % in Dili; 91 % in Baucau). However, the composite score of knowledge about HIV transmission was low for MSM in both cities (16% in Dili and 20% in Baucau). One third of MSM in Baucau and 55% in Baucau reported receiving condoms from an outreach worker in the last 12 months. Among all participants, less than 50% reported ever having an HIV test and only 29% of MSM in Dili and 41% in Baucau had been tested in the last year and knew their results, of which almost all of them indicated their last HIV status. The survey found low HIV and syphilis prevalence among MSM in both cities: 0.4% of MSM in Dili and none in Baucau were tested positive for HIV; syphilis prevalence among MSM ranged between 4.9 % in Dili and 1.1% in Baucau.

Conclusion

The majority of both MSM and FSW from Dili and Baucau reported having bi-sexual relationship with multiple partners even in early sexual life. General knowledge on HIV and syphilis, access to services, and prevention practices were relatively low among all participants, particularly in Dili. Although the survey found low prevalence of HIV and syphilis, current levels of risk behaviour with limited knowledge and practices among both populations across the sites underscore the potential spread of diseases. Results from this survey provide up-to-date insights to service providers and highlight the need for scaling up of targeted HIV interventions.

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BACKGROUND

EPIDEMIOLOGY OF HIV IN TIMOR-LESTE

The national prevalence of HIV in Timor-Leste was below 1% in 2015(1). However, HIV prevalence is expected to be higher among key populations at higher risk of HIV exposure, including female sex workers (FSW), men who have sex with men (MSM), and Transgender persons (TG). Although the 2011 HIV Integrated Biological and Behavioral Surveillance (IBBS) surveys conducted in Dili, Ainaro, Baucau, Bobonaro, Covalima, and Oecusse found HIV prevalence to be below 5% (1.6 % among MSM and 1.3% among FSW)(2), there is still concern that HIV may be shifting from ‘low level’ to a ‘concentrated’ epidemic. It is estimated that there are 1,688 (95% CI: 1333, 2044) FSW living in Timor-Leste, representing 0.71% (95% CI: 0.56%, 0.86%) of females aged 15 to 49 (3). The population sizes of MSM&TG are estimated to be 8,703 (95% CI: 7,821, 9,585) in Timor-Leste (3). These key populations are often stigmatized and discriminated against and are more likely to have limited access to needed health services. Regular IBBS surveys of these populations’ plays a critical role in providing an evidence base for the program design, implementation and monitoring of targeted HIV/sexually transmitted infection (STI) intervention and prevention programs. Assessment of HIV and STI prevalence for key populations across time periods allows the National AIDS Programme (NAP) to measure progress in responding to HIV. Similarly, monitoring sexual risk behaviors helps NAP to develop and improve effective programs targeting key populations. In 2016-2017, HIV IBBS surveys were conducted among FSW and MSM in Dili and Baucau.

RATIONALE AND OBJECTIVES

GENERAL OBJECTIVES

The general objectives of the IBBS in Timor-Leste were to:

- measure the prevalence of HIV/AIDS; and
- measure sexual risk behaviors.

SPECIFIC OBJECTIVES

In relation to the population groups identified for the IBBS, specific survey objectives are to measure:

- i. socio-demographic profiles
- ii. knowledge, attitudes and practices related to HIV/AIDS and STI
- iii. sexual and other risk behaviours including condom use, types and number of partners

- iv. prevalence of Syphilis
- v. access to services, including HIV testing.
- vi. translate research findings into recommendations for policy and program development
- vii. undertake capacity development of local research staff and NAP in planning and implementing the IBBS

ELIGIBILITY

The eligibility criteria for FSW was:

- biological female
- aged 17 to 49 years
- exchanged sex (anal and/or vaginal) for money or other items of value, to at least two clients, over the past 12 months
- currently residing in the study area

The eligibility criteria for MSM was:

- Biological male
- aged 17 years and over
- anal sex with a male, regardless of his/her sexual identity or orientation, over the past 12 months
- currently residing in the study area.

METHODS

Cross-sectional surveys using respondent driven sampling (RDS) of FSW and MSM were conducted in the Dili and Baucau districts of Timor-Leste.

RESPONDENT DRIVEN SAMPLING (RDS)

This survey utilized standard methods of RDS(4) to recruit FSW and MSM in Dili and Bacau. RDS is a variant of a chain referral sampling method, which was specifically designed to reach “hidden” populations(5,6). RDS recruitment starts with a number of purposefully selected members of the study population referred to as “seeds”. Emphasis is placed on selecting seeds with large social networks and who know people from diverse backgrounds. After enrolling and completing the survey process, each seed is given a specified number of uniquely coded coupons, with which to recruit their peers (i.e.,

eligible FSW and MSM). Recruited peers who agree to enroll and complete the survey steps make up the first wave of participants and are also given uniquely coded coupons with which to recruit their peers. The use of this recruitment strategy produces successive waves of recruitment, ideally long recruitment chains of respondents, and continues until the desired sample size is reached.

Analysis of RDS data relies on each participant providing a social network size and active monitoring of who recruited whom using the information from the uniquely coded coupons. Use of the unique coupon codes eliminates the need to collect personal identifying information, such as names and addresses, maintaining the anonymity and confidentiality of survey respondents. When conducted and analyzed properly, RDS has the ability to eliminate biases commonly associated with other chain referral sampling methods, which yields findings representative of the network from which the sample was taken.

SAMPLE SIZE CALCULATION

For MSM and FSW, the sample size was calculated to detect a measurable change over time. Change over time was calculated using the percentage of key populations reached with HIV prevention through health programs found in the 2011 HIV IBBS. In 2011, 9.1% of MSM and 7% of FSW (increased to 10% for calculation) reported being reached with HIV prevention programs through health programs. The final calculation is based on the expectation of seeing a 15% increase between 2011 and 2016 in key populations being reached with HIV prevention through health programs. In addition, the calculation assumes a 95% confidence, Alpha of between 80% (n=156) and 85% (n=216) and a design effect of two. Based on these calculations the sample size for FSW and MSM in Dili is 200 each (Table 1). In Baucau estimation of the sample size for FSW and MSM under the surveillance is 100 each.

Table 1. Sample sizes in each location based on change over time in IBBS.

Population	Dili	Baucau	Total sample size
FSW	200	100	300
MSM (including TG)	200	100	300
TOTAL	400	200	600

DATA COLLECTION LOCATIONS

FSW and MSM were sampled from two districts in Timor-Leste: Dili (population: 252,884 in 2015), and Baucau (population: 111,694 in 2010) (Figure 1).

Figure 1: Map of Timor-Leste, identifying Dili and Baucau



Dili district includes the capital city Dili and has the highest population. Baucau district has the third largest population in Timor-Leste.

RECRUITMENT PROCESS

In Dili and Bacau, two to three seeds (initial recruits) were selected to recruit diverse people from their social networks. Seeds were given three referral cards each with unique numbers and encouraged to recruit peers (eligible individuals) of their social network. Upon arrival to a study site, individuals in possession of a valid recruitment coupon were screened for eligibility and underwent informed consent. Upon recruitment and screening, individuals were given a Participant Information Statement which outlines the study purpose, risks, benefits, privacy protocol, complaints and feedback process, and consent process. All participants were asked to sign their consent to participate in the study. Once someone was deemed eligible and enrolled, they were interviewed by a trained interviewer, provided HIV pretest counseling, and underwent a venal blood draw for laboratory tests of HIV and Syphilis. Following the blood draw, each respondent was given no more than two coupons along with recruitment instructions on how to recruit eligible peers. In order to maintain respondents' confidentiality, unique identification codes were used to link behavioral and biological data and to track who recruited whom. Every participant received their HIV test results along with post-test counselling. Respondents received primary compensation for enrollment and completion of the behavioral and biological parts of the survey and a secondary incentive for recruiting peers to enrolled and completed the behavioral and biological parts of the survey.

LABORATORY PROCEDURES

HIV AND SYPHILIS SPECIMEN COLLECTION

HIV

Serological testing for HIV followed national serology laboratory standard operating procedures (SOPs) used for surveillance surveys in Timor-Leste (7). HIV rapid/point-of-care testing was conducted on-site using Timor-Leste national algorithm and approved commercial test kits. Following pre-test counselling, primary HIV rapid testing was conducted using a saliva sample. Saliva specimens were tested using the Oraquick™ HIV- 1/2 (Orasure technologies, PA, USA) rapid test kit. Non-reactive results were considered negative. Reactive results were further tested with Determine™ HIV- 1/2 (Alere, Japan) rapid test kits using capillary blood from a finger prick. If the test was non-reactive, the result was recorded as negative. If reactive, results were confirmed by Uni-Gold™ HIV (Trinity Biotech, NY, USA) and Stat Pak™ HIV 1&2 (Chembio Diagnostics, NY, USA) rapid tests processed in parallel format. If Uni-Gold™ or Stat Pak™ results were discordant or nonreactive, results were recorded as indeterminate. DBS was therefore collected for further confirmation. If confirmatory tests are both reactive, the result was recorded as positive.

Syphilis

Syphilis rapid testing was conducted using capillary blood from a finger prick. Syphilis was screened using the SD Biline RPR rapid test device (Standard Diagnostics, Korea). Non-reactive tests were recorded as negative. All reactive tests were marked as 'Syphilis reactive'. This did not provide results for active syphilis.

STORAGE AND TRANSPORTATION

Specimens tested via rapid test was tested immediately, stored on site then picked up daily by national laboratory (Dili) or district referral hospital staff (Baucau) for disposal using established laboratory procedures.

DATA MANAGEMENT AND ANALYSIS

Questionnaire data were collected on paper questionnaires and double entered into an Excel database. Data cleaning was conducted by UNFPA. Data were analyzed for Dili and Baucau using the RDS II(8)

estimator in RDS analyst (www.hpmsg.org). A modified bootstrapping method was used to construct 95% confidence intervals (9,10).

DATA PRESENTATION AND INTERPRETATION

Data are displayed in either tables or figures (bar and pie charts). When possible, the category size (n), the adjusted estimates and 95% confidence intervals (CI) are provided. Statistically significant differences between or within the samples can be assessed by noting whether the confidence intervals overlap. In some cases there are not enough values (cross ties in recruitment) in a variable for RDS-Analyst to produce adjusted estimates. In such cases, unadjusted estimates are provided accompanied by the following symbols: ^^. Although the estimates presented here may be considered representative of the network of the population from which respondents were recruited, the small number of values for certain variables may limit the ability to derive accurate estimates. In some cases, CI are too wide for meaningful interpretation. Further, as analysis in RDS-Analyst depends on the integrity of recruitment chains to determine and adjust estimates for probability of recruitment, missing values may distort adjusted proportion estimates.

ETHICAL CONSIDERATIONS

The study team was trained to ensure ethical practices concerning recruitment, consent, revocation of consent, participant complaints, confidentiality, anonymity, community consultation, data collection, data management and storage, data analysis, reporting and dissemination. Data were collected according to international ethical standards. Protocols, procedures and data collection forms were subject to review, approval and oversight by both local and international ethics review committees. Individual participation in the study was voluntary and all data collection was anonymous and confidential. Prior to participation in the survey and testing individuals gave signed informed consent. Participants were informed of the purpose of the data collection, and if requested, data collectors provided details for the data collection agency, the funding agency, and the contact details of an appropriate person to whom enquiries and concerns were addressed. Immediately following the survey component of the study and prior to testing, participants met with a pre-test counsellor so as to be fully informed of the testing procedure and testing implications particularly in the case of receiving a positive result. Testing protocols adhering to international standards and/or national algorithms were developed and all staff involved in the collection of sample specimens received full training and oversight. All

supervisors, coordinators, recruiters and interviewers signed strict confidentiality and procedural agreements at the outset. All data tabulation and information disseminated were on the basis of groups rather than individuals, thus keeping anonymous individual identity. Completed data forms and data collection schedules were stored securely in locked file cabinets. Resulting datasets were handled securely, with particular attention to fail-safe back-ups. The project team received approval from the Ministry of Health Ethics Cabinet (Timor-Leste) in October 2016.

LIMITATIONS

Dili and Baucau are the largest cities in Timor-Leste. However, only sampling two districts will not provide accurate national estimations. Nevertheless, the estimates from the 2016 IBBS provides actionable data for the Northern side of Timor-Leste. Because behavioral data were self-reported in a face-to-face interview, social desirability bias may have resulted in the underreporting of risky sexual practices and drug use behaviors. Respondents were asked to recall periods of up to twelve months when responding to some questions which may have impacted the accuracy of responses due to recall bias.

Compensation for respondents is a crucial element of recruitment in RDS but it can be challenging to determine the appropriate amount for each unique population in a given country. If the compensation offered is too high, there is a risk that recruits fake eligibility requirements. If the amount is too low, recruitment will not be successful. For these surveys, compensation amounts were set based on meetings with key experts, and MSM, FSW in each district. In order to ensure all respondents met eligibility criteria, recruits were screened by a trained screener with experience working with the each population. Individuals who tried to enrol in the survey and were found to have already participated or who were found to be ineligible, had their coupon taken away by a staff member and were asked to leave the premises. Although the estimates presented here may be considered representative of the network of the population from which respondents were recruited, the network may be missing important sub-groups. Further, as analysis in RDS statistics depends on the integrity of recruitment chains to determine and adjust estimates for probability of recruitment, having many missing values may distort adjusted proportion estimates.

GENERAL FINDINGS

FSW were sampled in October and November of 2016 and February of 2017 and MSM were sampled in February 2017. Beginning with four seeds, 202 FSW were sampled in Dili and, beginning with two seeds, 110 FSW were sampled in Baucau. Both the Dili and Baucau surveys of MSM began with two seeds and resulted in 205 MSM in Dili and 105 MSM in Baucau. In the recruitment graphics in Figures 2, 3, 4, and 5 (Following page), seeds are identified in the recruitment graph as larger squares and only have arrow leading away from them rather than towards them.

Figure 2. Recruitment graphic of FSW in Dili

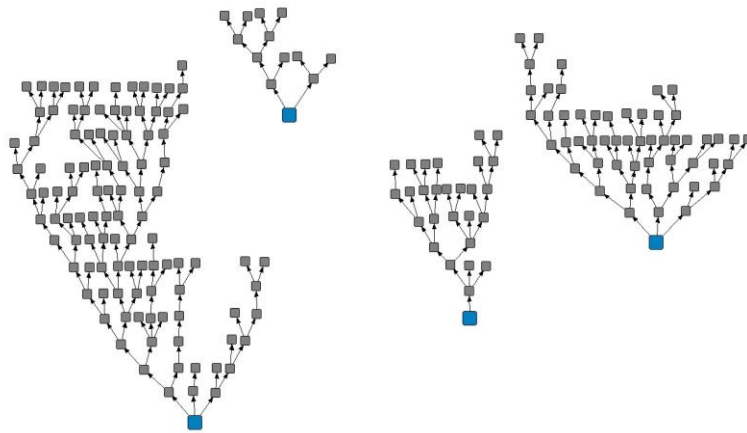


Figure 3. Recruitment graphic of FSW in Baucau

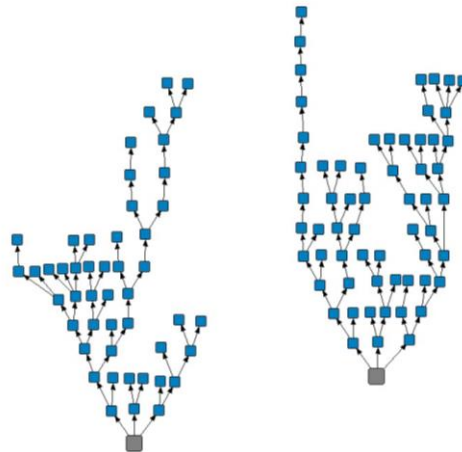


Figure 4. Recruitment graphic of MSM in Dili

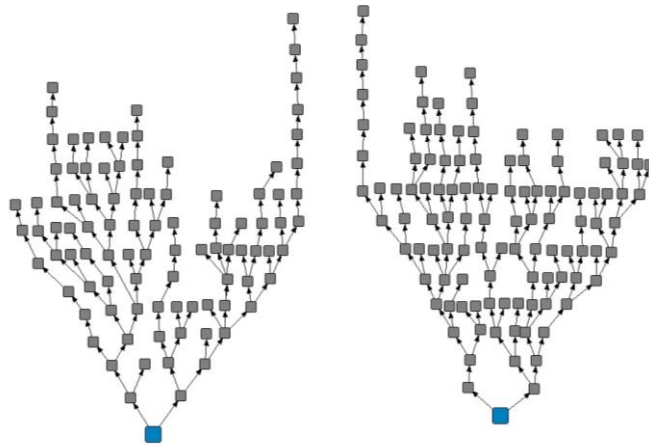
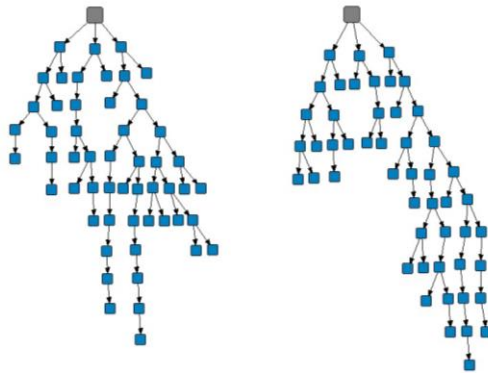


Figure 5. Recruitment graphic of MSM in Baucau



RESULTS FSW

RESPONDENT'S CHARACTERISTICS

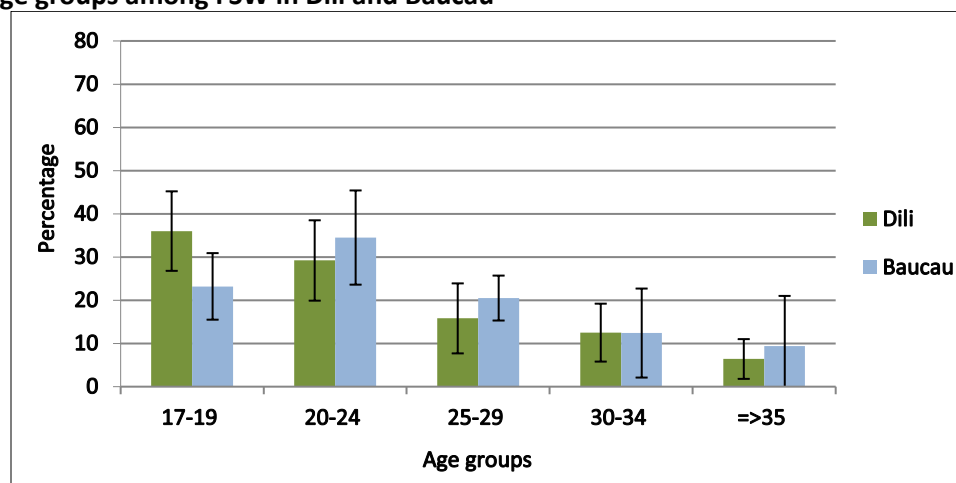
Age

The majority of respondents are young in both sites; about 60% of all respondents were under the age of 25 years (Table 1, Figure 6). Among age categories, most FSW in Dili were between 17 and 19 years (36%) while most Baucau FSW were older, between the ages of 20 to 24 (34.5%). The median age of FSW in Dili was slightly younger (22 years, range: 17 to 50) compared to the median age of FSW in Baucau (24 years, range: 17 to 42).

