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THAILAND (2011): Baseline HIV/AIDS TRaC Study among Transgenders in Pattaya, Sattahip and Sriracha

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Population Services International
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THAILAND (2011): Baseline HIV/AIDS TRaC Study among Transgenders in Pattaya, Sattahip and Sriracha

PSI Research & Metrics
Year 2011

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SUMMARY

BACKGROUND & RESEARCH OBJECTIVES

In Thailand, transgender women are biological males who act, feel, think and look like females. Thai society is generally more accepting of transgenders than in the norm in other countries, and the majority of transgenders openly live their lives as 'women'. Some transgender women however face discrimination and stigma within their families or working life, with a significant population of this population of transgender women being involved in commercial sex work[1]. The situationof stigma and discrimination in the lives of transgender women in Pattaya is strongly linked to their vulnerability to HIV. For instance, violence and threats of violence may limit the ability to negotiate safe sexual behaviors, and then may also increase the chance of non-protective sex.[2]Transgenders are not allowed to enter some hotels in Pattaya. Most of them live separately from their families, although, in most cases, their close family members will be aware that they are living as a transgender. In the past, carrying condoms while looking for client along the street made them afraid of getting arrested, although this is no longer a major concern for most transgenderwomen in the study area.

Previous studies conducted by PSI have indicated multiple sex partners and inconsistent condom use during sex among transgender women. There is a high prevalence of HIV risk behavior and it is suspected that HIV rates are higher among transgender women than among the more general MSM population in Thailand. HIV prevalence among transgender women (TG) in Chonburi is 8.85 percent.[3]

The purpose of the Tracking Results Continuously (TRaC) survey among Transgenders (TG) is to provide evidence for monitoring and implementation of PSI/Thailand's HIV prevention program. Information from this study will be used to develop behavior change communication interventions for HIV prevention including branding, key messages, and/or campaigns for condom use, lubricant use, HCT and STI testing

This study design is for the baseline of the TRaC Survey. This survey aims to answer two fundamental questions related to segmentation and monitoring of populations.

1. Segmentation. By each risk/behavior combination or factors which opportunity, ability and motivation (OAM) constructs and population characteristics are significantly correlated with condom use?
2. Monitoring. What are the levels and trends that are evident in other key behavior, risk, OAM constructs, and exposure to PSI/Thailand activities?

DESCRIPTION OF INTERVENTION

PSI/Thailand is implementing a program "Sisters", the Targeted Behavior Change Communication (BCC) Program for HIV/AIDS Prevention among Transgender Population in Pattaya, Chonburi Province, Thailand. Programmatic focus is placed on behaviors and high transmission sites, or "hot spots" that are identified as the principal drivers of HIV in Thailand.

[1] Thailand (2009): HIV/AIDS TRaC among Transgenders, Third Round
[2]The operational research on developing healthcare and social service system for TG and MSW in Pattaya affected by manifestations of stigma and discrimination, including gender-based violence, Policy Research and Development Institute Foundation.
[3] IBBS, Chonburi Provincial Public Health Office, 2010

The purpose of the program is to promote safer sex among TG through peer education and drop in center activities in Pattaya (Sisters), and using a high coverage social marketing (SM) strategy to increase access to and availability of condom and water-based lubricant. Peer education activities will expand to Sattahip and Sriracha District in Chonburi Province. Activities in the drop in center include designing and implementing culturally appropriate behavior change programs through interpersonal communication, ensuring access to high-quality voluntary counseling and testing services, developing the capacity of most at risk populations to lead prevention activities, creating safe spaces for most at risk populations, enhancing access to essential care and treatment services for HIV/AIDS, monitoring and evaluation of all activities and documenting lesson learned. Outreach activities through peer educators that conducted at TG hot zones and their living places such as pubs, bars, apartments, the beach, and parks. Interpersonal communication for TG includes HIV/AIDS knowledge and safe sex.

METHODOLOGY

This study was a first round cross-sectional survey among TGsin Pattaya, Sattahip and Sriracha. This study was conducted in December 2011. The study population for this TRaC were TGs in Pattaya, Sattahip and Sriracha, aged 18-35. In order to be included in the study, TGs must have: 1) self-identified as transgender and said that they feel sexually attracted to males; 2) had more than one sexual partner (either same or different type of partner) and had penetrative sex with these partners within the past three months; 3) been living in specific area for more than one month. Time-location sampling (TLS) was used to recruit this hard-to-reach group. A structured questionnaire was used to collect data. A total of 308, 31 and 47 interviews were completed for Pattaya, Sattahip and Sriracha respectively.In total, 386 TGs were recruited in this study. Analyses consisted of logistic regression and unianovas to examine ascertain which determinants are correlated with key behaviors. Coarsened Exact Matching (CEM) was used to match treated individuals with those in a control group, based on specific covariates. The effect of treatment on outcome is the difference between treated and non-treated group.

MAIN FINDINGS

This study focused on four key behaviors; condom use, lubricant use, VCT and STI screening. The monitoring table highlights that:

- :: TG reported high percentage of condom use at last sex. Consistent condom used with all type of partner was lower than condom use at last sex. Condom use behaviour varies by partner type. With commercial partner and regular commercial partner, TG reported more consistent condom use than with casual and regular partner. Consistent condom use with regular partner in the past 3 months was only 57.8%.
- :: Water-based lubricant used showed the same trend as condom used. Consistent condom used along with water-based lubricant with casual and regular partner was 58.1% and 43.1% respectively. 17.6% of TGs reported using oil-based lubricant in the past 3 months.
- :: Two-thirds of TG (66.6%) reported ever having been tested for HIV, while 50.3% of them received the test in the past 6 months and only 10.9% reported received three components of VCT.

The results of segmentation analysis indicate that the probability of TG using condom consistently in the past 3 months with each type pf partner;

With commercial partner;

- :: *Availability of condoms.* Around 14.2% of those practicing unsafe sex report that a condom is not available at the place they have sex (OR=0.64, p<.001).
- :: *Attitude about using condoms.*TG who agree that if they get more money it is OK to not use a condom were less likely to use condoms consistenly with commercial partners (OR=0.67, p<.001).
- :: *Intention to use condoms.*TG who intend to not have sex without a condom were more likely to use condom than those who did not intend (OR=1.46, p<.01).
- :: *Self efficacy.* TG who were afraid of losing clients if they insist on using condoms were less likely to use condoms consistently with commercial partners (OR=0.79, p<.05).

With casual partner;

- :: *Availability of condoms.*TG who reported consistent condom use with casual partner in the past 3 months (73.3%) were more likely to state that they kept a condom with them when going out to meet their partner (OR=1.52, p<.05).

With regular partner;

- :: *Attitude about using condoms.* TG who reported consistent condom use with regular partners were more likely to agree that condom use represents love and trust with regular partner (OR=2.02, p<.01).

The results of CEM evaluation analysis reveal TG who receive any service from Sisters in the past 12 months is associated with:

- :: HIV tested in the past 6 months (OR=2.61, p<.01).

PROGRAMMATIC RECOMMENDATIONS

- :: The program faced a challenging environment to work with TG in Pattaya due to large turnover of TG, with around half of them having been resident for 1 year or less. Effort should be put on reaching new TG in the area and keep contact with TG who move to other areas.
- :: Pattaya based TG are earning a lot more money than those in Sattihip and Sriracha through having a higher number of commercial sex customers. Most TG in Sriracha (55%) work as employees in a factory. Due to different context in these areas suggest for customization of program intervention.
- :: 58% of TG had only commercial partners while 24% of them had more than one type of partners in the past three months. The program was very successful in promoting condom use. Consistent condom use with those who had only commercial partner was 86% while consistent condom use with TG who had more than one type of partners was lower. These suggest program messages to focus on promoting consistent condom use with all types of partners with every sexual contact, not only with commercial partners.
- :: 87% of TGs reported consistent condom use with regular commercial partners. However, 4% of them reported never using a condom when having sex with regular commercial partners. Therefore, this suggests that they are a high risk group. Key message should be focused on promoting consistent condom use even with regular commercial partners.

- Condom use key messages should be focused on the value of using condoms over receiving more money, self confidence to insist on not having sex without a condom, keeping condoms with them all the time and that condoms represent love and trust.
- The program was successful in promoting not using oil-based lubricant with TG in Pattaya, therefore, existing program intervention should continue for TG in Sattahip and Sriracha.
- 32% of TG reported never having been tested for HIV. Among those who ever received a test, 10% have not been tested in the past 12 months. The program was effective in promoting HIV testing. TG that have had contact with Sisters have over 2.6 times the likelihood of having been tested for HIV in the past 6 months. TG who had ever tested reported intention to get it in the next 6 months, while those who never received a test reported being afraid of their test result. Therefore, efforts should be put on coping with their fear to get their first test and then they will be more likely to get their test regularly.