Table 1: Age of FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Age groups						
17-19	71	36	(26.8 – 45.2)	28	23.2	(15.4 – 30.9)
20-24	55	29.2	(19.9 – 38.6)	36	34.5	(23.7– 45.4)
25-29	34	15.8	(7.7 – 23.9)	23	20.5	(15.4–25.7)
30-34	30	12.5	(5.8 – 19.3)	15	12.4	(2 – 22.7)
=>35	11	6.4	(1.8 – 11)	8	9.4	(0 – 21)
Age in years, median (min – max)	22 (17 – 50)			24 (17 – 42)		
Age groups						
≤24 years	126	65.2	(54.7 – 75.8)	64.0	57.7	(44.6–70.8)
≥ 25 years	76	34.8	(24.2 – 45.3)	46.0	42.3	(29.2 – 55.4)

Figure 6: Age groups among FSW in Dili and Baucau



Denominator: All respondents

Literacy, education, civil status and living situation

Literacy and education levels have important implications for FSW to be able to get accurate information about HIV prevention (Table 2). More than one in ten FSW in both sites said that they could not read and write in Tetum language. When asked about the highest grade they had completed in formal education, about one third of respondents in both Dili and Baucau reported having completed primary or pre-secondary. However, the proportion of FSW in Baucau who reported completing polytechnic school, a university or receiving a diploma was significantly higher (19.8%) compared to Dili (3.9%). The majority of FSW in both sites reported living with family members or relatives and approximately half of them reported being single. However, a higher proportion of FSW in Dili were divorced or widowed or separated (45.2%) while less than 10% of FSW in Baucau were divorced or widowed or separated.

Table 2: Literacy, education, civil status and living situation among FSW in Dili and Baucau

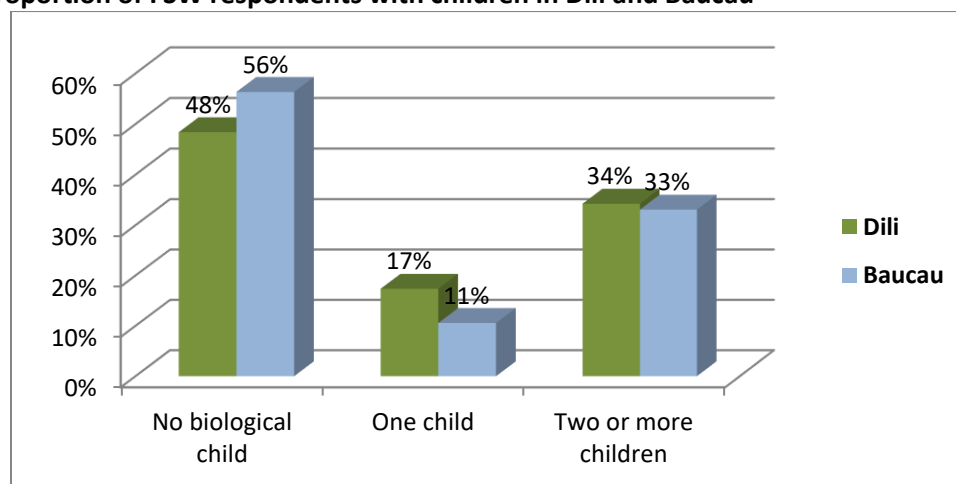
	Dili (N= 202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Literacy status (Can read and write)						
No	38	15.1	(6.5 – 23.6)	10	12.5	(6.9 – 18)
Yes	163	84.9	(76.4 – 93.5)	99	87.6	(82 – 93.1)
Education Status						
No formal education	15	6.46	(0– 15.1)	3	3.9	(0–15.3)
Pre-primary	3	1.8	(0 – 9.9)	3	3.3	(0– 11.3)
primary/pre-secondary	72	36.1	(31.1 – 41.2)	33	30.8	(20.9 – 40.7)
secondary/technical school	93	51.8	(50 – 53.5)	49	42.2	(38.4 – 46.1)
Polytechnic/diploma/ university	8	3.9	(1 – 6.8)	22	19.8	(16.4 – 23.2)
Civil status						
Married, living together	11	6.5	(0– 14.7)	15	15.1	(9.2 – 21.1)
Married, not living together	9	4.5	(0 – 13.7)	14	16.8	(3.2 – 30.4)
Divorced/widowed/separated	78	41.3	(36.5 – 46.1)	9	8.2	(0.3 – 16.2)
Single (living alone)	95	45.2	(41.3 – 49.2)	59	52.7	(45.6 – 59.9)
Cohabitation	7	2.5	(0 – 7.6)	8	7.1	(0.3 – 13.9)
Lived in						
Family house	38	17	(9.7 – 24.3)	42	38.7	(25.8 – 51.6)
Own house	114	59	(49.1 – 68.9)	63	58.7	(53.6 – 63.90)
Rented house	48	23.4	(14.8– 32)	5	2.6	(0– 15.4)
Brothel/Sex work place	1	0.6	(0 – 2)	--	--	--
Household composition (Multiple responses possible)						
Spouse/partner	12	5	(1.1 – 8.8)	17	16.5	(8.9 – 24.2)
Parents	8	3.2	(0.6 – 5.8)	3	3.1	(0 – 6.8)

Brothers/sisters	77	39.2	(29.9 – 48.5)	90	84.7	(75.5 – 93.8)
Children	88	45	(35.2 – 54.9)	63	57.4	(46.9 – 68)
Other relatives	52	27.9	(17.5 – 38.3)	37	34.9	(24 – 45.8)
Friends	49	21	(14 – 28.1)	19	14.3	(7.2 – 21.5)
Alone	5	2.6	(0 – 5.5)	1	0.4	(0 – 1.3)

FSW with children in Dili and Baucau

A higher percentage of FSW in Dili (52%) reported having biological children compared to FSW in Baucau (44%) (Figure 7). Seventeen percent of FSW in Dili and 11% in Baucau reported having one biological child and about one third of FSW in both cities reported having two or more biological children.

Figure 7. Proportion of FSW respondents with children in Dili and Baucau



Denominator: All respondents

The median ages of the youngest child in Dili and Baucau were 2 years (range: months to 20 years) and 3 years (range: months to 18 years), respectively (Table 3). More than 60% of these children were reported by FSW to be less than 3 years old. Approximately, 10% of FSW in Dili and Baucau also had adopted children.

Table 3: FSW with children in Dili and Baucau

	Dili (N= 202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Biological children						
No	105	48.4	(38.2 – 58.6)	66	56.3	(43.3 – 69.4)
One child	37	17.4	(10.5 – 24.3)	10	10.6	(5.2 – 15.9)
≥2	60	34.3	(26.1 – 42.4)	34	33.1	(20.2 – 46)

Age of youngest biological child, median (min–max) age in years	2 years (0–20)			3 years (0–18)		
Child age groups						
≤3	58	67.8	(56.8–78.7)	27	60.3	(38.7–82)
≥4	40	32.2	(21.3–43.2)	16	39.7	(18.1–61.3)
Adopted children						
No	179	94.5	(91.3–97.7)	95	88.7	(80.5–96.9)
One child	9	2.8	(0–5.2)	12	8.6	(0–17.5)
≥2	8	2.7	(0.7–4.8)	2	2.6	(0–7.8)

Income and financial responsibilities

Thirty seven percent of FSW in Baucau and 15% in Dili, reported earning an income in addition to selling sex (Table 4). Common income sources other than sex work depended on site. Dili, being the capital of Timor-Leste, had almost 40% of respondents reporting additional income through working in a restaurant/hotel or salon. The majority of FSW in Baucau reported their other income source as being from manual work (cleaning, agriculture etc.). With regards to monthly income and last time money was received for sex work, FSW in Dili and Baucau were markedly different. Two thirds of the Dili FSW reported having a monthly income of 200 dollars and above. And the median amounts of money earned at last sex were 80 dollars with a range of 10 to 550 dollars. In contrast, the majority of FSW (64%) in Baucau had an income of less than 200 dollars per month and more than three quarters of the respondents reported earning less than 50 dollars from their last client, with a median value of 30 dollars. This likely reflects the higher earning power by FSW working in a capital city of Timor, Dili. Almost all respondents in both sites (94% in Dili and 100% in Baucau) reported providing support to a median number of two persons in Dili (minimum 1 to maximum 18) and three persons in Baucau (minimum 1 to maximum 10).

Table 4. Income and financial responsibilities among FSW in Dili and Baucau

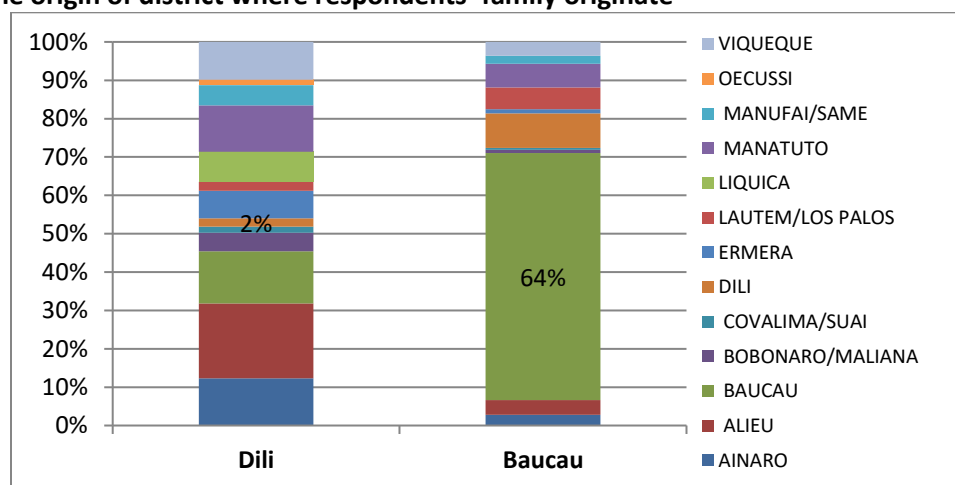
	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Earn income other than sex work						
No	164	84.7	(76.1–93.2)	68	63.3	(50.2–76.4)
Yes	35	15.4	(6.8–23.9)	42	36.7	(23.6–49.8)
Type of work other than sex work						
NGO related	13	25.7	(4.8–46.7)	14	23.6	(5.3–42.0)
Manual work (cleaning)	9	28	(0–61)	14	36.7	(14.4–59)
restaurant/hotel or salon	8	39.1	(11.1–67.1)	7	18.6	(8.1–29)

Other	2	7.1	(-3.9 – 18.2)	7	21.1	(9 – 33.4)
Monthly personal income (in USD)						
Less than <100	25	13.2	(5.4– 21.1)	25	21.8	(18.7–24.9)
101-200	34	15.7	(8.9 – 22.5)	45	42.1	(30.9 –53.2)
201-500	88	50.4	(41.4 – 59.4)	37	34.5	(23.4 –45.6)
More than 501	50	20.6	(10.4 – 30.9)	3	1.7	(0– 8.8)
Last time money received for sex (USD)						
≤20	10	4.9	(0.8 – 9)	27	25.3	(19.4 –31.1)
21-50	64	36	(27.6 – 44.4)	60	54.2	(46.7 – 61.7)
51-100	67	35.3	(26.0 – 44.5)	16	14.9	(3.3 – 26.5)
≥101	54	23.9	(16.5 – 31.3)	7	5.7	(0 – 14)
Last time money received for sex, median (min – max) (USD)	80 (10 – 550)			30 (5 – 1000)		
Financially support others						
No one	12	5.9	(2.1 – 9.6)	--	--	--
1-2	99	50	(41.5 - 58.5)	47	38.8	(23.9 –53.7)
3-5	62	31.2	(23.3 – 39.1)	41	38	(27.1 –48.9)
≥ 6	26	12.9	(6.2 – 19.6)	22	23.2	(14.9 – 31.5)
Financially support others, median (min – max)	2 (0 –18)			3 (1 –10)		

MOBILITY OF FSW

FSW reported that their families originated from a variety of districts within Timor-Leste (Figure 8). Only 2% of Dili respondents reported Dili as their city of family origin while a majority of FSW in Baucau (64%) reported that their families were from Baucau.

Figure 8. The origin of district where respondents' family originate



Denominator: All respondents

The majority of FSW reported selling sex for more than one year in either Dili or Baucau (median of two years for both cities) (Table 5). Although respondents from both sites had ever sold sex in other districts, a higher degree of mobility was found in Baucau. More than 30% of the respondents in Baucau reported having sold sex in a district other than their current district. This high than that reported by FSW in Dili (11%). Among those who reported selling sex in another district, the majority in both sites reported conducting sex work in from one to four districts in the last 6 months.

Table 5. Mobility of FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Working as FSW in Dili/Baucau						
> 1 years	141	65	(55.5 – 74.5)	77	71.7	(58.7– 84.8)
≤ 1 year	60	35	(25.5 – 44.5)	33	28.3	(15.2 –41.3)
Working as sex worker in years, median (min– max)	2 years (0 –16)			2 years (1 –17)		
Ever sold sex in other district						
No	175	88.6	(82 – 95.2)	74	66.7	(54.6– 78.9)
Yes	25	11.4	(4.8 – 18)	36	33.3	(21.1–45.4)
No of other districts where						
1-2	8	25.3	(5.3–45.3)	19	56.3	(43.9–68.6)
3-4	10	60.6	(43.4–77.8)	13	28.6	(7.3–49.8)
≥5	6	14.1	(0 –35.2)	4	15.2	(0–42.6)

GENERAL SEXUAL HISTORY AND SEX WORK PRACTICE

General sexual history

In both sites, more than three quarters of women reported having sex before the age of 19; the median age at first sex was 17 years for Dili and 18 years for Baucau (Table 6, following page). The distribution of age at first sex work was similar in both sites: between the ages of 19-20. Duration of sex work was calculated using the respondents given current age and first year of selling sex. The median number of years of selling sex in both sites was two years. The majority of FSW fall into the category of having sold sex for more than one year.

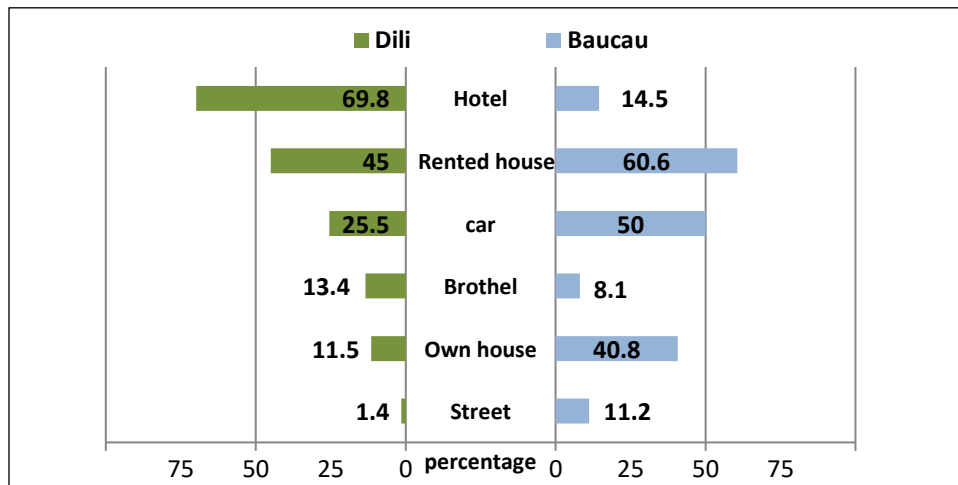
Table 6. General sexual history and places of solicitation among FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Age at first sex						
≤14	28	15.8	(10.9 – 20.7)	6	8.7	(4 – 13.2)
15-19	134	58.1	(50.0 – 66.2)	78	68.8	(58.5 – 79)
≥20	38	26.1	(18.7 – 33.6)	26	22.6	(11.7 – 33.3)
Age at first sex in years, median (min– max)	17 years (10 – 27)			18 years (9 – 25)		
Age at first paid sex						
≤14	10	6.2	(1.8 – 10.6)	2	2.8	(-8.4 – 14)
15-19	108	49.6	(38.7 – 60.4)	48	41.3	(30.3 – 52.3)
≥20	78	44.2	(32.9 – 55.6)	57	55.9	(53.2 – 58.7)
Age at first paid sex in years, median (min– max)	19 years (13 – 45)			20 years (12 – 39)		
Duration of sex work						
> 1 year	137	65.6	(55.8 – 75.3)	77	72.5	(61 – 83.9)
≤ 1 year	59	34.4	(24.7 – 44.2)	33	27.5	(16.1 – 39)
Duration of sex work in years, median (min – max)	2 years (0 – 29)			2 years (0 – 21)		
Places of solicitation (Multiple responses possible)						
Own house	22	11.5	(5.3–17.6)	44	40.8	(30.5– 51.1)
Brothel	39	13.4	(8.6 – 18.2)	6	8.1	(0– 18.5)
Rented house	87	45	(35.4 – 54.7)	65	60.6	(48.1 – 73.1)
Hotel	139	69.8	(60.9 – 78.7)	17	14.5	(6 – 23)
In a car	65	25.5	(15.8– 35.1)	52	50	(39.6– 60.4)
Street/Beach/park/bus	3	1.4	(0– 3.2)	13	11.2	(2.6 – 19.8)

Place of solicitation

Regarding the most common places where FSW sell sex, the majority of FSW in Dili reported selling sex at hotels (70%), whereas the majority of FSW in Baucau reported selling sex at rented houses (61%) (Figure 9, following page). In Dili, a sizable percentage reported selling sex at rented houses (45%) and in Baucau, a sizable percentage reported selling sex in a car (50%) and at their own house (41%).

Figure 9. Most common places where respondents reported soliciting clients in Dili and Baucau

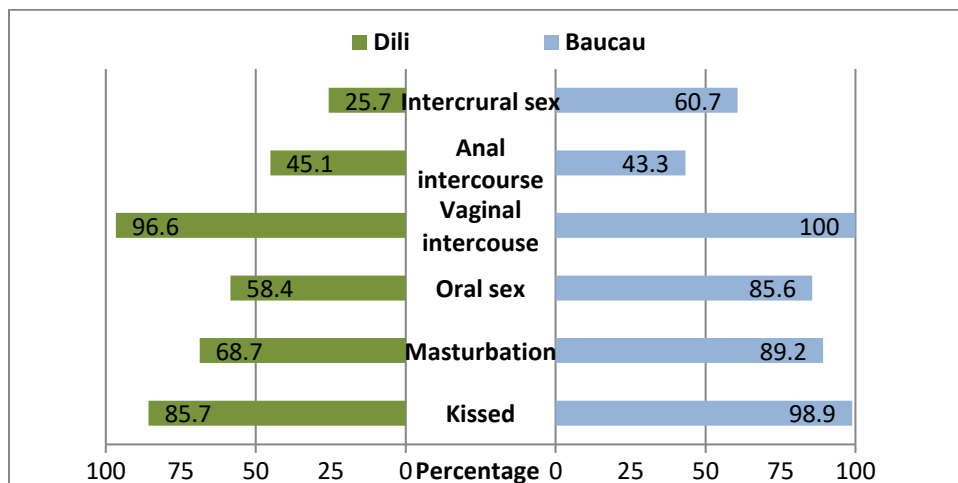


Denominator: All respondents; multiple responses possible

Type of sexual contacts with paying partners

In both sites, vaginal intercourse and kissing were the most frequently reported activities among different types of sexual contacts (Figure 10). Interestingly, a sizeable proportion (around 45%) from both Dili and Baucau reported having anal sex with clients in the last 12 months.

Figure 10. Type of sexual contacts with paying partners in the last 12 months in Dili and Baucau



Denominator: All respondents

Experience of Involuntary sex

Just over a quarter of respondents in each site reported being forced to have sex commonly by a client or boyfriend/husband in the last 12 months (Table 7). However, a high percentage of FSW in Dili reported that strangers were the persons responsible for involuntary sex whereas in Baucau, boyfriends or husbands were the most commonly reported persons responsible for involuntary sex.