The above recommendations will be implemented through the Sisters program's main activities: development and distribution of IEC materials; interpersonal communication through outreach and counseling; group edutainment activities; and influencing peer norms through training of popular opinion leaders.

MONITORING TABLE
Trends in behaviors, OAM behavior factors and exposure among TGs in Pattaya, Sattahip and Sriracha, 2011
Risk: Transgenders, 18-35 years old in Pattaya, Sattahip and Sriracha
Behavior: Condom used at last sex, consistent condom used, water-based lubricant used at last sex, HIV test and STI test

INDICATORS	Dec 2011 N=386
BEHAVIOR/USE	
Condom use	%
- Condom used with commercial partner at last sex[1]	95.1
- Condom used with regular commercial partner at last sex[2]	94.0
- Condom used with casual partner at last sex[3]	86.7
- Condom used with regular partner at last sex[4]	61.8
- Consistent condom used with commercial partner[1]	85.8
- Consistent condom used with regular commercial partner[2]	86.7
- Consistent condom used with casual partner[3]	73.3
- Consistent condom used with regular partner[4]	57.8
Water-based lubricant use	%
- Water-based lubricant used with commercial partner at last sex[1]	91.6
- Water-based lubricant used with regular commercial partner at last sex[2]	91.6
- Water-based lubricant used with casual partner at last sex[3]	74.3
- Water-based lubricant used with regular partner at last sex[4]	71.6
- Consistent water-based lubricant used with commercial partner[1]	81.2
- Consistent water-based lubricant used with regular commercial partner[2]	85.5
- Consistent water-based lubricant used with casual partner[3]	63.8
- Consistent water-based lubricant used with regular partner[4]	62.7
Condom use along with water-based lubricant	%
- Condom used along with water-based lubricant with commercial partner at last sex[1]	89.6
- Condom used along with water-based lubricant with regular commercial partner at last sex[2]	89.2
- Condom used along with water-based lubricant with casual partner at last sex[3]	71.4
- Condom used along with water-based lubricant with regular partner at last sex[4]	50.0
- Consistent condom used along with water-based lubricant with commercial partner[1]	75.4
- Consistent condom used along with water-based lubricant with regular commercial partner[2]	81.3
- Consistent condom used along with water-based lubricant with casual partner[3]	58.1
- Consistent condom used along with water-based lubricant with regular partner[4]	43.1
Oil-based lubricant used	%
- Oil-based lubricant used in the past 3 months	17.6
Unsafe sex while drunk or high on drug	%
- Had sex without condom while drunk or high on drug in the past 3 months[5]	24.4
VCT and HIV test	%
- Ever been tested for HIV	66.6
- Received HIV test in the past 6 months	50.3
- Received VCT in the past 6 months	10.9
STI test	%
- Received STI test in the past 12 months[6]	37.5
OPPORTUNITY	
Availability	Mean
- Sometime, condom is not available at the place where I have sex	2.64
- I keep a condom with me when I go out to meet my partner	5.39
ABILITY	

INDICATORS	Dec 2011 N=386
Self Efficacy	Mean
- I am afraid of losing my clients if I insist on using a condom	2.66
MOTIVATION	
Attitude	Mean
- If I get more money, it is OK to not use a condom	2.05
- I am less likely to use condoms with a regular commercial partner	1.89
- Condom use with regular partner represents love and trust (SCALE)[4]	4.46
Intention	Mean
- I intend to not having sex without condom	4.56
- I intend to get HIV testing and counseling in the next 6 months	4.91
Outcome Expectation	Mean
- Using condom reduces sexual pleasure	3.32
Threat	Mean
- I am fear of the test result so I don't want to get HIV test	2.98
EXPOSURE	%
- Awareness of Sisters	80.1
- Visited Sisters drop-in center in the past 12 months	33.7
- Has been contacted by Sisters outreach in past 12 months	62.7

Note:

1	Among those having commercial partner	n = 309
2	Among those having regular commercial partner	n = 166
3	Among those having casual partner	n = 105
4	Among those having regular partner	n = 102
5	Among those having sex while drunk on alcohol or on drug	n = 213
6	Among those reporting that had STI symptoms in the past 12 months	n = 24