Table 7. Experience of Involuntary sex among FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Had been forced to have sex in past 12 months						
No	140	73.9	(65.7 – 82.1)	77	72.4	(62.7 – 82)
Yes	57	26.1	(17.9 – 34.3)	30	27.7	(18 – 37.3)
Responsible person for involuntary sex among those who had been forced to have sex in the past 12 months (Multiple responses possible)						
Family members	4	7.3	(0 – 15.7)	--	--	--
Clients	27	39.4	(27.6 – 51.2)	9	33.2	(15.8–50.7)
Boyfriend/husband	30	44.1	(25.1 – 63.1)	14	40.6	(25.1–56.1)
Security personnel	9	15.7	(5.5 – 25.9)	--	--	--
Stranger	36	71.8	(54.6 – 89.1)	6	21.9	(6.9–36.9)

SEXUAL PARTNERS AND CONDOM USE PATTERNS

Number and type of recent sexual partners

The number and type of recent sexual partners varied between FSW in Dili and Baucau (Table 8, following page). More than 90% of FSW in Baucau had two or more clients in the last week, compared to 60% of FSW in Dili. Although the median number of clients on their last day of work was the same in both sites, overall client volume in the last 7 days was twice as high in Baucau compared to Dili. The reported regular and casual partners of Baucau respondents were relatively high compared to Dili FSW. Of the FSW in Baucau, almost all had one or more regular or casual partners in the last week. In Dili, 65% of FSW reported having least one regular partner in the last week. Few FSW (less than 10%) reported having casual partner in the past week.

Table 8. Number and type of recent sexual partners among FSWs in Dili and Baucau

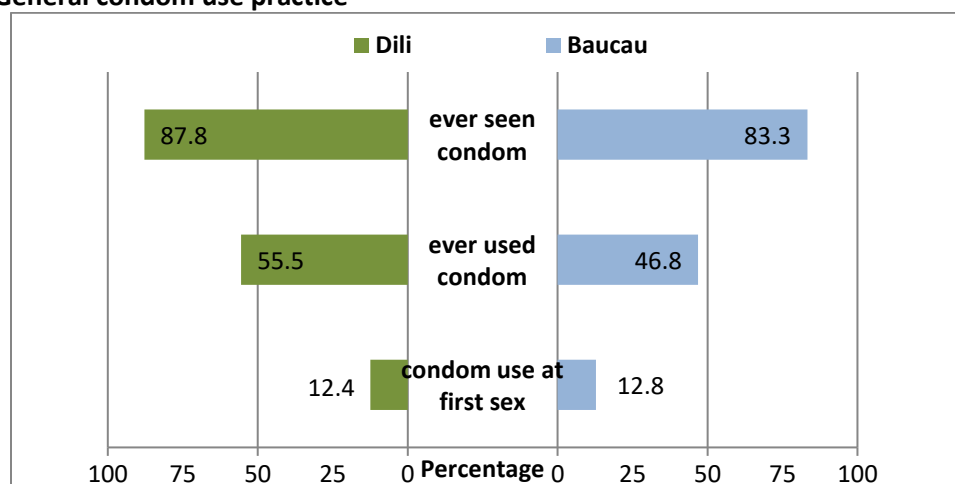
	Dili (N=202)			Baucau (N=110)		
	N	%	95% CI	n	%	95% CI
Number of paying clients in the last 7 days						
0	19	11.1	(5.3 – 17)	--	--	--
1	52	28.2	(21.6 – 34.7)	11	8.5	(0.8 – 16.3)
2-4	92	47.0	(36.9 – 57)	52	50.0	(38.4 – 61.5)
≥ 5	36	13.7	(5.8 – 21.7)	47	41.5	(29.4 – 53.6)
Number of clients last 7 days, median (min – max)	2 (0 – 25)			4 (1 – 10)		
Number of paying clients in last working day						
0	2	2.1	(0– 7.7)	--	--	--
1	67	36.9	(27 – 46.8)	36	35.3	(24.3 – 46.4)
2	44	24.6	(17.1 – 32.1)	51	47.5	(41.2 – 53.7)
3	25	10.6	(3.9 – 17.4)	15	12.1	(0.5 – 23.8)
≥4	57	25.8	(24.5 – 27)	8	5.1	(0–16.3)
Number of clients last working day, median (min– max)	2 (0– 25)			2 (1 – 10)		
Number of regular partner in the last 7 days						
0	59	35.5	(25.7– 45.3)	--	--	--
1	113	54	(46.1– 61.9)	86	78.4	(68.7 – 88.1)
2-4	23	8.9	(0– 18.4)	22	20.1	(10.4 – 29.9)
≥ 5	4	1.6	(0– 3.6)	2	1.4	(0– 3.6)
Number of regular partner last 7 days, median (min – max)	1 (0 – 8)			1 (1 – 15)		
0	172	89.7	(85.3 – 94.1)	5	3.8	(0 – 16.1)
1	12	4.6	(3.5 – 5.8)	26	24.0	(13.7 – 34.3)
2-4	11	4.9	(1.6 – 8.2)	72	67.8	(62.6 – 72.9)
≥5	2	0.7	(0 – 3.6)	7	4.5	(0.1 – 8.8)
Number of casual partner last 7 days, median (min– max)	0 (0–20)			2 (0–20)		

Condom use practice

GENERAL CONDOM USE

The reported general condom use experience was quite low among FSW in both sites: around 85% reported ever seeing a condom; around half of all respondents had ever used a condom with any partner and just above 10% reported using a condom at their first sex (Figure 11, following page).

Figure 11. General condom use practice



Denominator: All respondents

CONDOM USE PRACTICES WITH PAYING CLIENTS

As expected, less than 30% of respondents from both sites reported consistently (always) using condoms with clients in the past 12 months (Table 9). Similarly, more than half of them used a condom at last sex with a client. In addition, over 20% of FSW in Dili and Baucau reported ever having sex without a condom because they would receive extra money.

Table 9. Condom use practices with clients among FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Frequency of condom use with clients in past 12 months						
Sometimes/Do not use	139	70.7	(60.6 – 80.8)	78	72.2	(61.2 – 83.1)
Always	55	29.3	(19.2 – 39.4)	32	27.8	(16.9 – 38.8)
Used condom at last sex with a client						
No	108	57.4	(46.6 – 68.2)	56	51.6	(38.4 – 64.7)
Yes	86	42.6	(31.8 – 53.4)	54	48.4	(35.3 – 61.6)
Ever had sexual intercourse with a client without a condom to receive extra money						
No	141	78.1	(70.3 – 85.9)	82	76.2	(67.5 – 84.9)
Yes	52	21.9	(14.1 – 29.7)	26	23.8	(15.1 – 32.5)

CONDOM NEGOTIATION WITH CLIENTS

More than one third of respondents in both Dili and Baucau never tried to convince their client to use a condom throughout their sex work (Table 10, following page). Among those who ever tried to convince their client to use a condom, 25% of respondents in Dili and 38% in Baucau reported it always being difficult in the last 12 months.

Table 10. Condom negotiation with commercial clients among FSWs in Dili and Baucau

	Dili (N=202)			Baucau (N= 110)		
	n	%	95% CI	n	%	95% CI
Ever tried the client to use condom						
No	63	37.1	(28.8 – 45.4)	38	37.8	(26.6 – 49)
Yes	139	62.9	(54.6 – 71.3)	72	62.2	(51 – 73.4)
Frequency of difficulty in negotiation of using condom with client (Among those who ever tried)						
None of the time	85	65.1	(54.9 – 75.3)	34	49.5	(35.5 – 63.4)
Sometimes	13	10.5	(1.6– 19.5)	7	12.2	(2.6 – 21.7)
All the time	32	24.4	(16 – 32.8)	31	38.4	(21.4 – 55.3)

CONDOM USE WITH REGULAR AND CASUAL PARTNERS

In general, the proportion of FSW reporting condom use with non-paying regular and casual partners was lower than the proportion reporting the use of condoms with clients (Table 11). These responses were consistent over 12 months and at last sex. When comparing condom use with non-paying clients between survey sites, the respondents in Dili (23%) who reported using a condom was much lower compared to Baucau (36%) FSW, both at last sex and in the past 12 months.

Table 11. Condom use practices with non-paying partners (regular and casual partners) among FSW in Dili and Baucau

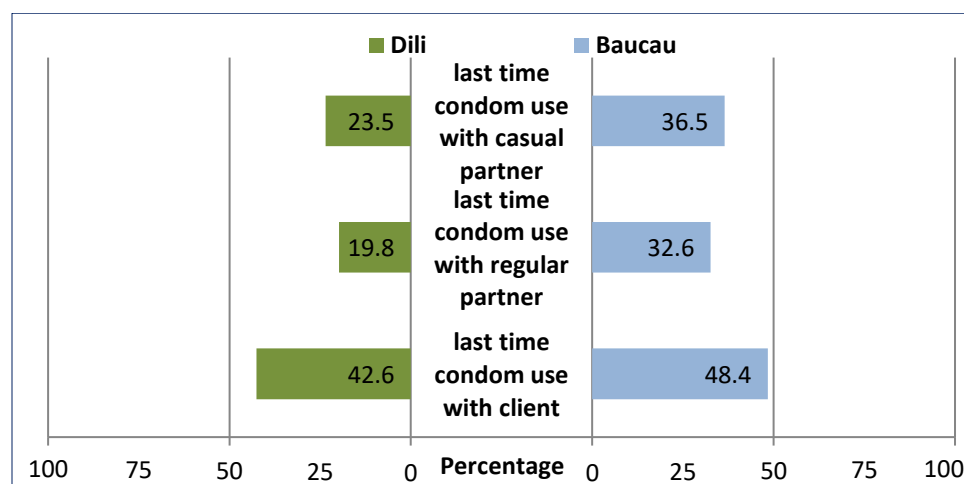
	Dili (N=202)			Baucau (N= 110)		
	n	%	95% CI	n	%	95% CI
Frequency of condom use with non-paying regular partner in the past 12 months						
Sometimes/Not use	161	90.6	(84.8 – 96.5)	90	83.4	(75.5 – 91.2)
Always	16	9.4	(3.5 – 15.2)	19	16.6	(8.8 – 24.5)
Used condom at last sex with non-paying regular partner						
No	138	80.2	(71.1 – 89.3)	73	67.5	(55.3 – 79.6)
Yes	37	19.8	(10.8 – 28.9)	36	32.6	(20.4 – 44.7)
Frequency of condom use with non-paying casual partner in the past 12 months						
Sometimes/Not use	140	97.5	(95 – 100)	73	77.4	(66.7 – 88.1)
Always	6	2.5	(0 – 5)	25	22.6	(11.9 – 33.3)
Used condom at last sex with non-paying casual partner						
No	125	76.5	(66.7 – 86.3)	69	63.5	(52.3 – 74.7)
Yes	42	23.5	(13.7 – 33.3)	39	36.5	(25.3 – 47.7)

LAST TIME CONDOM USE WITH DIFFERENT PARTNERS

Figure 12 compares the proportion of last time condom use practice among FSW with different partners between the survey sites (Table 12). Overall in both sites, this proportion was highest when respondents had sex with a client (Dili: 42.6 % and Baucau: 48.4%) and lowest with a regular partner (Dili: 19.8 % and

Baucau: 32.6%). Moreover, the respondents from Baucau reported using condoms more often with any partner compared to Dili respondents.

Figure 12. Last time condom use with any partner among FSWs in Dili and Baucau



Denominator: All respondents

SOURCE OF CONDOMS

In each site, the most frequently reported places/persons where respondents obtained a condom the last time they obtained a condom were from a peer (73% in Baucau and 44% in Dili), NGOs (64% in Baucau and 34% in Dili), a private house (45% in Baucau and 59% in Dili) and a salon (29 % in Baucau and 34% in Dili) (Table 12). More than 20% of respondents from Dili reported being able to obtain a condom from the pharmacy and outreach workers whereas no one or only 11% of respondents from Baucau mentioned obtaining condoms from these sources. Similarly, service coverage for FSW was higher in Baucau compared to Dili. The proportion of FSW receiving a condom from an NGO volunteer in the last 12 months was 48% in Baucau compared to 25% in Dili.

Table 12. General condom accessibility/availability among FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Place/person from whom respondent obtained a condom (the last time they obtained one) (Multiple responses possible)						
Peer	70	44.4	(32.2 – 56.6)	50	73	(59.5–86.5)
Educator/outreach worker	36	23.1	(10.1 – 36.1)	7	11.7	(5 –18.5)
Condom dispenser (bar/night club/restaurant)	15	7.9	(1.3 – 14.4)	3	2	(0 –5.8)
NGO	56	34	(23.5 – 44.5)	42	63.7	(45.6–81.7)
Pharmacy	35	23.5	(13.4 – 33.6)	--	--	--

Client	3	0.7	(0– 6.1)	--	--	--
Friend	15	9.5	(0.8 – 18.2)	2	2.9	(-1.7 –7.5)
Salon	45	34	(21.3 – 46.8)	23	28.8	(16.4–41.2)
Private house	74	59	(46.4 – 71.5)	32	44.9	(29.2– 0.5)
Health clinic	6	5.3	(1.4 – 9.2)	2	1.8	(-4.5 – 8.2)
Brothel/sex work venue	3	1.8	(0 – 4.3)	--	--	--
Received condom from a NGO volunteer in the last 12 months (Among all respondents)						
No	147	75.4	(66.4 – 84.5)	58	52.4	(38.8 – 66)
Yes	55	24.6	(15.5 – 33.6)	52	47.6	(34 – 61.2)

SUBSTANCE USE AMONG FSW

Alcohol consumption was more common among FSW in the capital city, with more than 40% of women reported drinking alcohol in the last month (Table 13). In Baucau, this proportion was less than 15%. The percentage of FSW who reported having sex under alcohol was also higher (26%) among respondents in Dili and lower in Baucau (12%). Few FSW (1.5%) from Dili and no FSW from Baucau reported ever using drug.

Table 13. Alcohol and drug use among FSW in Dili and Baucau

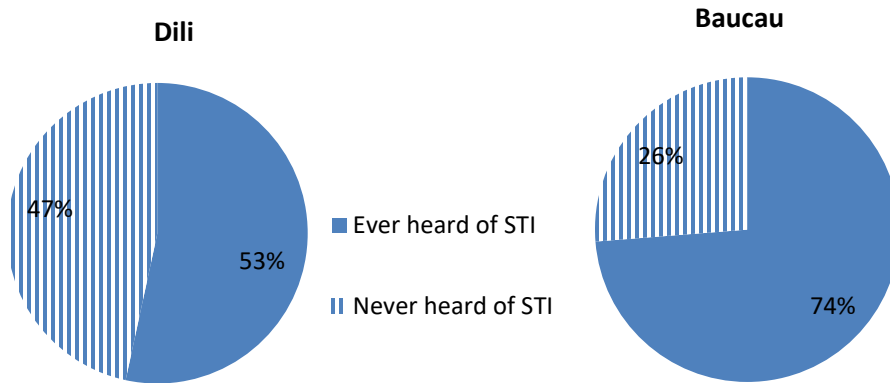
	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Frequency of drinking alcohol						
Never	81	43.9	(35 – 52.8)	84	82.6	(76.6–86.6)
Not in the last 4 weeks	24	14.4	(7.8 – 21.1)	7	4.1	(-6.3–14.5)
Less than once a week	64	31.2	(22.1– 40.3)	17	12.9	(11.3–14.5)
At least once a week	25	10.5	(2.7 – 18.2)	1	0.4	(0–10.3)
Had sex under alcohol in the past 4 weeks						
No	140	73.9	(64.3 – 83.5)	91	88.2	(78.3–98.1)
Yes	56	26.1	(16.5 –35.7)	17	11.8	(1.9–21.7)
Ever used drug						
No	189	98.5	(96.4 –100)	107	100	--
Yes	4	1.5	(0 – 3.6)	--	--	--

SEXUALLY TRANSMITTED INFECTIONS (STI)

Awareness about STI

Awareness about STI among FSW in Baucau was moderately high with 74% reporting that they had heard of diseases that can be transmitted through sexual intercourse (Figure 13, following page). However in Dili, only half of FSW (53%) reported awareness about STI.

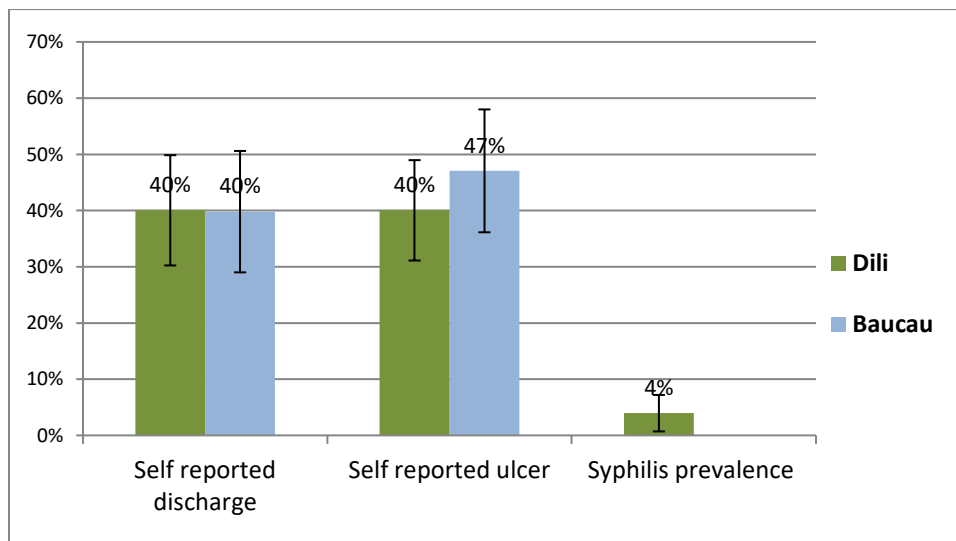
Figure 13. Awareness of sexually transmitted infections among FSW in Dili and Baucau



Syphilis prevalence and self-reported STI

A sizable percentage of FSW reported a history of STI symptoms in the last 12 months (Figure 14). Forty percent of respondents from both sites reported having vaginal discharge in the last year. Although the proportion of FSWs reporting a genital ulcer in the last year was slightly higher in Baucau, only the women in Dili were identified with active Syphilis at the time of survey (4%).

Figure 14. Syphilis prevalence and self-reported STI in the last 12 months



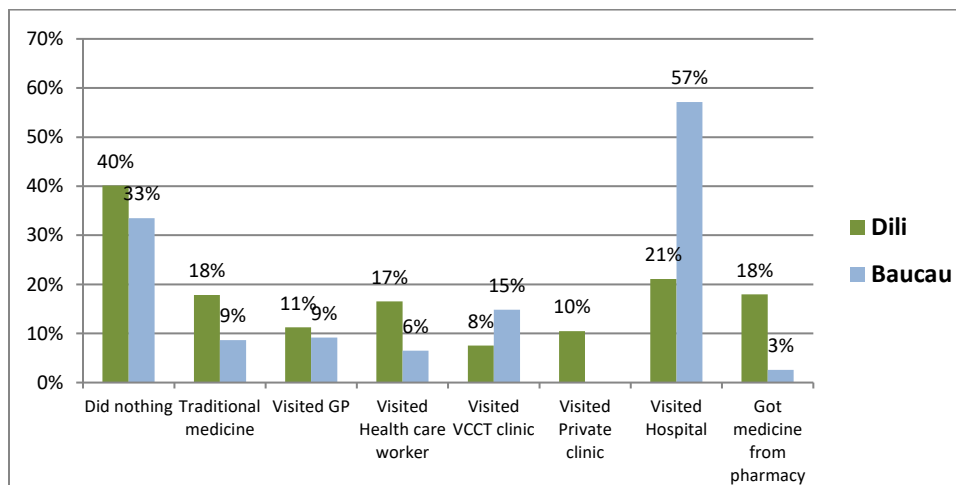
Denominator: All respondents

Treatment seeking behavior for STI symptoms

The patterns of health seeking behavior for last STI symptoms were quite different between FSW in Dili and Baucau (Figure 15). Among Dili FSW, the most frequent reported response was no action (40%),

followed by visited hospital (21%), traditional medicine or got medicine from pharmacy (18%), visited health care worker (17%), visited general practitioner (11%), visited private clinic (10%), and visited a Voluntary Confidential HIV Testing and Counseling (VCCT) clinic (8%). In Baucau, respondents with STI symptoms were more likely to seek treatment from hospital (57%) and less frequently reported seeking treatment at general practitioner (9%) or traditional medicine (9%) or health care worker (6%) or VCCT clinic (15%) or private clinic (0%). But, one third of respondents also reported doing nothing (33%).

Figure 1. Treatment seeking behavior for STI symptoms among FSW in Dili and Baucau



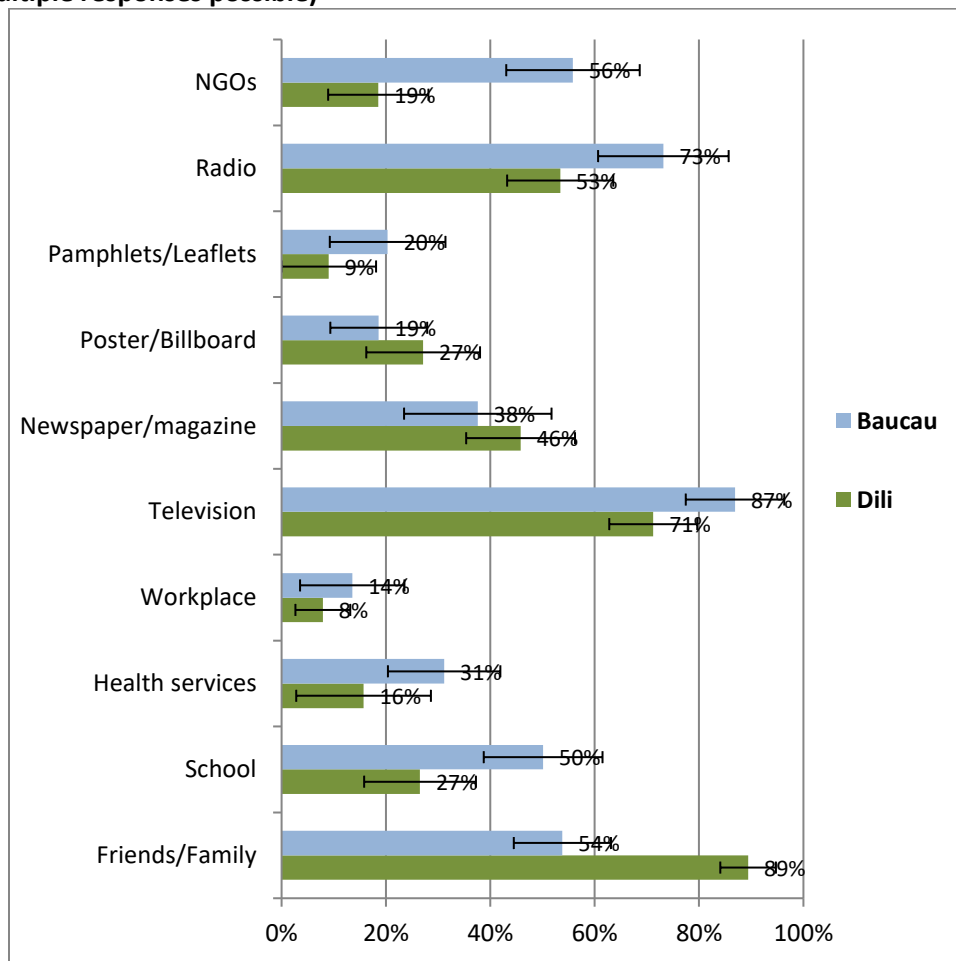
Denominator: All respondents

KNOWLEDGE AND ATTITUDE ABOUT HIV/AIDS

Source of information about HIV/AIDS

The reported sources of information about HIV and AIDS varied between the sites (Figure 16, following page). In Dili, friends/family (89%) were the main source of HIV information among respondents, while in Baucau, a similar amount (87%) named television as a dominant source of information. The second most frequently reported source of information was television (71%) for Dili respondents and radio (73%) for FSW in Baucau. In addition, respondents from Baucau named NGO (56%) and school (50%) as other common sources of information.

Figure 2. Figure Source of information about HIV and AIDS reported by FSW respondents, Dili and Baucau (Multiple responses possible)



Denominator: All respondents

Knowledge on HIV/AIDS prevention and transmission

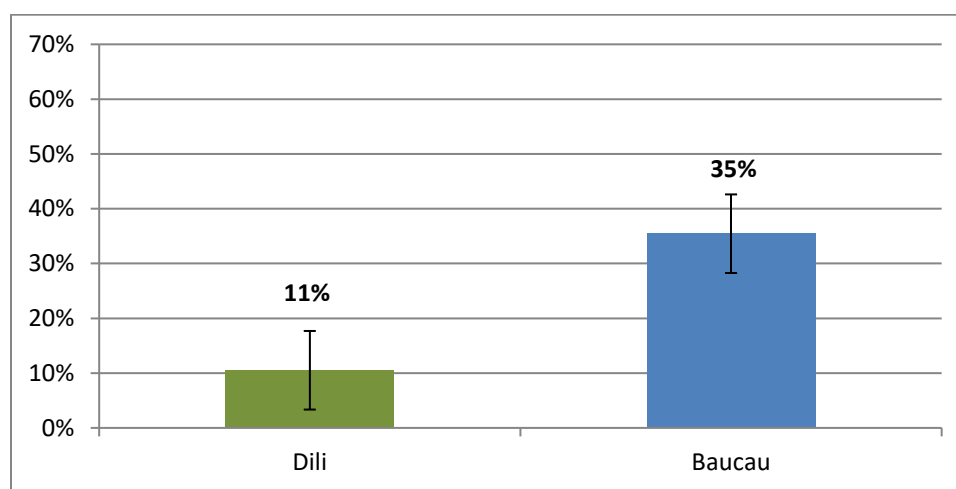
Respondents from both sites were asked the standard measure of comprehensive knowledge of HIV prevention and transmission questions (Table 14, following page). Most respondents in both Dili and Baucau incorrectly responded that HIV can be transmitted through mosquito bites. The second most incorrectly answered question was about the knowledge that a person cannot get HIV by sharing food with a person who is infected with HIV. For the remaining three questions about HIV prevention and transmission, 68% to above 90% of respondents in both sites gave correct answers. When looking at the responses between Dili and Baucau, FSW in Baucau had higher levels of knowledge on preventing HIV transmission.

Table 14. Knowledge about HIV prevention and transmission among FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Can reduce the risk of getting HIV by using a condom every time						
No	52	31.3	(20.6 – 42)	21	21.8	(13.5 – 30.1)
Yes	87	68.7	(58 – 79.4)	75	78.2	(69.9 – 86.5)
A person can get HIV from mosquito bites						
No	71	50.7	(39.8 – 61.7)	53	59.2	(46.2 – 72.2)
Yes	61	49.3	(38.3 – 60.2)	43	40.8	(27.8–53.8)
A person can get HIV by sharing food with someone who is infected						
No	74	48.1	(36.5 – 59.6)	66	76.6	(65.3 – 87.8)
Yes	65	51.9	(40.4 – 63.5)	30	23.4	(12.2 – 34.7)
Having sex with only one faithful, uninfected partner reduce the risk of HIV transmission						
No	45	32	(21.7 – 42.3)	12	11.1	(3 – 19.2)
Yes	90	68	(57.7 – 78.3)	86	88.9	(80.8 – 97.0)
A healthy-looking person can have HIV						
No	20	9.8	(0 – 19.7)	12	13.9	(6.7 – 21)
Yes	117	90.2	(80.3 – 100)	85	86.1	(79 – 93.3)

A composite measure where respondents gave all correct answers to five knowledge questions was calculated to obtain the level of comprehensive knowledge about HIV prevention and transmission (Figure 17). Against this measure, FSW in Baucau performed much better than those in Dili; more than one third of FSW in Baucau gave correct answers to all five questions while only 11% in Dili could provide the correct answers.

Figure 3. Proportion of FSW respondents in Dili and Baucau with comprehensive knowledge on HIV prevention and transmission; GARPR composite indicator



Denominator: All respondents

Attitudes about HIV and risk perception among FSW

A majority of FSW from both cities (more than 70%) reported having a chance to discuss HIV with any partner (Table 15). When asked whether they would care for a family member who was living with HIV in their home, more than 65% of respondents in Baucau and a slightly higher percentage (78%) in Dili reported supportive and positive attitude towards the HIV positive individual. However, HIV related risk perception appeared low. Most respondents in both Dili and Baucau reported no risk of contracting HIV and a few (5.2%) from Dili reported that they simply did not know about the risk of contracting HIV.

Table 15. Attitude on HIV and risk perception among FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Ever discussed about HIV or AIDS with any sexual partner						
No	36	23.9	(14.8 – 33)	26	28	(18.7 – 37.3)
Yes	106	76.1	(67 – 85.2)	71	72	(62.7 – 81.3)
Willing to take care a relative who becomes ill with HIV						
No	28	21.7	(12.8 – 30.5)	35	34.3	(23.7 – 44.8)
Yes	119	78.3	(69.5 – 87.2)	63	65.8	(55.2 – 76.3)
Perceived risk of getting infected						
No	89	70.1	(56.5 – 83.6)	64	66.1	(54.2 – 78.1)
Yes	34	24.8	(12.3 – 37.3)	33	33.9	(22 – 45.8)
Don't know	7	5.2	(0 – 11.5)	--	--	--

PREVENTION PROGRAMS EXPOSURE

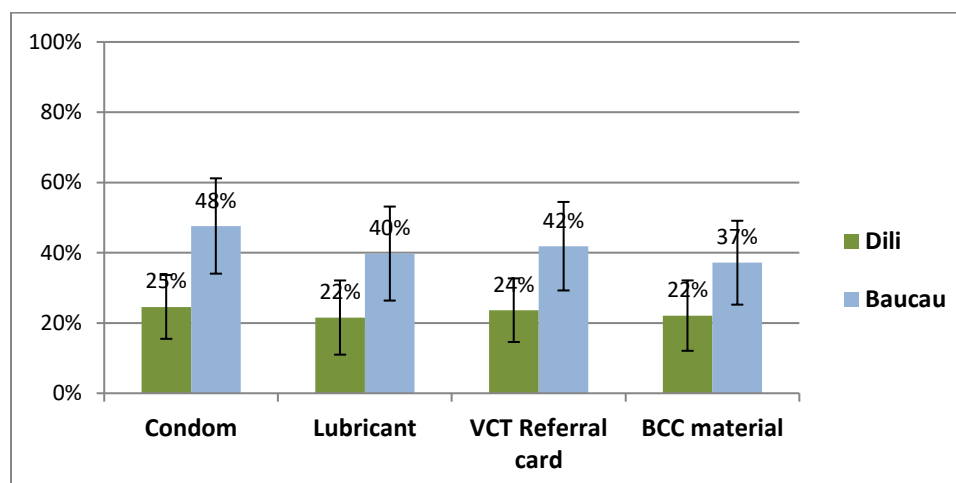
The proportion of FSW who received outreach services at least once by a volunteer from Fundasaun Timor Hari'l (FTH) was fairly high (56%) in Baucau compared to 33% in Dili (Table 16, following page). Those FSW who reported receiving HIV or sexual health information in the last 12 months was also high (82%), among those who ever heard about FTH in Baucau, and slightly lower in Dili (65%). However, among those who received services in the last year, FSW in Dili were more frequently contacted by a volunteer from FTH than their counterparts from Baucau—more than 80% were contacted at least once a month in Dili, compared to half of respondents in Baucau. Generally, the population covered with outreach services was greater than the proportion who visited a drop in center (DIC). But, the same pattern of accessing services was observed between the two sites.

Table 16. Exposure to HIV/ AIDS related services among FSW, Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
Ever received HIV or sexual health information from FTH						
No	126	67.4	(55.5 – 79.3)	48	43.6	(30.5– 56.7)
Yes	76	32.6	(20.7 – 44.5)	62	56.4	(43.3–69.5)
Received HIV or sexual health information from FTH in the last 12 months (Among those ever heard of						
No	29	34.9	(24 – 45.8)	16	18.6	(5.6 – 31.5)
Yes	67	65.1	(54.2 – 76.1)	61	81.5	(68.5 – 94.4)
Frequency of contacts by a volunteer from FTH for HIV or sexual health information in last 12 months (Among those who received HIV or sexual information in the last 12 months)						
Few times a week	15	14.2	(4.5 – 23.9)	11	19.3	(6 – 32.5)
2-4 times a month	22	27.6	(14.6 – 40.6)	10	11.1	(1.5 – 20.8)
Once a month	18	39.4	(21.4 – 57.3)	13	19.9	(2.7 – 37.0)
1-2 times in 6 months	12	18.9	(-2.1 – 39.8)	26	49.8	(37.7 – 61.8)
Ever visited FTH drop in center(DIC) in Palapaco						
No	135	72.7	(61.1 – 84.4)	66	59.2	(46.7–71.6)
Yes	67	27.3	(15.7 – 38.9)	44	40.9	(28.4–53.3)
Visited FTH DIC in Palapaco in the last 12 months (Among those who ever heard of FTH)						
No	33	37.4	(24.1 – 50.8)	35	41.9	(24.4 – 59.4)
Yes	62	62.6	(49.2 – 75.9)	43	58.1	(40.6 – 75.6)
Frequency of visit to FTH DIC in Palapaco (Among those who visited FTH DIC in the 12 months)						
Few times a week	16	15.5	(6.1 – 25)	5	7.0	(2.8 – 11.3)
2-4 times a month	17	33	(16 – 50.1)	5	11.8	(0 – 23.7)
Once a month	13	26.5	(15.5 – 37.4)	11	17.1	(0 – 35.4)
One or two times in 6 months	16	25	(5.2 – 44.7)	23	64.0	(56.4 – 71.7)

Similarly, coverage by outreach workers was uniformly high among Baucau FSW when looking at the different types of materials which respondents received from a volunteer in the last 12 months (Figure 18, following page). Thirty seven to 48% of Baucau FSW reported receiving different prevention commodities in the last 12 months whereas just above 20% in Dili were provided with those services.

Figure 4. Proportion of respondents who have received prevention commodities from outreach workers in the last 12 months



Denominator – among all respondents

HIV TESTING

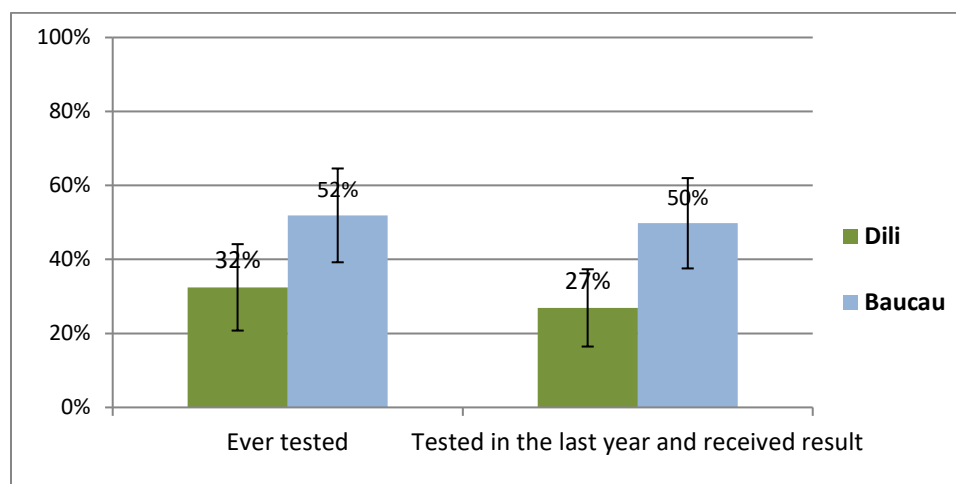
As in previous indicators, the proportion of respondents who had ever been tested was high in Baucau (52%) and low in Dili (33%) (Table 17). Among those who had ever tested, the majority of respondents from both sites reported having an HIV test in the last 12 months (79% in Dili and 90% in Baucau), among which almost all in both Dili and Baucau received their test results and indicated their last HIV status.

Table 17. HIV testing among FSW

	Dili (N=202)			Baucau (N=110)		
	N	%	95% CI	N	%	95% CI
Has ever been tested for HIV						
No	119	67.6	(55.9 – 79.2)	53	48.1	(35.4 – 60.8)
Yes	75	32.5	(20.8 – 44.1)	57	51.9	(39.2– 64.6)
Tested for HIV in past 12 months (among those ever tested)						
No	13	21.1	(11.3 – 30.9)	8	9.6	(0 – 29.7)
Yes	68	78.9	(69.1 – 88.7)	54	90.4	(70.3 – 100)
Participant received HIV test result at last testing (among those who tested in the past 12 months)						
No	2	1.4	(0 – 14.7)	1	1.7	(06 – 8)
Yes	66	98.6	(85.3 – 112)	53	98.3	(92 – 100)
Result of last HIV test (among those who tested and got the results in the past 12 months)						
Don't know my results	--	--	--	1	4.2	(3.3 – 5.2)
Negative	66	100	--	52	95.8	(94.8 – 96.7)

In both sites, FSW who had ever utilized the testing services consistently accessed the testing service; the proportion that had ever been tested was similar to the proportion that had been tested in the last year and knew the results (Figure 19). As a result, 50% of FSW in Baucau and 27% of FSW in Dili met the global testing coverage definition.

Figure 5. Proportion of FSW who ever tested, and who tested last year and received results (GARPR)



HIV AND SYPHILIS PREVALENCE

HIV and Syphilis prevalence among women in both Dili and Baucau were measured during the survey (Table 18). All FSW from both sites were negative for both tests at the time of the survey with the exception of a few Dili respondents (4%) who tested positive for Syphilis.

Table 18. Prevalence of HIV and Syphilis among FSW in Dili and Baucau

	Dili (N=202)			Baucau (N=110)		
	n	%	95% CI	n	%	95% CI
HIV						
Negative	201	100	--	110	100	--
Positive	--	--	--	--	--	--
Syphilis						
Negative	191	96.1	(92.8 – 99.3)	110	100	--
Positive	10	4	(0.7 – 7.2)	--	--	--

DISCUSSION AND RECOMMENDATIONS

Low HIV and Syphilis prevalence among FSW

We found no HIV infection among FSW in either of the sampled cities. Few FSW in Dili (4%) and none in Baucau were positive for active syphilis at the time of the survey. Although HIV and Syphilis prevalence appear to be low, inconsistent condom use with multiple partner types can quickly spread any new cases of HIV. It is important to continue monitoring this population for HIV and STI.

FSW may not have many alternatives but to sell sex.

More than 10% of FSW in both sites were illiterate. One third of respondents in both Dili and Baucau reported attaining only a primary education. Half of FSW in both sites reported being single and 45% in Dili and 10% in Baucau reported being either separated or divorced. About half of FSW in both sites reported having had children and two thirds of them reported having two or more children. Only 15% of FSW in Dili and 37% in Baucau reported earning an income in addition to selling sex. When asked about the main work they do to earn extra income, almost 40% in Dili reported working in a restaurant or salon. By contrast, most FSW in Baucau reported doing manual work such as cleaning and agriculture. Improved education and economic empowerment such as provision of an alternative source of income are needed to provide women with alternatives to selling sex.