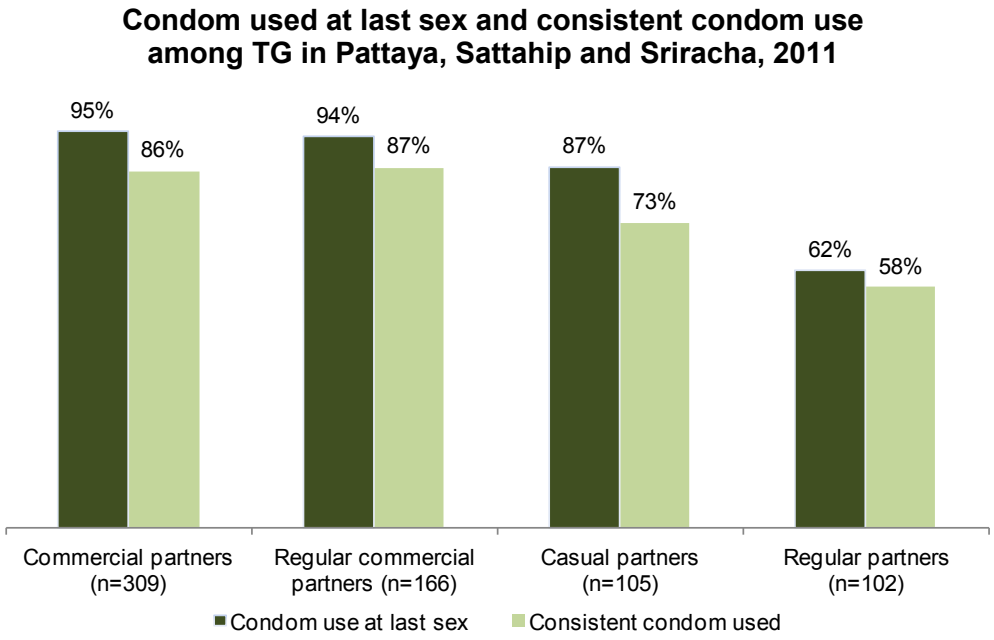
OAM determinant values ranged from 1-6 "1=Strongly Disagree, 2=Disagree, 3=Mildly Disagree, 4= Mildly Agree, 5=Agree, 6=Strongly Agree"

Attitude (Scaled Items)

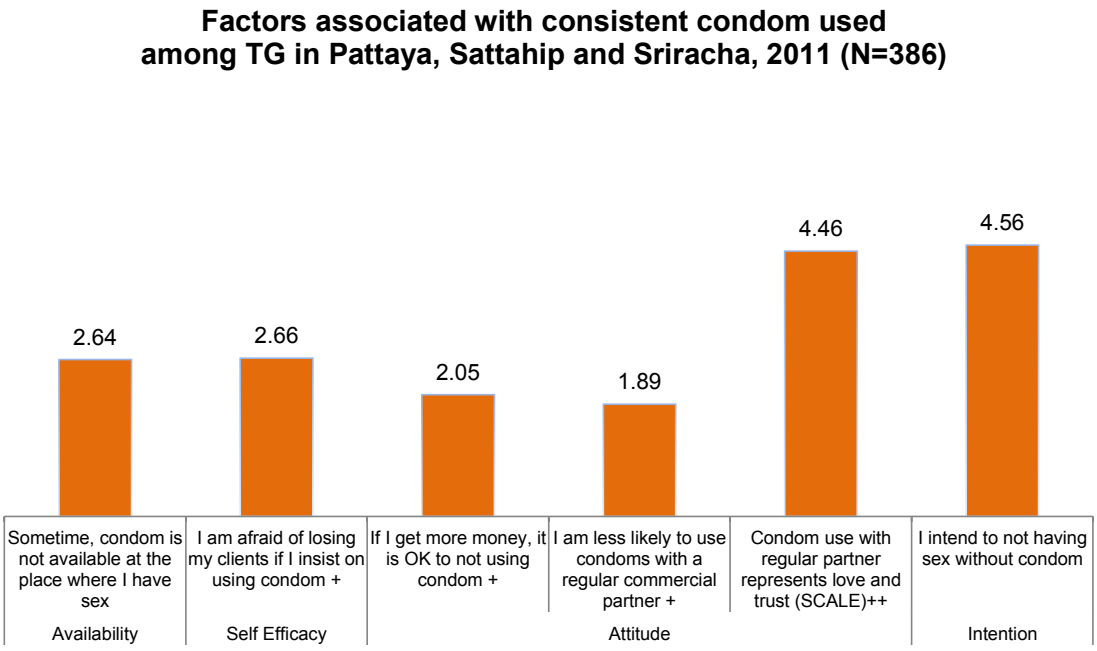
Condom use with regular partner represents love and trust