High levels of risky sexual behaviours.

Most FSW have multiple sexual partners and use condoms inconsistently resulting in increased risk for HIV and STI transmission. Only half of FSW in both sites had ever used a condom with any sexual partner. HIV prevention programs should be strengthened and scaled up to reduce risky sexual behaviours in Dili and Baucau.

Risky alcohol use and low substance use.

Between 40% of FSW in Dili and 13% in Baucau reported ever consuming alcohol. Alcohol consumption was more common among FSW in Dili. Only a few FSW in Dili reported ever using drugs. It is well known that alcohol consumption and drug use are associated with risky sexual behaviours such as unprotected sex and should be monitored when screening FSW during routine health visits.

Limited knowledge of STI and patterns of treatment seeking behaviour for STI symptoms

About half of FSW in Dili and over 70% in Baucau had heard of diseases that can be transmitted through sexual intercourse. When asked about treatment seeking behaviour for last STI symptoms, 40% of FSW in Dili and 30% of Baucau reported doing nothing. Low awareness about STI may result in neither recognizing an infection on a sexual partner nor seeking advice and treatment when infected, thereby increasing the risk of acquiring or transmitting an STI. HIV/STI prevention programs should be integrated

into clinical service interventions providing systematic screening for STI (including symptomatic patients as well as asymptomatic patients). Addressing barriers to healthcare access also plays an important role in encouraging FSW to regularly attend clinics. Health facility-based services should consider including systematic physical examinations for STI in people known or suspected to be FSW and all females reporting multiple sex partners since signs or symptoms may neither be self-recognized nor reported.

Low composite scores for HIV knowledge.

FSW in both sites had low composite scores for HIV knowledge. Only 11% of FSW in Dili reported the correct answers to all five questions whereas one-third in Baucau reported the correct answers. There is evidence of the need for increased education, especially in Dili, about HIV risk and transmission for sexually active females.

HIV testing

Only 33% of FSW in Dili and half in Baucau reported ever having had a HIV test. The percentages of FSW who have ever been tested for HIV are low given the level of sexual risk in which they engage.

Service coverage

Over half of FSW in Dili and one-third in Baucau received outreach services from FTH. FHT's prevention programs should be strengthened and scaled up.

SUMMARY OF KEY RECOMMENDATIONS

- Scale-up prevention and testing programs, especially in Dili where active syphilis cases were found.
- Scale-up coverage, screening, condom distribution and implementation of combination prevention.
- Map FSW activities to identify the gaps in prevention.
- Make use of the knowledge that FSW constitute a large social network (as confirmed by the fast recruitment of FSW in this study) to deliver prevention. Hire FSW as outreach workers and educators.
- Operationalize the concept of combination HIV prevention given the multiplicity of factors which make FSW vulnerable to HIV and other infections.
- Integrate prevention and screening among FSW at public health centers, especially in reproductive health services.

- Educate health staff to improve prevention services targeting high risk populations, especially FSW.
- Educate pharmacists to the needs of FSW, especially since FSW often use pharmacies to buy condoms or STI treatment.
- Educate providers of condoms (shops, stores, etc.) about the needs of FSW, to encourage FSW to continue purchasing condoms.
- As the majority of FSW have children, strengthen family planning services, prenatal consultation and preventing mother to child transmission of HIV for FSW.
- Develop programs targeting the clients of FSW (conduct action research activities on the acceptability of condoms by clients and whether clients pay more if a FSW does not use a condom).
- Include syphilis and other STI screening in all HIV testing (rapid testing, confirmation and treatment);
- Enhance youth programs to include healthy lifestyle choices and support for young girls who may be vulnerable to becoming sex workers;
- Educate doctors and other medical staff to assess alcohol and drug use of females who have multiple sex partners; also educate doctors and other medical staff to provide effective and accurate counselling to women at risk of alcohol and drug abuse;
- Increase outreach efforts/policy changes and reducing stigma related to female sex work, to address sexual health needs of FSW and their partners;
- Integrate systematic screening for STI (which are unrecognized by FSW) into programs providing services to FSW and women in general;
- Adapt new WHO guidelines for prevention and treatment of STI (http://www.who.int/hiv/pub/guidelines/msm_guidelines2011/en/) among FSW;
- Increase education access to and availability of HIV risk and transmission for sexually active females;
- Continue to scale up HIV prevention and education services through organizations that cater to the specific needs of FSW and women in general;

RESULTS MSM

RESPONDENT'S CHARACTERISTICS

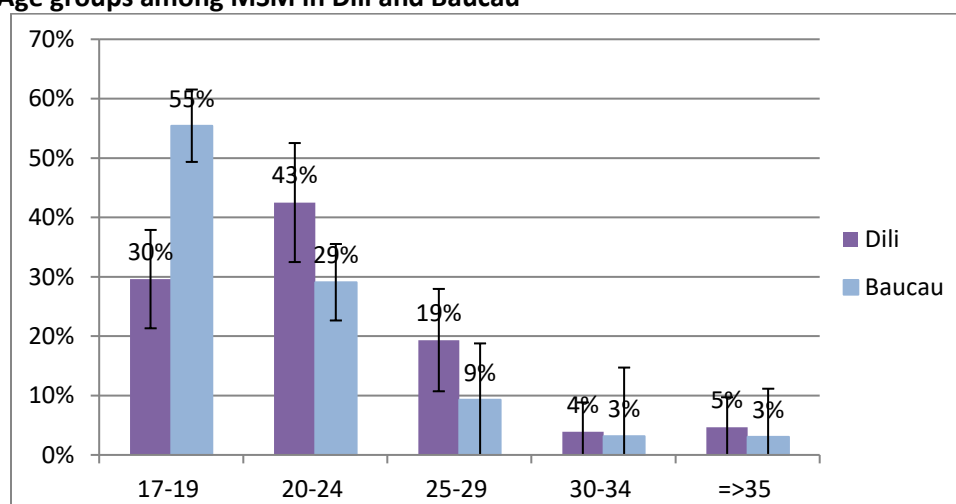
Age

A larger proportion of MSM in Dili were in the 20-29 years age group compared to Baucau (Table 19, Figure 20). Over 50% of MSM in Baucau were 19 years or younger. Dili MSM had a median age of 22 whereas Baucau MSM had a median age of 19 years. However, both cities had a higher proportion of MSM who were younger than 25 years.

Table 199. Age of MSM in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Age groups						
≤19	56	29.6	(21.3 – 37.9)	52	55.4	(49.3 – 61.5)
20-24	85	42.5	(32.5 – 52.5)	31	29.1	(22.6 – 35.5)
25-29	44	19.3	(10.7 – 28)	11	9.3	(0– 18.8)
30-34	8	3.9	(0– 8.8)	5	3.2	(0– 14.7)
=>35	12	4.7	(0– 9.7)	6	3	(0 – 11.1)
Median (min–max) age in years	22 (17 – 67)			19 (16 – 49)		
Age groups						
≤24 years	141	72.1	(62.7– 81.5)	83	84.5	(72.5 – 96.6)
≥ 25 years	64	27.9	(18.5–37.3)	22	15.5	(3.4 – 27.5)

Figure 20: Age groups among MSM in Dili and Baucau



Denominator: All respondents

Literacy, education, civil status and living situation among MSM

Almost all MSM in both cities reported being able to read and write and the largest percentage reported having a secondary or technical school education (Table 20). Almost all MSM reported being unmarried and living with parents and siblings.

Table 20: Literacy, education, civil status and living situation among MSM (Dili and Baucau)

	Dili (N= 205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Literacy status (Can read and write)						
No	7	2.1	(0 – 9.2)	7	3.1	(0– 12.8)
Yes	198	97.9	(90.8 –100)	98	96.9	(87.2 –100)
Education Status						
No formal education	3	1	(0 – 6.9)	5	2.8	(0 – 8.5)
primary/pre-secondary	33	16	(6.6 – 25.3)	24	23.3	(13.7 – 32.9)
secondary/technical school	115	53.4	(45.9 – 61)	62	58.8	(47.6 – 70)
Polytechnic/diploma/univer	54	29.6	(26.6– 32.6)	14	15.2	(6.9 – 23.4)
Civil status						
Married/Divorced	13	8.0	(4 – 12)	9	8.2	(2.5 – 13.9)
Not Married	185	92.0	(88 – 96)	96	91.8	(86.1 – 97.5)
With whom respondent lives (Multiple responses possible)						
Parents	101	43.2	(32.9– 53.6)	80	77.2	(69.3 –85)
Brothers/sisters	94	43.6	(33 – 54.3)	65	64.7	(55.1– 74.4)
Other relatives	22	13.2	(5.1 – 1.3)	24	23	(15.9 – 30)
Children	5	4.5	(0 – 9.2)	4	3.7	(0 – 7.5)
Hela Mesak	29	15.4	(9.5 – 21.4)	3	2.8	(0 – 5.8)

Income and financial responsibilities

Eighty one percent of MSM in Dili and 86% in Baucau reported not being employed (Table 21). Among those who had employment, about one third in both cities had NGO related work and 29% in Dili and 46% in Baucau worked in the service sector such as a restaurant, hotel or salon. Just over half in Dili and 71% in Baucau reported earning less than 50 USD a month. Almost 30% of MSM in Dili reported supporting no one compared to 1% in Baucau; 86% of MSM in Baucau reported supporting 1 to 2 other people.

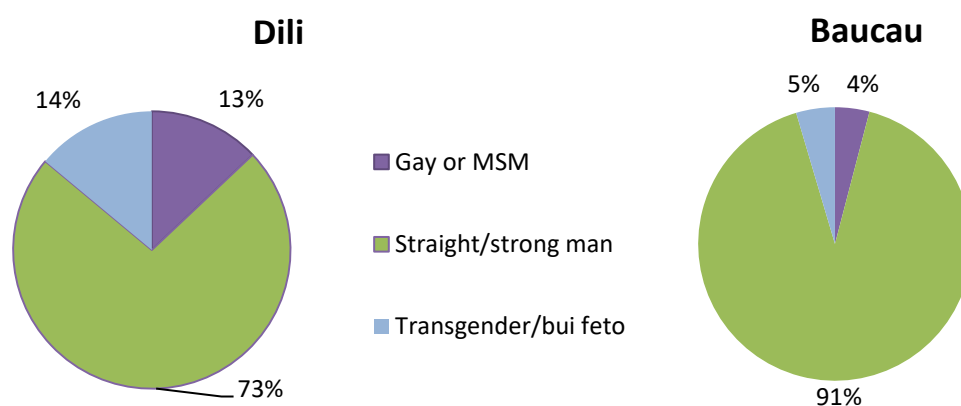
Table 21. Income and financial responsibilities among MSM in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Employment status						
Not employed	147	81.0	(69.3– 92.7)	70	85.8	(73.8 – 97.8)
Part-time	31	10.8	(1.3 – 20.3)	14	12.1	(0 – 24.5)
Full-time	23	8.2	(0 – 16.5)	3	2.2	(0– 7.1)
Type of work (Among those who were employed)						
NGO related	21	30.4	(12.8 – 48.1)	7	33.6	(4.6 – 62.6)
restaurant/hotel or salon	24	39.5	(18.3 – 60.7)	7	46.2	(10.4 – 82.1)
Other	11	30	(12.8 – 47.2)	3	20.2	(0.6 – 39.7)
Monthly personal income (in USD)						
Less than <50	97	54.9	(44.3 – 65.5)	72	71.0	(60.1 – 82)
50- 100	43	22.5	(14 – 31.1)	16	17.0	(10.1 – 24)
101-200	31	7.8	(0– 16.1)	9	6.2	(0 – 13.7)
More than 201	30	14.8	(10.9 – 18.7)	8	5.8	(0 – 12.3)
Financially support others						
No one	55	29.8	(20.2 – 39.4)	1	1.3	(0– 9.4)
1-2	87	44.3	(34.8 – 53.8)	86	86.3	(76.5 – 96.1)
3-5	35	12.8	(4.5 – 21.2)	9	8.0	(0– 20)
≥ 6	26	13.1	(5.3 – 20.8)	9	4.5	(1.3 – 7.7)
Financially support others, median (min – max)	1 (0-20)			1 (0-24)		

MSM IDENTITY

The majority of MSM in both cities reported their sexual identity as being straight or ‘strong man’ (Figure 21). Under 15% in Dili and 5% and under in Baucau reported identifying as Gay or MSM or transgender or ‘bui fetu’.

Figure 61. Sexual identity among MSM, Dili and Baucau



Almost all MSM reported their gender identity to be male; however, 11% in Dili and 7% in Baucau reported their gender identity to be either Transgender or female (Table 22). When asked about their sexual preference, 58% in Dili and 77% in Baucau replied that transgender and women were preferred. The most cited reason for why participants preferred to have sex with males was that they were sexually attracted to them.

Table 22. Identity, sexual preference, and main reason of being MSM in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Gender identity						
Male	156	88.6%	(76.5 – 100)	93	92.9	(82.9 – 100)
Female	--	--	--	4	4.3	(0 – 13)
Transgender (TG)	42	11.4	(0 – 23.5)	8	2.8	(0 – 16.2)
Sexual identity						
Gay or MSM	23	13.0	(9.5 – 16.5)	5	4.1	(0 – 9.2)
Straight/ ‘Strong man’	123	73.0	(63.3 – 82.9)	90	91.3	(85.3 – 97.4)
Transgender/ ‘bui fetu’	59	14.0	(4.2 – 23.7)	10	4.6	(2 – 7.1)
Sexual preference						
Men only	61	15.2	(10.5 – 19.9)	11	6.0	(2 – 10)
Women only	1	1.1	(0 – 8.8)	--	--	--
Transgender only	3	2.8	(1.3 – 4.3)	--	--	--
Men and women	4	2.5	(0 – 9.2)	8	7.0	(0– 17.7)
Transgender and women	98	58.0	(56.7 – 59.3)	76	77.0	(70.6 – 83.4)
Men and transgender	1	1.1	(0 – 2.5)	8	8.3	(5.3 – 11.2)
Men, women, transgender	37	19.4	(17.7 – 21.1)	2	1.7	(0– 11.8)
Main reasons of having sex with males						
Love	6	1.4	(-1.8 – 4.7)	8	7.1%	(0 – 14.8)
Sexually attracted to them	136	63.2	(54.5 – 72)	78	73.6%	(63.7 – 83.5)
Money or payment	43	23.4	(15.3 – 31.5)	18	19.3%	(12.6 – 26)
Other reason	19	11.9	(9.6 – 14.3)	--	--	--

The majority (85% in Dili and 88% in Baucau) never express themselves as feminine including wearing female clothing and make up (Table 23, following page). Overall, most MSM in Dili and Baucau have had friendships and have spent time with other MSM.

Table 23. Feminine expression and spending time with MSM in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Frequency of expressing themselves a female						
Never	144	84.8	(73 – 96.5)	36	88.4	(83.8 – 92.9)
Sometimes	31	8.7	(0 – 20)	5	5.2	(0 – 10.5)
All the time	30	6.5	(0– 15.5)	3	6.4	(0.7 – 12.1)
Had MSM friends						
None	26	13.2	(8.8 – 17.6)	13	13.1	(6.7 – 19.5)
A few	77	44.1	(34.1 – 54.1)	26	27.2	(13 – 41.5)
Some	49	27.1	(19 – 35.1)	33	31	(19.6 – 42.4)
Most	53	15.6	(8.2 – 23.1)	33	28.6	(19.5 – 37.8)
Spent free time with MSM or TG						
None	8	6.4	(0– 15.4)	4	3.9	(0 – 12.6)
A few	28	17.8	(8.2 – 27.5)	37	37.7	(27.6 – 47.8)
Some	114	60.2	(54.3 – 66)	34	32.3	(22 – 42.6)
Most	55	15.6	(13.4 – 17.8)	30	26.1	(22.6 – 29.7)

GENERAL SEXUAL HISTORY

General sexual history

The majority of MSM in both cities reported having their first sexual intercourse between the ages of 15 and 19 (median age of 16 years) and that their first sexual partner was female (Table 24). The median age of MSMs' first sexual partners was 17 years. As much as 59% in Dili and 32% in Baucau have never used a condom with any partner and 94% in Dili and 73% in Baucau did not use a condom during their first sexual act. Most MSM in both cities reported ever having sexual intercourse with a female and 47% in Dili and 10% in Baucau reported having overlapping (more than one) sexual relationships with any partner in the last 6 months.

Table 24. General sexual history and behaviors among MSM in Dili and Baucau

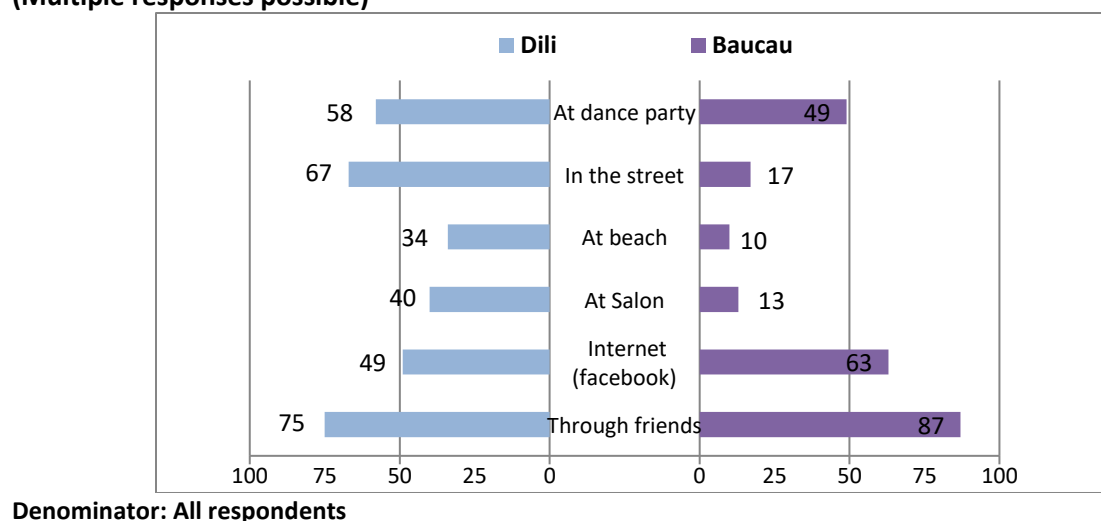
	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Age at first sexual intercourse						
≤14	52	18.2	(11.4 – 24.9)	11	9.2	(4.2 – 14.2)
15-19	140	72.9	(64.8 – 81.1)	91	88	(82.5 – 93.6)
≥20	13	8.9	(3.4 – 14.4)	3	2.8	(0 – 5.8)
Age at first sexual intercourse in years, median (min– max)	16 years (7 – 27)			16 years (10 –21)		

First sexual partner						
Man	63	15.8	(8.6 – 22.9)	19	12.9	(6.7 – 19.2)
Women	101	62.5	(53.2 – 71.7)	61	60.2	(50.2 – 70.3)
Transgender	37	21.8	(14.4 – 29.9)	25	26.9	(16.8 – 36.9)
First sexual partners' age, in years; median (min – max)	17 years (9 – 50)			17 years (11 – 45)		
Ever condom use with any partner						
No	116	59.1	(49.1 – 69.1)	36	32.5	(22.1 – 42.8)
Yes	88	40.9	(30.9 – 50.9)	67	67.5	(57.2 – 77.9)
Condom use at first sex						
No	196	94.4	(90.2 – 98.6)	79	72.9	(64.7 – 81.1)
Yes	9	5.6	(1.4 – 9.8)	26	27.1	(18.9 – 35.4)
Ever had sex with female (vaginal or anal sex)						
No	62	18.9	(10.4 – 27.4)	13	8.9	(3.6 – 8.9)
Yes	143	81.1	(72.6 – 89.6)	91	91.1	(85.8 – 91.1)
Had overlapped (more than one) sexual relationship with any partner in the last 6 months						
No	102	53.1	(43.7 – 62.5)	94	89.5	(84 – 95.1)
Yes	99	46.9	(37.5 – 56.3)	11	10.5	(4.9 – 16)

Ways to meet a new MSM/transgender partner for anal sex

Three quarters of MSM in Dili and 87% in Baucau most frequently meet their new MSM or Transgender anal sex partners through friends (Figure 22). More than 50% of MSM in Dili also reported meeting male sex partners at dance parties and in the street, whereas more than 50% of MSM in Baucau also reported meeting male sex partners on the internet.

Figure 22. Most frequent ways to meet a new MSM/TG partner for anal sex (Multiple responses possible)



SEX POSITION, SEXUAL PARTNERS, CONDOM AND LUBRICANT USE PATTERNS

Number of partners according to sex position among MSM

Just about all MSM, with a median number of 4 partners, in both cities reported being in the insertive position during anal sex in the past 12 months, however around 25% in Dili and 30% in Baucau reported being in the receptive position during anal sex in the past 12 months (Table 25).

Table 25. Number of partners according to sex position among MSM in the past 12 months in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Number of male/TG anal sex partners in past 12 months where respondent had insertive position						
No one	42	13.2	(5.7 – 20.6)	5	3	(0.2 – 5.8)
1– 4	74	45.9	(35.9 – 56)	61	63.7	(57.1 – 70.3)
5 – 9	53	25.5	(15.2 – 35.8)	30	28	(17.9 – 38.1)
≥10	36	15.4	(8.1 – 22.7)	9	5.4	(0 – 17.1)
Median (min–max)	4 (0 – 100)			4 (0 – 50)		
Number of male/TG anal sex partners in past 12 months where respondent had receptive position						
No one	125	73.2	(60.3 – 86.2)	71	70.7	(64.7 – 76.6)
1– 4	24	12.4	(0 – 24.9)	21	21.4	(8.8 – 34.1)
5 – 9	9	3.2	(0.2 – 6.1)	5	4.1	(0– 15.7)
≥10	47	11.3	(2.4 – 20.1)	8	3.8	(0– 10.4)
Median (min –max)	0 (0 – 200)			0 (0 – 80)		

Male sexual partners among MSM

STEADY/REGULAR MALE/TG SEXUAL PARTNERS AMONG MSM

Sixty seven percent of MSM in Dili and 92% in Baucau reported having a steady male or TG sex partner in the past 12 months (Table 26, following page). Among those having a steady male or TG sex partner, more than 90% reported having between 1 and 4 steady partners. Condom use consistency was low with more than 75% of MSM reporting never or sometimes using a condom with a steady partner in the past 12 months. Sixty six percent of MSM in Dili and 56% in Baucau reported not using a condom at last anal sex with a steady male partner.

Table 26. Steady male/TG sexual partners among MSM in the past 12 months in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Had steady male/TG sex partner in past 12 months						
No	65	32.9	(23.3 – 42.5)	10	7.9	(0.1 – 15.7)
Yes	140	67.1	(57.5 – 76.7)	95	92.1	(84.3 – 99.9)
Number of steady male/TG sex partners (among those who had regular partner in last 12 months)						
1-4	125	91.4	(76 – 106.9)	92	96.9	(92.2 – 101)
5-9	10	7.7	(-8.2 – 23.5)	2	2.9	(-1.8 – 7.6)
≥10	5	0.9	(-11.6 – 13.3)	1	0.2	(-0.2 – 0.6)
Number of steady male/TG sex partners, median (min –max)	2 (1 – 15)			1 (1 – 15)		
Frequency of condom use with steady male/ TG partner in past 12 months						
Never	123	60.5	(50.6 – 70.4)	36	33.3	(22.9 – 43.8)
Sometimes	45	23.2	(15.2 – 31.2)	43	42.3	(30.4 – 54.1)
Always	29	16.3	(9.7 – 22.9)	25	24.4	(15.4 – 33.4)
Used condom at last anal sex with steady male/TG partner						
No	132	65.8	(55.8 – 75.9)	58	56.5	(45.6 – 67.4)
Yes	63	34.2	(24.2 – 44.2)	45	43.5	(32.6 – 54.4)

NON-REGULAR (CASUAL) MALE/TRANSGENDER PARTNERS AMONG MSM

More than 90% of MSM in both cities reported having non-regular or casual sex partners in the past 12 months (Table 27). Of these the majority reported having 1 to 4 (median of 4 in Dili and 3 in Baucau) non-regular partners. Condom use consistency was low with the majority of MSM reporting never or sometimes using a condom with a non-regular partner in the past 12 months. Sixty one percent of MSM in Dili and 42% in Baucau reported not using a condom at last anal sex with a non-regular male partner.

Table 27. Non-regular male/TG partners among MSM in the past 12 months in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Had non-regular (casual) sex partner in past 12 months						
No	10	7.8	(5.2 – 10.3)	2	2.6	(0.5 – 4.8)
Yes	195	92.2	(89.7 – 94.8)	103	97.4	(95.2 – 99.5)
Number of non-regular (casual) sex partners (among those with a non-regular partner in last 12 months)						
1-4	80	52.7	(44.9 – 60.5)	79	82.8	(77.5 – 88.2)
5-9	55	30.9	(21.1 – 40.8)	16	11.7	(1.4 – 22)
≥10	60	16.4	(5.8 – 26.9)	8	5.5	(0 – 14.4)

Number of non-regular, median (min –max)	4 (1 – 200)			3 (1 – 79)		
Frequency of condom use with non-regular (casual) partner in past 12 months						
Never	108	54.5	(44.4 – 64.6)	31	28.5	(17.1 – 40)
Sometimes	61	27.9	(19.7 – 36.1)	41	39.9	(27.4 – 52.3)
Always	34	17.6	(9.6 – 25.6)	32	31.6	(22.4 – 40.9)
Used condom at last anal sex with non-regular (casual) partner						
No	121	60.9	(51.4 – 70.3)	43	41.9	(29.8 – 54)
Yes	80	39.2	(29.7 – 48.6)	61	58.1	(46 – 70.2)

COMMERCIAL ANAL SEX PARTNERS

Paying male/transgender partners (clients) among MSM

A sizable percentage of MSM in Dili (83%) and in Baucau (86%) reported being paid for sex in the past 12 months, among which 62% in Dili and 91% in Baucau reported sold sex to 1 to four persons (Table 28).

As with other partner types, condom use consistency was low with the majority of MSM reporting never or sometimes using a condom with a non-regular partner in the past 12 months. Seventy percent of MSM in Dili and 51% in Baucau reported not using a condom at last anal sex with a client.

Table 28. Paying male/TG sexual partners (clients) among MSM in the past 12 months in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Had paying partner(clients) in past 12 months						
No	35	16.9	(9.7 – 24.1)	17	13.6	(7.4 – 19.8)
Yes	156	83.1	(75.9 – 90.3)	88	86.4	(80.2 – 92.6)
Number of paying partners (clients) (among those who had clients in last 12 months)						
1-4	85	62.4	(51.5 – 73.3)	75	90.7	(86.1 – 95.3)
5-9	40	22.0	(13.2 – 30.7)	10	8.1	(0 – 21.6)
≥10	31	15.6	(7.6 – 23.7)	3	1.2	(0 – 15.1)
Number of paying partners, median (min –max)	4 (1 – 30)			2 (1 – 30)		
Frequency of condom use with paying partner (Among those who had clients in the last 12 months)						
Never	86	57.0	(45.1 – 68.9)	29	27.5	(15.6 – 39.4)
Sometimes	43	25.0	(13.5 – 36.5)	40	40.4	(28.2 – 52.7)
Always	27	18.0	(9.1 – 26.8)	29	32.1	(23.9 – 40.2)
Used condom at last anal sex with paying partner						
No	148	69.9	(61.2 – 78.7)	56	51.2	(40.3 – 62)
Yes	57	30.1	(21.4 – 38.8)	49	48.9	(38 – 59.7)

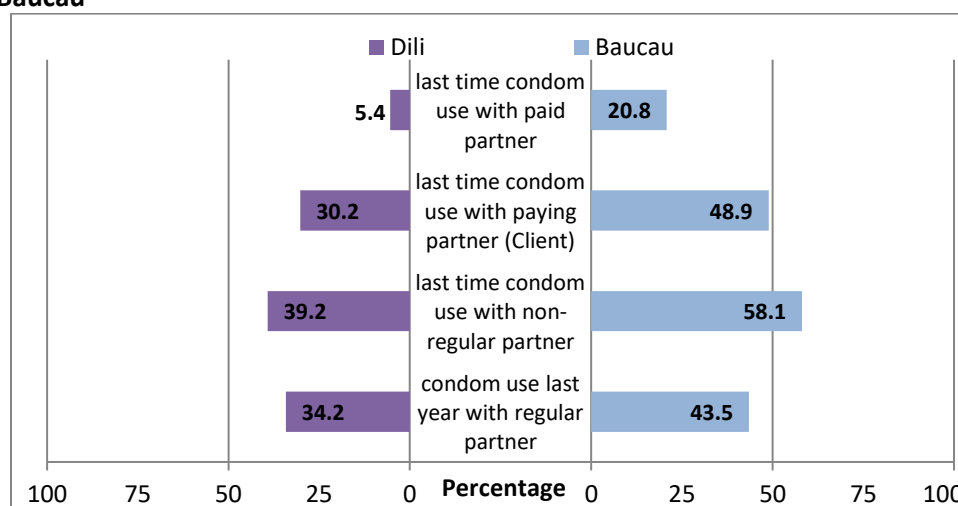
Paid male/transgender sexual partners among MSM

Most MSM in both cities reported not paying a male or transgender for sex in the past 12 months (Table 29). Among those paying for sex, the median number of paid partners in Dili was 5 and in Baucau was one. Only 7% of MSM in Dili and 28% in Baucau reported always using a condom with paid partners in the past 12 months and only 5% in Dili and 21% in Baucau reported using a condom at last anal sex with a paid partner (Figure 23, following page).

Table 29. Paid male/transgender sexual partners among MSM in past 12 months in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Had paid male/transgender sex partner in past 12 months						
No	140	82.9	(71.5 – 94.2)	78	74.8	(63.2 – 86.4)
Yes	59	17.1	(5.8 – 28.5)	27	25.2	(13.6 – 36.9)
Number of paid partners (Among those who had paid partners in the last 12 months)						
1-4	24	34.7	(15.5 – 53.8)	24	96.2	(93.9 – 98.5)
5-9	8	21.5	(12.6 – 30.4)	2	3.3	(1.9 – 4.6)
≥10	27	43.9	(23.7 – 64)	1	0.5	(-1.2 – 2.2)
Number of paid partners, median (min –max)	5 (1 – 200)			1 (1 – 10)		
Frequency of condom use with paid partner (Among those who had paid partners in the last 12 months)						
Never	28	39.8	(33.4 – 46.2)	26	49.5	(38.1 – 61)
Sometimes	26	53.6	(35.5 – 71.7)	13	22.2	(3.3 – 41.2)
Always	7	6.7	(0–25.2)	16	28.2	(14.4 – 42.1)
Used condom at last anal sex with paid partner						
No	183	94.6	(84.2 – 105)	81	79.2	(68.8 – 89.7)
Yes	22	5.4	(0 – 15.8)	24	20.8	(10.3 – 31.2)

Figure 23. Last time condom use with different male/TG partners among MSM in the past 12 months in Dili and Baucau



Denominator: All respondents

USE OF LUBRICANT FOR ANAL INTERCOURSE WITH MEN

Few MSM in Dili and Baucau always used lubricant with condoms and lubricant without condoms when having sex with male partners in the past 12 months (Table 30). Of those who ever used lubricants, 37% in Dili and 61% in Baucau reported using water-based lubricants.

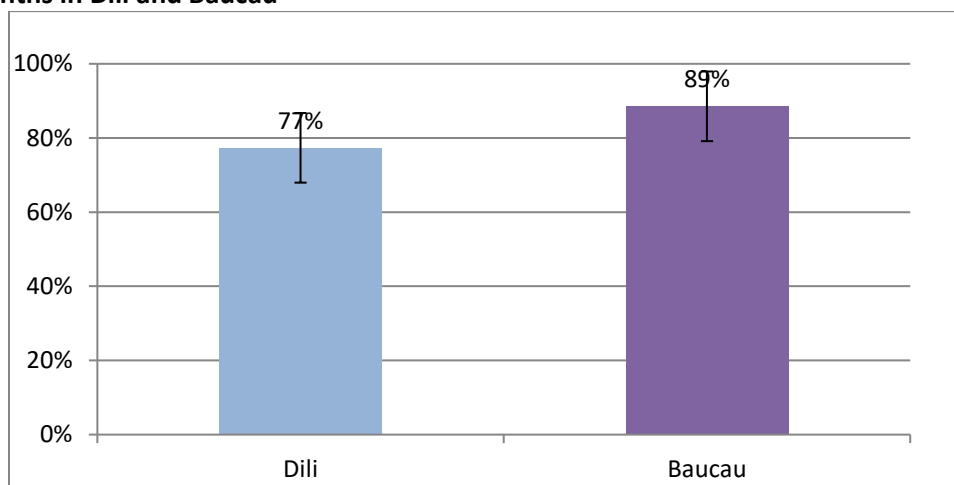
Table 30. Lubricant use for anal sex with men among MSM in the past 12 months, Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Frequency of lubricant use with condom when having sex with male partner in past 12 months						
Never	132	70	(58.4 – 81.6)	52	50.9	(45.5 – 56.4)
Sometimes	49	21.2	(12.6 – 29.9)	45	42.5	(31.7 – 53.3)
Always	23	8.8	(0.9 – 16.7)	8	6.5	(0 – 17.1)
Frequency of lubricant use without condom when having sex with male partner in past 12 months						
Never	133	69.7	(58.8 – 80.6)	51	50.2	(39.5 – 60.9)
Sometimes	63	26.7	(15 – 38.3)	44	42.5	(32.1 – 52.9)
Always	6	3.6	(-1.3 – 8.5)	8	7.3	(1.8 – 12.8)
Most frequent use lubricant without condom (multiple response possible among those who ever use lubricant)						
Water-based lubricant	31	37.1	(21.4 – 52.7)	36	60.9	(47.8 – 74)
Vaseline	19	17	(4 – 30)	18	31.9	(16 – 47.8)
Hand lotion	37	43.8	(30.2 – 57.3)	43	80.7	(69.7 – 91.8)
Baby oil	19	28.8	(13.8 – 43.7)	13	21.9	(12.8 – 31)

Female sex partners

A high proportion of MSM in both cities reported having had vaginal or anal sex with a female partner in the previous 12 months (figure 24).

Figure 24. Proportion of MSM respondents who had sex (vaginal or anal) with female partner in the past 12 months in Dili and Baucau



Denominator: All respondents

REGULAR/STEADY FEMALE SEXUAL PARTNERS AMONG MSM

Eighty six percent of MSM in Dili and almost all in Baucau reported having a regular female sex partner in the past 12 months, among which the majority in both cities reported having 1 to 4 such partners (Table 31). Low percentages of MSM reported always using a condom with regular female sex partners during vaginal intercourse in the past 12 months and 87% in Dili and 72% in Baucau reported not using a condom at their last vaginal sex with a regular female partner. Among those MSM who reported having anal sex with a regular female partner, few reported always using a condom in the past 12 months and using a condom at last anal sex with regular female partner.

Table 31. Regular female sex partners and their sex practice among MSM in the past 12 months in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Had regular female sex partner (vaginal or anal sex) (among those who had female partners in past 12 months)						
No	16	14.3	(8.2 – 20.4)	3	2.3	(0– 7.8)
Yes	121	85.7	(79.6 – 91.8)	86	97.7	(92.2 – 100)

Number of regular female partners (among those who had regular female partners in last 12 months)						
1-4	97	83.9	(75.2 – 92.6)	84	98.1	(95 – 101)
5-9	21	15.6	(0– 33.1)	1	1.4	(0 – 4.3)
≥10	3	0.5	(0 – 16.6)	1	0.4	(0–1.4)
Median (min –max)	2 (1 – 15)			1 (1 – 35)		
Frequency of condom use with regular female partner for vaginal sex (Among those who had vaginal sex with regular female partners in last 12 months)						
Never	97	70.4	(61 – 79.8)	39	43.4	(32.2 – 54.5)
Sometimes	25	20.5	(12.5 – 28.4)	39	45.5	(32.7 – 58.3)
Always	13	9.2	(3.3 – 15)	10	11.2	(5.2 –17.1)
Used condom at last vaginal sex with regular female partner						
No	182	86.6	(79.8 – 93.5)	78	71.8	(61.9 – 81.7)
Yes	23	13.4	(6.5 – 20.2)	27	28.2	(18.3 –38.1)
Frequency of condom use with regular female partner for anal sex (among those who had anal sex with regular female partners in last 12 months)						
Never	78	78.5	(69.2 – 87.7)	29	47.9	(33.8 – 62)
Sometimes	16	15.6	(7.7 – 23.5)	30	45.2	(31.6 – 58.8)
Always	7	6	(2.3 – 9.6)	4	6.9	(1.9 – 12)
Used condom at last anal sex with regular female partner						
No	186	90	(83.9 – 96.1)	91	86.2	(78.4 – 94.1)
Yes	19	10	(3.9 – 16.1)	14	13.8	(5.9 – 21.6)

NON – REGULAR (CASUAL) FEMALE SEXUAL PARTNERS AMONG MSM

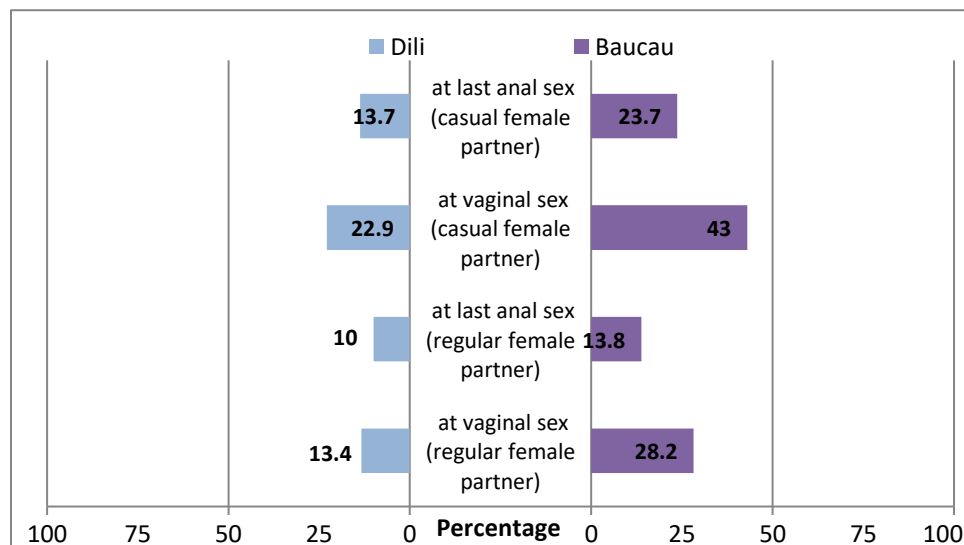
Eighty five percent of MSM in Dili and almost all in Baucau reported having a non-regular female sex partner in the past 12 months, among which the majority in both cities reported having 1 to 4 non regular female partners (Table 32, Figure 25, following page). Low percentages of MSM reported always using a condom with non-regular female sex partners during vaginal intercourse in the past 12 months and 77% in Dili and 57% in Baucau reported not using a condom at their last vaginal sex with a non-regular female partner. Among those MSM who reported having anal sex with a non-regular female partner, few reported always using a condom in the past 12 months and using a condom at last anal sex with regular female partner.