1) I love my boyfriend so I have to protect him by using condom every time
2) Using condom is appropriate for people who love each other
3) Using condom is appropriate for people who trust each other
4) My regular partner still think that I trust him if I suggested using a condom
5) My regular partner still think that I love him if I propose usinga condom

MONITORING GRAPH 1: KEY PERCENTAGE RESULTS



MONITORING GRAPH 2: KEY MEAN RESULTS



\+ Among those who have client partner (n=320).
++ Among those who have regular partner (n=102)

SEGMENTATION TABLE
Behavioral determinants of consistent condom use with commercial partner in the past 3 months among TG in Pattaya, Sattahip and Sriracha, 2011
Risk: Transgenders, 18-35 years old in Pattaya, Sattahip and Sriracha
Behavior: Consistent condom used with commercial partner

INDICATORS	Consistent Condom Use with Commercial Partner		Odds Ratio	Sig.
	Yes n=265 (85.8%)	**No** n=44 (14.2%)		
OPPORTUNITY	Mean	Mean		
Availability				
- Sometime, condom is not available at the place where I have sex	2.55	3.59	0.64	***
- I keep a condom with me when I go out to meet my partner	5.46	4.84	-	NS
ABILITY	Mean	Mean		
Social Support				
- My partner encourages me to use condoms	5.27	4.80	-	NS
Self Efficacy				
- I am afraid of losing my clients if I insist on using condoms	2.61	3.11	0.79	*
MOTIVATION	Mean	Mean		
Attitude				
- It is OK to not use condoms with a handsome man	2.04	3.36	-	NS
- If I get more money, it is OK to not use a condom	1.92	2.91	0.67	***
- I am less likely to use condoms with a regular commercial partner	1.74	2.82	-	NS
- It is necessary to use condom even if a client looks healthy or attractive (SCALE)	5.20	4.41	-	NS
Belief				
- Carrying condoms will make me lose new commercial sex partner	1.89	2.64	-	NS
Intention				
- I intend to not have sex without a condom	4.75	3.78	1.46	**
Locus of Control				
- When I was drunk and could not control myself so do not use a condom	2.30	3.48	-	NS
- When I have sex, condoms always leak or break	2.62	3.30	-	NS
- It's my decision to use condoms when having sex with other men	5.45	5.07	-	NS
Outcome Expectation				
- Using condoms reduces sexual pleasure	3.22	3.80	-	NS
POPULATION CHARACTERISTICS				
	Mean	Mean		
- Number of commercial partners	32.44	67.17	0.99	***
	%	%		
- Sexual role is receiver every time	36.6	58.7	0.33	**
- Ever had sex while drunk on alcohol or high on drug	50.3	74.3	0.35	*

Note:
* < .05 p-value
** < .01 p-value
*** < .001 p-value
BS Borderline Significant (<.08 p-value)

NS Not Significant
Cox & Snell R square =.229
Negellkerke R square =.410
Chi square = 80.402, p-value = .000
Hosmer and Lemeshow Chi square = 4.326, df = 8, p-value =.827

OAM determinant values ranged from 1-6 “1=Strongly Disagree, 2=Disagree, 3=Mildly Disagree, 4= Mildly Agree, 5=Agree, 6=Strongly Agree”

Attitude (Scaled Items)

It is necessary to use condom even a client look healthy or attractive

1) I am likely to use condom even if a commercial partner looks attractive
2) I am likely to use condom even if a commercial partner looks healthy
3) It is necessary to use condom even if a commercial partner does not have any STI symptom

SEGMENTATION TABLE
Behavioral determinants of consistent condom use with casual partner in the past 3 months among TG inPattaya, Sattahip and Sriracha, 2011
Risk: Transgenders, 18-35 years old in Pattaya, Sattahip and Sriracha
Behavior: Consistent condom used with casual partner

INDICATORS	Consistent Condom Use with Casual Partner		Odds Ratio	Sig.
	Yes n=77 (73.3%)	**No** n=28 (26.7%)		
OPPORTUNITY	Mean	Mean		
Availability				
- Sometime, condoms are not available at the place where I have sex	2.42	3.39	-	NS
- I keep a condom with me when I go out to meet my partner	5.48	4.86	1.52	*
MOTIVATION	Mean	Mean		
Attitude				
- I feel good when my partner uses a condom with me	5.52	4.92	-	NS
- It is OK to not use a condom with a handsome man	2.41	3.06	0.73	BS
- No need to use condom when having oral sex	2.79	3.57	-	NS
Locus of Control				
- When I was drunk and could not control myself so do not use a condom	2.52	3.21	-	NS
Outcome Expectation				
- Using condoms reduces sexual pleasure	3.49	4.25	-	NS
POPULATION CHARACTERISTICS				
	Mean	Mean		
- Number of sexual partners	20.77	42.62	0.99	BS
- Number of casual partners	6.64	10.11	-	NS
	%	%		
- Education *(Lower than secondary school)*	22.5	59.6	0.19	**