Table 32. Non-regular (casual) female sex partners and their sex practice among MSM in the past 12 months in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Had non-regular female sex partner (vaginal or anal sex) (among those who had female partners in past 12 months)						
No	22	14.6	(5 – 24.1)	2	1.9	(0 – 5)
Yes	114	85.4	(75.9 – 95)	87	98.1	(98.1–100)

Number of non-regular female partners (among those who had regular female partners in last 12 months)						
1-4	71	69.3	(58.8 – 79.8)	54	63.3	(51.9 – 74.6)
5-9	25	15.5	(6.8 – 24.3)	26	29.9	(19 – 40.8)
≥10	18	15.1	(8.4 – 21.9)	7	6.8	(0.3 – 13.4)
Median (min –max)	3 (1 – 22)			3 (1 – 40)		
Frequency of condom use with non-regular female partner for vaginal sex (among those who had vaginal sex with non-regular female partners in last 12 months)						
Never	75	60.2	(47.9 – 72.4)	30	33.6	(21.7 – 45.6)
Sometimes	30	27.1	(16.3 – 37.8)	33	36.3	(23.9 – 48.8)
Always	18	12.8	(5.8 – 19.8)	24	30	(20.5 – 39.6)
Used condom at vaginal sex with non-regular female partner						
No	166	77.1	(68.6 – 85.6)	63	57	(45.9 – 68.1)
Yes	39	22.9	(14.4 – 31.4)	42	43	(31.9 – 54.1)
Frequency of condom use with non-regular female partner for anal sex (among those who had anal sex with non-regular female partners in last 12 months)						
Never	62	67	(60.1 – 73.8)	25	41	(22.6 – 59.3)
Sometimes	20	20.7	(6.3 – 35.1)	26	40.4	(25.4 – 55.5)
Always	15	12.4	(0 – 25.8)	9	18.6	(9.7 – 27.6)
Used condom at last anal sex with non-regular female partner						
No	178	86.3	(79.5 – 93.2)	82	76.3	(64.2 – 88.5)
Yes	27	13.7	(6.8 – 20.5)	23	23.7	(11.5 – 35.9)

Figure 25. Last time condom use (vaginal or anal sex) with different female partners among MSM in the past 12 months, Dili and Baucau



Denominator: All respondents

SOURCE OF CONDOMS AMONG MSM

More than 80% of MSM in both cities know where to get condoms with the majority getting them from friends or NGOs (Table 33). Thirty seven percent of MSM in Dili and 55% in Baucau reported receiving condoms from an NGO volunteer in the past 12 months.

Table 33. General condom accessibility/availability among MSM in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Know a place/person to get condom						
No	30	17.6	(11 – 24.3)	14	12.7	(4.9 – 20.4)
Yes	161	82.4	(75.7 – 89.1)	91	87.4	(79.6 – 95.1)
Place/person from whom respondent obtained a condom last time						
Peer educator/outreach	3	1.9	(0–11.4)	--	--	--
Condom dispenser (bar/night club/restaurant)	2	0.6	(0 – 2.7)	--	--	--
NGO	87	33.8	(27 – 40.6)	31	28.7	(18.5 – 38.8)
Pharmacy/clinic /hospital	6	5.4	(0– 13.5)	2	1.9	(0– 12)
Friends	77	45.8	(43.7 – 47.9)	59	67.6	(64.2 – 70.9)
Other	23	12.5	(9 – 16.1)	2	1.9	(-0.6 – 4.4)
Received condom from a NGO volunteer in the last 12 months (among all respondents)						
No	106	62.6	(52.6 – 72.7)	47	45.3	(33.5 – 57)
Yes	99	37.4	(27.4 – 47.4)	58	54.7	(43 – 66.5)

SUBSTANCE USE AMONG MSM

Few MSM in both cities reported not during alcohol every day, however 63% of MSM in Dili and 48% in Baucau reported having sex under the influence of alcohol in the previous 4 weeks (Table 34). Hardly any MSM reported ever using drugs.

Table 34. Alcohol and drug use among MSM, Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Frequency of drinking alcohol						
Never	31	12.8	(7 – 18.6)	6	4.9	(0 – 16.9)
Not in the last 4 weeks	52	24.6	(16.4 – 32.8)	39	36.6	(34.9 – 38.2)
Less than once a week	51	27.5	(18.1 – 36.9)	36	37.4	(30.4 – 44.4)
At least once a week	47	26.1	(16.4 – 35.8)	23	21	(18 – 24)
Everyday	22	9	(2.6 – 15.4)	1	0.1	(0–13.4)

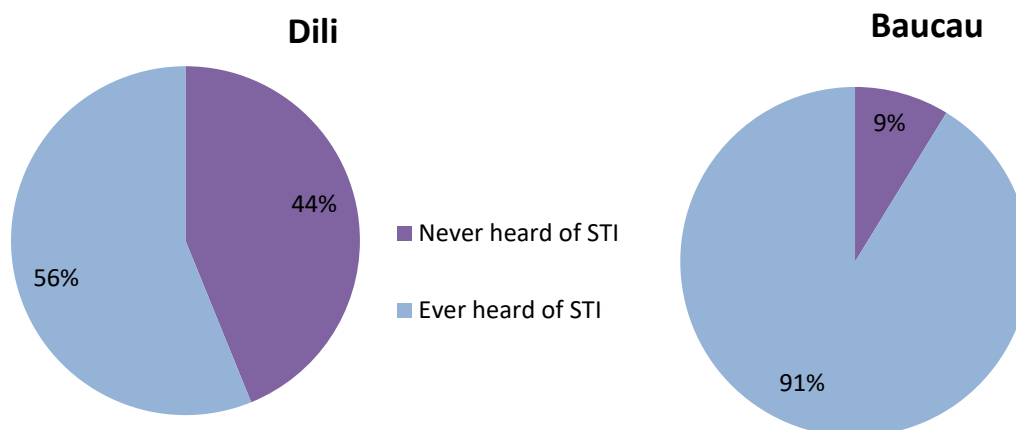
Had sex under the influence of alcohol in the past 4 weeks (among those who reported drinking alcohol)						
No	43	36.8	(25.4 – 48.2)	34	52	(39.4 – 64.6)
Yes	79	63.2	(51.8 – 74.6)	33	48	(35.4 – 60.7)
Ever used drug						
No	200	97.5	(93.2 – 101)	102	97.7	(94.9 – 100)
Yes	2	2.5	(0 – 6.8)	3	2.3	(0 – 5.1)

SEXUALLY TRANSMITTED INFECTIONS (STI)

Awareness about STI

Just over half of MSM in Dili and 91% in Baucau had ever heard of an STI (Figure 26).

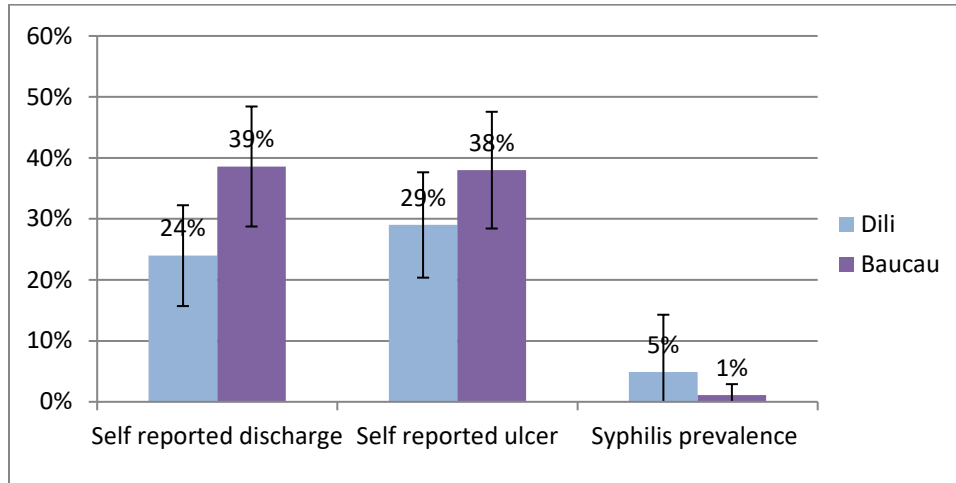
Figure 26. Awareness of sexually transmitted infections among MSM in Dili and Baucau



SYPHILIS PREVALENCE AND SELF-REPORTED STI

A higher percentage of MSM in Baucau reported having signs and symptoms of an STI compared to MSM in Dili (Figure 27, following page). However, Syphilis prevalence was higher in Dili compared to MSM in Baucau.

Figure 27. Syphilis prevalence and self-reported STI among MSM in the past 12 months in Dili and Baucau

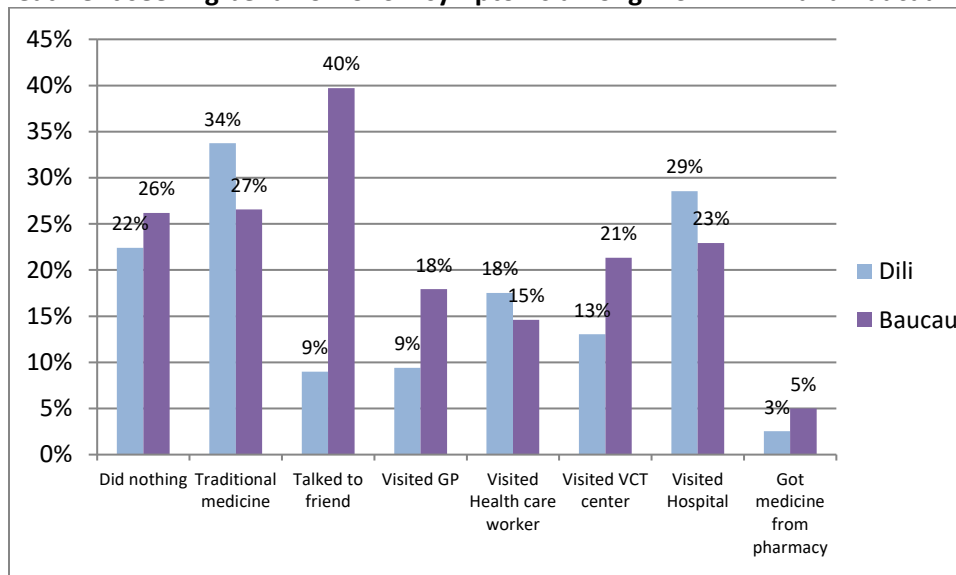


Denominator: All respondents

TREATMENT SEEKING BEHAVIOR FOR STI SYMPTOMS

Among MSM who reported having STI symptoms, 22% in Dili and 26% in Baucau did nothing and 34% in Dili and 27% in Baucau used traditional medicine as a remedy (Figure 28). Only 9% in Dili and 18% in Baucau visited a General Practitioner (GP).

Figure 28. Treatment seeking behavior for STI symptoms among MSM in Dili and Baucau



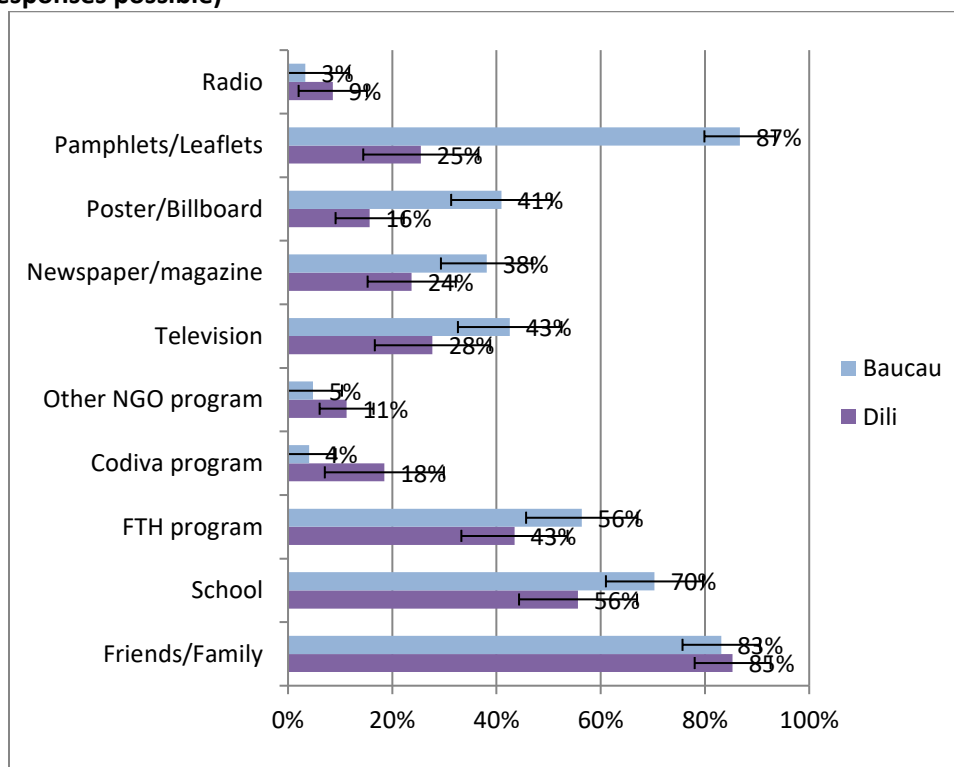
Denominator: All respondents

KNOWLEDGE AND ATTITUDE ABOUT HIV/AIDS

Source of information about HIV/AIDS

More than 80% of MSM in both cities reported receiving information about HIV/AIDS from friends and family (Figure 29). Fifty six percent in Baucau and 43% in Dili reported that they received their HIV/AIDS information from FTH program.

Figure 29. Sources of information about HIV/AIDS reported by MSM respondents in Dili and Baucau (Multiple responses possible)



Denominator: All respondents

Knowledge on HIV/AIDS prevention and transmission

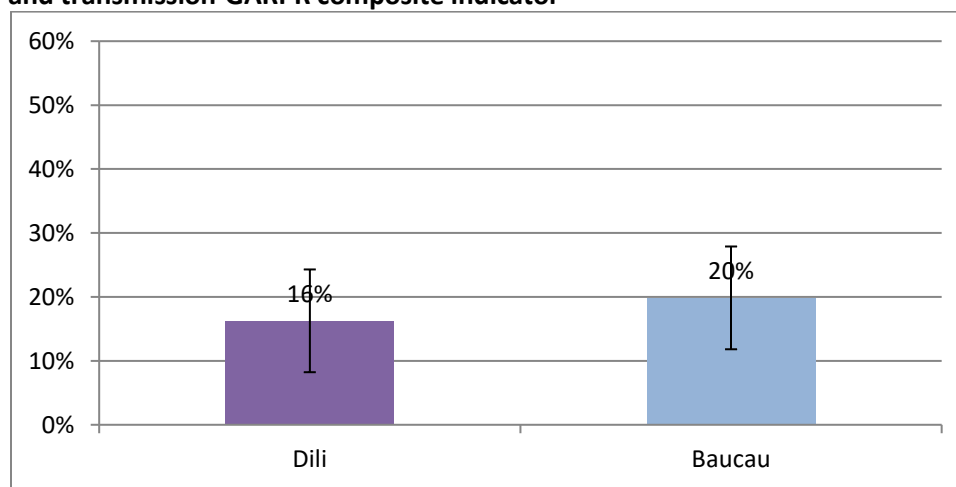
The majority of MSM in both cities, had correct knowledge that using a condom every time during sexual intercourse and having sex with only one faithful, uninfected partner can reduce the risk of HIV transmission and that healthy looking people can have HIV (Table 35, following page). Roughly half of MSM in both cities incorrectly thought that a person can get HIV from mosquito bites and a sizable proportion (52% in Dili, 39% in Baucau) incorrectly believed that a person can get HIV by sharing food with someone who is infected.

Table 35. Knowledge about HIV prevention and transmission among MSM, Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	N	%	95% CI
Can reduce the risk of getting HIV by using a condom every time						
No	38	10.6	(0.1 – 21.3)	37	36.2	(24.6 – 47.7)
Yes	156	84.6	(73.6 – 95.5)	66	62.3	(51 – 73.7)
Don't know	10	4.8	(0 – 10.9)	2	1.5	(0 – 3.6)
A person can get HIV from mosquito bites						
No	99	48	(38 – 58)	51	44.8	(33.9 – 55.6)
Yes	96	48.1	(38.4 – 57.8)	49	50.3	(39.9 – 60.7)
Don't know	9	3.9	(0.2 – 7.5)	5	4.9	(0.7 – 9.2)
A person can get HIV by sharing food with someone who is infected						
No	93	44.9	(34.7 – 55)	67	59.5	(49.8 – 69.2)
Yes	98	51.8	(42.1 – 51.5)	36	39	(35.3 – 42.8)
Don't know	10	3.3	(0.9 – 5.8)	2	1.5	(0 – 11)
Having sex with only one faithful, uninfected partner reduce the risk of HIV transmission						
No	49	24.3	(15.4 – 33.3)	30	25.5	(17.1 – 34)
Yes	145	72.1	(62.9 – 81.2)	74	73.7	(65.3 – 82.1)
Don't know	10	3.6	(0.8 – 6.4)	1	0.8	(0 – 2.2)
A healthy-looking person can have HIV						
No	26	17.6	(12.7 – 22.5)	27	24.6	(13.6 – 35.6)
Yes	165	78.5	(73.1 – 83.8)	75	72.2	(61.1 – 83.2)
Don't know	13	3.9	(1.8 – 6)	3	3.3	(0 – 6.7)

Unfortunately, the overall comprehensive HIV transmission knowledge score was low for MSM in both Dili and Baucau (Figure 30).

Figure 30. Proportion of MSM respondents in Dili and Baucau with comprehensive knowledge on HIV prevention and transmission-GARPR composite indicator



Denominator: All respondents

Attitude on HIV and risk perception among FSW

Only 3% of MSM in Dili and 15% in Baucau have ever discussed HIV or AIDS with all sexual partners and about 47% have discussed HIV or AIDS with no sexual partners (Table 36). The majority of MSM in both sites reported that they were willing to take care of a household member who becomes ill with HIV. But only half in Baucau and 59% in Dili reported that they were willing to work with HIV infected people. Two thirds of MSM in both sites were willing to buy food from someone who was living with HIV. Less than 10% of MSM in Dili perceived themselves to be at high risk of being infected with HIV, whereas 27.1% in Baucau perceived themselves to be at high risk.

Table 36. Attitude on HIV and risk perception among MSM in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Ever discussed about HIV or AIDS with any sexual partner						
Yes, all	13	3.0	(0– 10)	17	14.6	(6.5 – 22.6)
Yes, some	106	50.0	(41 – 60)	38	37.8	(27.5 – 48.1)
No, none	74	47.0	(38 – 55)	50	47.6	(37.2 – 58.1)
Willing to take care a household member who becomes ill with HIV						
No	25	13.6	(7.6 – 19.7)	8	9.5	(4.8 – 14.3)
Yes	173	86.4	(80.3 – 92.4)	96	90.5	(85.7 – 95.2)
Willing to work with HIV infected people						
No	70	41.0	(31.6 – 50.4)	48	47.5	(35.1 – 59.9)
Yes	128	59.0	(49.6 – 68.4)	56	52.5	(40 – 64.9)
Willing to buy food from HIV infected food seller						
No	53	32.9	(23.3 – 42.6)	34	35.2	(23.8 – 46.6)
Yes	144	67.1	(57.4 – 76.8)	70	64.8	(53.4 – 76.3)
Perceived risk of being infected with HIV						
No risk	110	54.4	(44.7 – 64)	38	36.1	(25 – 47.2)
Some risk	27	14.6	(7.1 – 22)	37	36.8	(26.2 – 47.5)
High risk	21	9.1	(3.5 – 14.7)	30	27.1	(18.9 – 35.3)
Don't know	46	22.0	(13.2 – 30.7)	--	--	--

PREVENTION PROGRAMS EXPOSURE

Forty percent of MSM in Dili and 53% in Baucau reported ever receiving HIV or sexual health information from FTH (Table 37). Among those who have ever heard of FTH, 65% of MSM in Dili and 76% in Baucau reported receiving HIV or sexual health information from FTH in the last 12 months and almost half in Dili and only one-fifth in Baucau reported having contacts for HIV or sexual health information by a volunteer from FTH a few times a week in the last 12 months. Among those who have ever heard of FTH,

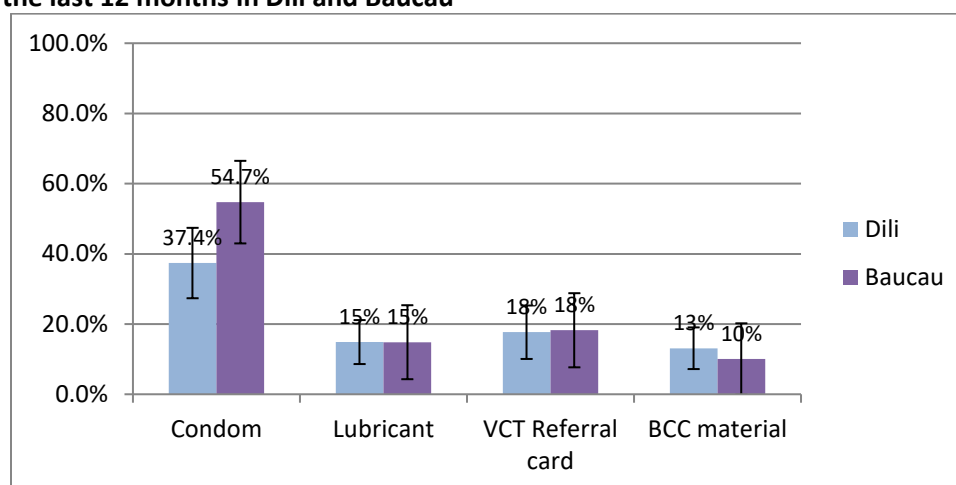
half of MSM in both sites reported visiting an FTH DIC in Palapaco in the last 12 months. The percentage of MSM who reported visiting an FTH DIC a few times a week in Palapaco was higher in Dili compared to Baucau (35% and 4% respectively).

Table 37. Exposure to HIV/ AIDS related services among MSM in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
Ever received HIV/sexual health information from FTH						
No	98	59.6	(50 – 69.2)	47	46.7	(36 – 57.4)
Yes	107	40.4	(30.8 – 50)	58	53.3	(42.6 – 64)
Received HIV/sexual health information from FTH in the last 12 months (Among those ever heard of FTH)						
No	40	34.9	(22.5 – 47.3)	18	24.2	(9.9 – 38.6)
Yes	94	65.1	(52.7 – 77.5)	55	75.8	(61.4 – 90.1)
Frequency of contacts by a volunteer from FTH for HIV/sexual health information in the last 12 months (Among those who ever heard of FTH)						
Few times a week	37	46.3	(32.5 – 60.1)	12	18.8	(8.8 – 28.9)
2-4 times a month	18	15.2	(3 – 27.4)	22	36.3	(22.6 – 49.9)
Once a month	27	22.7	(11.8 – 33.6)	15	30.9	(16.8 – 45)
1-2 times in 6 months	22	15.8	(5.4 – 26.2)	7	14	(0 – 30.4)
Visited FTH DIC in Palapaco in the last 12 months (Among those who ever heard of FTH)						
No	53	50	(36.7 – 63.3)	37	49.6	(38.4 – 60.8)
Yes	78	50	(36.7 – 63.3)	38	50.4	(39.2 – 61.6)
Frequency of visit to FTH DIC in Palapaco (Among those who ever heard of FTH)						
Few times a week	30	35	(22 – 48)	2	4.3	(0– 22.6)
2-4 times a month	30	33	(19 – 47.1)	14	32	(23.1– 41)
Once a month	19	18.6	(6.8 – 30.4)	6	15.1	(0 – 71)
One or two times in 6 months	19	13.4	(3.7 – 23.1)	18	48.5	(11.9 – 85)

Over half of MSM in Baucau and one-third in Dili reported receiving condoms from outreach workers in the last 12 months (Figure 32, following page). By contrast, less than 20% of MSM in both cities reported receiving other prevention commodities including lubricants, VCCT referral cards and BCC materials from outreach workers in the last 12 months.

Figure 31. Proportion of respondents who have received prevention commodities from outreach workers in the last 12 months in Dili and Baucau



Denominator: all respondents

HIV TESTING

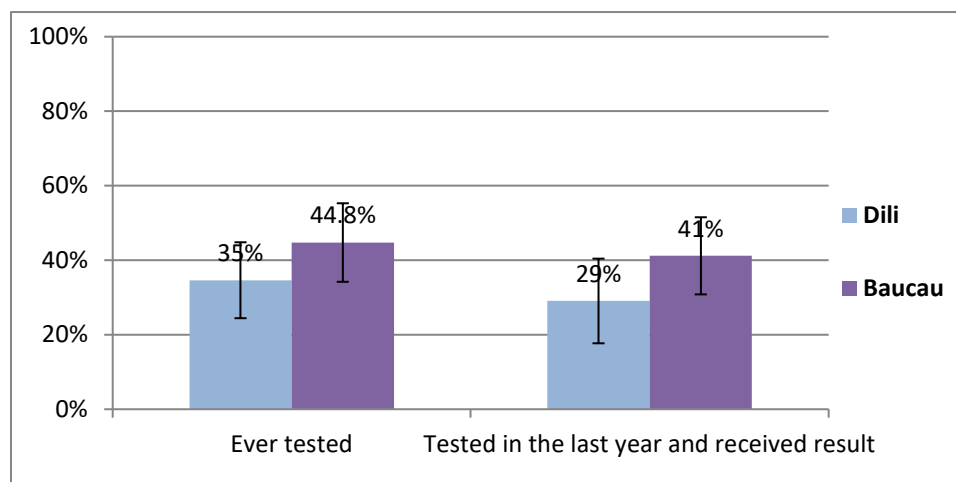
Only one-third of MSM in Dili have ever been tested for HIV whereas almost 45% in Baucau reported having had a HIV test (Table 38). Among those ever tested, 89% of MSM in Dili and 92% in Baucau reported being tested in the past 12 months. Of those, almost all reported receiving the HIV test result at their last testing and reported having negative test results.

Table 38. HIV testing among MSM, Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	N	%	95% CI	N	%	95% CI
Has ever been tested for HIV						
No	114	65.4	(55.2 – 75.6)	56	55.3	(44.7 – 65.8)
Yes	91	34.6	(24.4 – 44.8)	49	44.8	(34.2 – 55.3)
Tested for HIV in past 12 months (among those ever tested)						
No	9	12.1	(5.5 – 18.7)	3.0	8.0	(0.8 – 15.2)
Yes	80	87.9	(81.3 – 94.5)	46.0	92.0	(84.8 – 99.2)
Participant received HIV test result at last testing (among those ever tested)						
No	2	0.4	(0 – 21)	--	--	--
Yes	80	99.6	(79.1 – 100)	46	100	--
Result of last HIV test (among those ever tested)						
Don't know my results	1	0.1	(0 – 32.7)	--	--	--
Negative	79	99.9	(67.3 – 100)	45	100	--

Overall, among all participants, only 29% of MSM in Dili and 41% in Baucau reported having had an HIV test in the last year and receiving their result (Figure 32).

Figure 32. Proportion of MSM who ever tested, and who tested last year and received results (GARPR)



Denominator: All respondents

HIV AND SYPHILIS PREVALENCE

HIV seroprevalence in Dili was 0.4%. No one tested positive for HIV in Baucau (Table 39). In Dili, 4.9% of MSM and in Baucau, 1.1% tested positive for active Syphilis.

Table 39. Prevalence of HIV and Syphilis among MSM in Dili and Baucau

	Dili (N=205)			Baucau (N=105)		
	n	%	95% CI	n	%	95% CI
HIV						
Negative	204	99.6	(98.9 – 100)	105	100	--
Positive	1	0.4	(0 – 1.1)	-	--	--
Syphilis						
Negative	186	95.1	(85.7 – 100)	103	98.9	(97.1 – 100)
Positive	19	4.9	(0 – 14.3)	2	1.1	(0 – 2.9)

DISCUSSION AND RECOMMENDATIONS

Low HIV and Syphilis prevalence among MSM.

Few MSM in Dili (0.4%) and none in Baucau were positive for HIV at the time of the survey. Syphilis prevalence ranged between 1.1 % in Baucau and 4.9% in Dili. Although HIV and Syphilis prevalence appear to be low, continued encouragement of HIV testing and programs educating MSM about safe sex practices are needed to ensure that HIV does not increase in these populations.

Potential spread of Syphilis.

Syphilis prevalence was higher than HIV prevalence among MSM in the two survey districts. Monitoring STI, especially those that result in genital ulcers, among MSM is essential as these infections are easily transmitted to sexual partners and associated with increased sexual HIV transmission¹. MSM should routinely be screened and, if needed, treated for Syphilis, especially in HIV testing and counseling settings.

MSM are mostly bisexually active.

The majority of MSM in both sites identify as being straight or “strong man”. Between 58% in Dili and 77% in Baucau preferred having sex with TG and women compared to having sex with men. However, the most cited reason for why participants have sex with males was that they were sexually attracted to them. Most MSM in both sites reported having sex with both males and females in the last 12 months. More contextual information is needed about the sexual preferences of males who have sex with males and females. Additional questions to understand these dynamics should be added to the next round of the IBBS or collected through qualitative research. MSM targeted HIV prevention strategies should take into account that MSM in Timor-Leste have sexual relationships with both males and females.

MSM use the internet to meet a new MSM or TG partner.

Most MSM meet their MSM or TG sexual partners through friends. Meeting a new MSM or TG partner on the internet is also common among MSM in both districts. This information is useful for developing prevention programs accessible through the internet and for posting HIV prevention messages on frequently used gay websites.

Risky alcohol use and low substance use.

¹Wasserheit J. (1999) Epidemiologic synergy interrelationships between human immune virus infection and other sexually transmitted diseases. *Sex Transm Dis.* 75(1): 3–17; Dickerson MC, Johnston J, Delea TE, et al. (1996) The causal role for genital ulcer disease as a risk factor for transmission of Human Immunodeficiency Virus: An application of the Bradford Hill Criteria. *Sex Transm Dis.* 23(5):429-440.

Many MSM have had alcohol in past four weeks. Among those who reported ever drinking alcohol, 63% in Dili and 48% in Baucau reported having sex under the influence of alcohol in the last four weeks. Few MSM reported ever using drugs. It is well documented that alcohol consumption and substance use affect decision making about safe sex. Screening for alcohol use among MSM should be considered.

High levels of risky sexual behaviors.

MSM initiate sex while still in their teenage years, have multiple types of sexual partners, including occasional and commercial, and do not use condoms consistently with those partners, resulting in increased risk for HIV and STI transmission. Especially alarming was the high percentage of MSM who reported selling sex in Dili (83%) and in Baucau (86%). More information is needed about the dynamics of their commercial and transactional sex activities (i.e., is it a situation whereby they are being supported by someone or is it the formal selling of sex?) and the types of clients (i.e., foreigners, locals) to whom they are selling sex. Ideally this information can be collected through a future IBBS or through qualitative research.

Most MSM have sex with females as well as males.

High percentages of MSM in both sites reported having sex with females and being in current sexual relationships with both male and females. Condom use with female partners is inconsistent and especially low in Dili. It is not known whether these men they are openly bisexual and communicate this with their female partners or whether they have an open heterosexual persona and a hidden homosexual persona. All too often, MSM in many societies feel societal pressures to engage in sexual relationships with women. These pressures increase the HIV vulnerability for both men and women. Men who feel the need to hide their sexual orientation may be less forthcoming about their sexual health when seeking health care. Outreach efforts and policy changes, including decriminalizing homosexuality and reducing stigma related to male-to-male sex, must be developed to address sexual health needs of these men and their partners. Furthermore, given that MSM practice inconsistent condom usage with female and male partners, strategies are needed to reduce HIV transmission among intimate partners including scaling up HIV prevention interventions to emphasize the importance of protecting main female and male partners and conducting further research to improve understanding of the dynamics of HIV transmission among intimate partners².

More education and accessibility needed about lubricant usage.

²UNAIDS. (2009) HIV Transmission in Intimate Partner Relationships in Asia. Accessed on September 9, 2010 at: http://data.unaids.org/pub/Report/2009/intimate_partners_report_en.pdf

Less than 10% of MSM in both sites reported always using lubricants with condoms when having sex with male partners in the past 12 months. Half of the respondents have never used lubricants with condoms for anal sex with men. Of those who ever used lubricants, between 37% in Dili and 61% in Baucau reported using lubricant gels (understood to be water based lubricants). When men do not use enough lubricant, or use the wrong kind of lubricant, the likelihood of condom failure is increased, making transmission of HIV and other STI possible. Although water-based and silicone-based lubricants work best with condoms, many MSM reported using oil-based lubricants (such as baby oil, massage oil, etc), all of which can damage a condom and increase the likelihood that condoms will tear during sex. Education about correct lubricant use is important for MSM. Lubricant availability through multiple access points, including continuing and expanding lubrication distribution through peer educators and NGOs, should be enhanced for MSM.

Low awareness about STI.

Just over half of MSM in Dili and 91% in Baucau had ever heard of STI. A sizeable proportion from both Dili and Baucau reported having signs and symptoms of STI in the past 12 months. Not knowing signs and symptoms of STI may result in MSM neither recognizing an infection on a sexual partner nor seeking advice and treatment when infected, thereby increasing the risk of acquiring or transmitting STI. Continued systematic screening (including provision of results and treatment) for STI should be integrated into programs providing services to MSM; health facility-based services should consider including systematic physical examinations for STI in people known or suspected to be MSM since signs or symptoms may neither be self-recognized nor reported.

Low composite scores for HIV knowledge

Less than 20% had correct knowledge about HIV/AIDS transmission based on a composite scale of transmission modes. This provides evidence of the need for increased education about HIV risk and transmission for sexually active males.

HIV testing among MSM is low.

Among all participants, only 29% of MSM in Dili and 41% in Baucau reported having had an HIV test in the last year and receiving their result. There is the need to promote uptake of HIV testing among MSM. Enhanced HIV testing and counseling (HTC) for MSM could be addressed in several ways: (a) increase awareness about the importance of being tested and the availability of HIV testing locations; (b) promotion of the use of existing services, with additional training for counselors on how to receive and provide quality HTC services for this population, (c) providing more HTC services to MSM in 'gay friendly' settings, and (e) provide provider initiated testing in health care settings.

Service coverage

Only 40% of MSM in Dili and just over half in Baucau received HIV or sexual health information from FTH. Fifty five percent of MSM in Baucau and one-third in Dili reported receiving condoms from outreach workers in the last 12 months whereas less than 20% of MSM in both sites reported receiving other prevention commodities such as lubricants and BBC materials from outreach workers in the last 12 months. FHT's prevention programs, as well as the establishment of other programs, should be strengthened and scaled up.

MSM have misperceptions about and discrimination towards people infected with HIV.

Only half in Baucau and 59% in Dili reported that they were willing to work with HIV infected people. Two thirds of MSM in both sites were willing to buy food from someone who was living with HIV. Based on these findings, HIV prevention efforts should include education or community mobilization focused on reducing or responding to misperceptions about HIV transmission that lead to discrimination towards people living with HIV/AIDS.

SUMMARY OF KEY RECOMMENDATIONS

- Scale up programs to provide targeted HIV outreach/services to MSM to control the further spread of HIV;
- Scale-up coverage, screening, condom distribution and implementation of combination prevention.
- Map MSM activities to identify gaps in prevention.
- Make use of the knowledge that MSM constitute a large social network (as confirmed by the fast recruitment of MSM in this study) to deliver prevention.
- Operationalize the concept of combination HIV prevention given the multiplicity of factors which make MSM vulnerable to HIV and other infections.
- Integrate HIV and STI prevention and screening among MSM at public health centers.
- Educate health staff to improve prevention services targeting high risk populations, especially MSM.
- Educate pharmacists to the needs of MSM, especially since MSM may use pharmacies to buy condoms, lubricants or STI treatment.
- Educate providers of condoms (shops, stores, etc.) about the needs of MSM, to encourage MSM to continue purchasing condoms.
- Scale up peer educators' and NGOs' efforts to distribute condoms and lubricants to MSM.

- Screen MSM for Syphilis, especially in all HIV testing and counselling settings (rapid testing, confirmation and treatment);
- Examine whether existing intervention and service programs for MSM are reaching younger MSM;
- Enhance youth programs to include healthy lifestyle choices and support for young boys;
- Increase outreach efforts/policy changes, including decriminalizing and reducing stigma related to male-to-male sex, to address sexual health needs of MSM and their partners;
- Conduct research to understand male-female dynamics (among females that have male partners that have sex with other males) and HIV transmission;
- Investigate whether MSM need access to the correct lubricants and increase easy access to lubricants;
- Screen MSM for alcohol use and provide counseling and support services for those abusing substances. In addition, educate doctors and other medical staff to assess alcohol use among MSM and to provide effective and accurate counseling to MSM at risk of alcohol abuse;
- Integrate systematic screening for STI (which are unrecognized by MSM) into programs providing services to MSM;
- Adapt the WHO guidelines for prevention and treatment of STI among MSM;
- Increase education access and availability about HIV risk and transmission for sexually active males;
- Continue to scale up HIV prevention and education services that cater to the needs of MSM and male to female transgender persons;

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APPENDIX A. DISAGGREGATION OF CONDOM USE BY AGE, FSW, TIMOR LESTE, 2016-2017

Table 1. Condom use among FSW by city

	Dili		Baucau	
	N = 202		N = 110	
	n	%, (95% CIs)	n	%, (95% CIs)
Used a condom with most recent client by age group				
< 25 years				
Yes	46	41 (26.3, 55.7)	26	36.2 (15, 57.4)
No	76	59 (44.3, 73.7)	38	63.8 (42.6, 85)
≥ 25 years				
Yes	40	45.6 (24.6, 66.6)	28	65.1 (43.5, 86.7)
No	32	54.4 (34, 74.9)	18	34.9 (13.3, 56.5)

Table 2. Condom use among FSW averaged across sites

	All Sites (Dili and Baucau)	
	N = 312	
	n	%
Used a condom with most recent client by age group		
< 25 years		
Yes	72	38.7
No	114	61.3
≥ 25 years		
Yes	68	57.6
No	50	42.4

APPENDIX B. DISAGGREGATION OF CONDOM USE BY AGE, FSW, TIMOR LESTE, 2016-2017

Table 1. Condom use among MSM by city

	Dili		Baucau	
	N = 205		N = 105	
	n	%, (95% CIs)	n	%, (95% CIs)
Used a condom with most recent casual male partner by age group				
< 25 years				
Yes	49	37.4 (25.2, 49.5)	49	59.4 (44.7, 74)
No	90	62.6 (50.5, 74.8)	34	40.6 (26, 55.3)
≥ 25 years				
Yes	31	44.1(14, 74.1)	12	51.1(21.4, 80.7)
No	31	55.9 (25.9, 86)	9	48.9 (19.3, 78.6)

Table 2. Condom use among MSM averaged across sites

	All Sites (Dili and Baucau)	
	N = 310	
	N	%
Used a condom with most recent casual male partner by age group		
< 25 years		
Yes	98	44.1
No	124	55.9
≥ 25 years		
Yes	43	51.8
No	40	48.2