Note:
* < .05 p-value
** < .01 p-value
*** < .001 p-value
BS Borderline Significant (<.08 p-value)
NS Not Significant
Cox & Snell R square =.225
Negellkerke R square =.327
Chi square = 26.720, p-value = .000
Hosmer and Lemeshow Chi square = 6.018, df = 7, p-value =.538

OAM determinant values ranged from 1-6 "1=Strongly Disagree, 2=Disagree, 3=Mildly Disagree, 4= Mildly Agree, 5=Agree, 6=Strongly Agree"

SEGMENTATION TABLE
Behavioral determinants of consistent condom use with regular partner in the past 3 months among TG inPattaya, Sattahip and Sriracha, 2011
Risk: Transgenders, 18-35 years old in Pattaya, Sattahip and Sriracha
Behavior: Consistent condom used with regular partner

INDICATORS	Consistent Condom Use with Regular Partner		Odds Ratio	Sig.
	Yes n=59 (57.8%)	**No** n=43 (42.2%)		
OPPORTUNITY	Mean	Mean		
Availability				
- I keep a condom with me when I go out to meet my partner	5.56	5.02	-	NS
ABILITY	Mean	Mean		
Social Support				
- My partner encourages me to use condoms	5.16	4.64	1.36	BS
MOTIVATION	Mean	Mean		
Attitude				
- Condom use with regular partner represents love and trust (SCALE)	4.75	4.06	2.02	**
- I still use condom with my regular partner even my HIV test result is negative	5.19	4.42	-	NS
Belief				
- There is no need to use condom with my boyfriend	2.25	3.09	-	NS
Threat				
- My partner and I do not use condoms because we have been tested for HIV	2.73	3.72	-	NS
Outcome Expectation				
- Using condom reduces sexual pleasure	3.15	3.81	0.74	*
- Using condom make me feel clean	5.56	5.12	-	NS

Note:
* < .05 p-value
** < .01 p-value
*** < .001 p-value
BS Borderline Significant (<.08 p-value)
NS Not Significant
Cox & Snell R square =.201
Negellkerke R square =.271
Chi square = 22.935, p-value = .000
Hosmer and Lemeshow Chi square = 8.783, df = 8, p-value =.361

OAM determinant values ranged from 1-6 "1=Strongly Disagree, 2=Disagree, 3=Mildly Disagree, 4= Mildly Agree, 5=Agree, 6=Strongly Agree"

Attitude (Scaled Items)

Condom use with regular partner represents love and trust

1) I love my boyfriend so I have to protect him by using condom every time
2) Using condom is appropriate for people who love each other
3) Using condom is appropriate for people who trust each other
4) My regular partner still think that I trust him if I suggested using a condom
5) My regular partner still think that I love him if I propose using a condom

SEGMENTATION TABLE
Behavioral determinants of HIV test in the past 6 months among TG inPattaya, Sattahip and Sriracha, 2011
Risk: Transgenders, 18-35 years old in Pattaya, Sattahip and Sriracha
Behavior: HIV test in the past 6 months

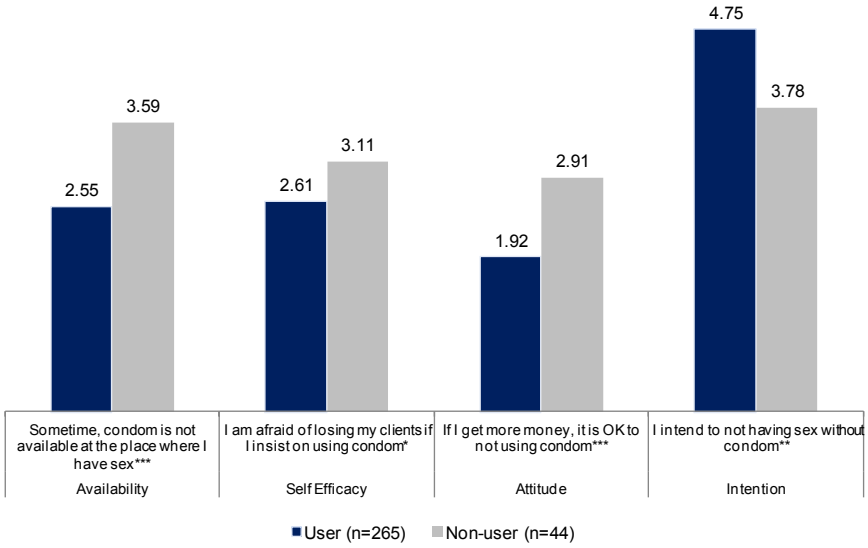
INDICATORS	HIV test in the past 6 months		Odds Ratio	Sig.
	Yes n=194 (50.3%)	**No** n=192 (49.7%)		
ABILITY	Mean	Mean		
Social Support				
- If my HIV test is positive, my family still love and support me	4.64	5.05	0.75	**
- I will encourage my friends to use VCT services	5.24	5.06	-	NS
MOTIVATION	Mean	Mean		
Attitude				
- I am afraid someone will see me going to a VCT center	3.15	3.82	-	NS
Intention				
- I intend to get HIV testing and counseling in the next 6 months	5.14	4.68	1.44	***
Threat				
- I am afraid of the test result so I don't want to get an HIV test	2.50	3.47	0.69	***
POPULATION CHARACTERISTICS				
	Mean	Mean		
- Number of sexual partners	41.20	29.23	1.07	*
	%	%		
- Work as a sex worker	87.1	78.6	-	NS
- Live or work in Sriracha	7.7	16.1	-	NS
- Exposure to Sisters in the past year	78.8	58.9	2.79	***

Note:
* < .05 p-value
** < .01 p-value
*** < .001 p-value
BS Borderline Significant (<.08 p-value)
NS Not Significant
Cox & Snell R square =.208
Negellkerke R square =.277
Chi square = 89.814, p-value = .000
Hosmer and Lemeshow Chi square = 7.433, df = 8, p-value =.491

OAM determinant values ranged from 1-6 "1=Strongly Disagree, 2=Disagree, 3=Mildly Disagree, 4= Mildly Agree, 5=Agree, 6=Strongly Agree"

SEGMENTATION GRAPH 1: KEY MEAN RESULTS

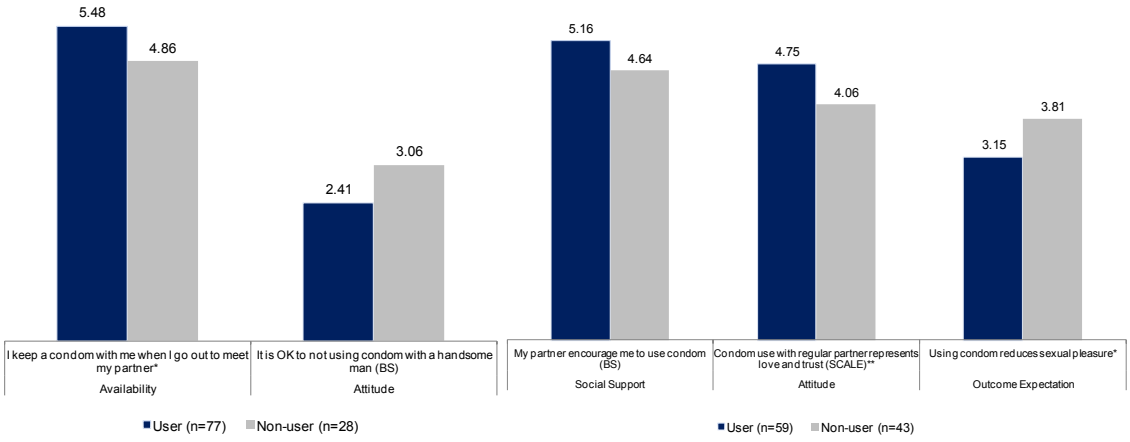
Factors associated with consistent condom used with commercial partner among TG in Pattaya, Sattahip and Sriracha, 2011



SEGMENTATION GRAPH 2: KEY MEAN RESULTS

Factors associated with consistent condom used with casual and regular partner among TG in Pattaya, Sattahip and Sriracha, 2011

Casual Partner **Regular Partner**



Note:

* < .05 p-value
** < .01 p-value
*** < .001 p-value
BS Borderline Significant (<.08 p-value)

CEM EVALUATION TABLE

Risk: Transgenders, 18-35 years old in Pattaya, Sattahip and Sriracha
Behavior: HIV test in the past 6 months
Exposure: Received any Sisters services in the past 12 months
Matching variables[+]: Residence area, length of residence, occupation, working venue, number of TG friends

Indicator	HIV test in the past 6 months (47.1%)			
	Odds Ratio	Sig.	CI 95%	
			Lower	Upper
Exposure variable				
Received any Sister service	2.606	**	1.494	4.546
Control variable				
Salary	1.000	NS	1.000	1.000
Education *(Higher than high school)*	0.906	NS	0.552	1.486
Number of partners	1.002	NS	0.997	1.007
Having regular partner	1.924	BS	0.968	3.824

Note:
* < .05 p-value
** < .01 p-value
*** < .001 p-value
BS Bordorline Significant
NS Not Significant

Matching Summary:
\+ Matching variables were selected by chossing factors that affect participation in the program. For TG in Pattaya, Sattahip and Sriracha, if they live in Pattaya, longer period of staying in the area, work in hot zone where easier meet outreach team and have higher number of TG friends will make them more likely to participate in the program.

Multivariate L1 distance:	4.328e-16
Number of matched cases:	278 cases
Recieved any Sisters services	
Yes	191 cases
No	87 cases
CEM adjusted for HIV test:	47.1%
Correlation coefficient:	0.2156 (p-value = 0.0003)

CEM EVALUATION TABLE

Risk: Transgenders, 18-35 years old in Pattaya, Sattahip and Sriracha
Behavior: HIV test in the past 6 months
Exposure: Received DIC services in the past 12 months
Matching variables[+]: Residence area, length of residence, occupation, working venue, number of TG friends

Indicator	HIV test in the past 6 months (58.61%)			
	Odds ratio	Sig	CI 95%	
			Lower	Upper
Exposure variable				
Received DIC services	2.178	**	1.322	3.589
Control variable				
Salary	1.000	NS	1.000	1.000
Education *(Higher than high school)*	1.281	NS	0.786	2.088
Number of partner	1.006	BS	1.000	1.011
Having regular partner	2.880	**	1.425	5.821

Note:
* < .05 p-value
** < .01 p-value
*** < .001 p-value
BS Bordorline Significant
NS Not Significant

Matching Summary:
\+ Matching variables were selected by chossing factors that affect participation in the program. For TGs in Pattaya, Sattahip and Sriracha, if they live in Pattaya, longer period of staying in the area, work in hot zone where easier meet outreach team and have higher number of TGs friends will make them more chance to participate in the peogram.

Multivariate L1 distance:	5.031e-17
Number of matched cases:	302 cases
Visited Sisters Drop-in Center in the past 12 months	
Yes	123 cases
No	179 cases
CEM adjusted for HIV test:	58.61%
Correlation coefficient:	0.1904 (p-value = 0.009)
Control variable:	Salary, education, number of partners, have regular partner

Remark:
Exposure variable 'Has been contacted by outreach in the past 12 months' was tested with HIV test in the past 6 months but it was found not significant different between those who exposed and non-exposed to the intervention.

ANNEX

ANNEX A: Methodology

This study was funded by the United States Agency for International Development. This study was a first round cross-sectional survey among TG in Pattaya, Sattahip and Sriracha. Cross-sectional study is a descriptive study in which disease and exposure status is measured simultaneously in this population. Cross-sectional studies can be thought of as providing a snapshot of the frequency and characteristics of a disease in a population at a particular point in time.[4]

This study was conducted in December 2011. Respondents were recruited by trained interviewers at time and location specify. The interview took around 1 hour.

1. SUBJECTS AND SAMPLING

The study population for this TRaC was TG in Pattaya, Sattahip and Sriracha, aged 18-35. In order to be included in the study, TG must have: 1) self-identified as transgender and said that they feel sexually attracted to males; 2) had more than one sexual partners and had penetrative sex with these partners within the past three months; 3) been living in specific area for more than one months.

Respondents were recruited at time and place specify in sampling frame. Fieldworkers recruited all TG who appear in each place.

Inclusion and exclusion criteria were as follow;

Inclusion criteria	Exclusion criteria
– Age 18-35 – Define themselves as transgender – Attracted to male – had more than one sexual partner and had penetrative sex with these partners within the past three months – Live in specific area for more than 1 month	– Being a Sisters staff or peer educator – Respondent is drunk or unable to control him/herself – Respondent not able to be interviewed within 2 hours of being sampled

Screening questions were used to assess eligibility for the study. Respondents who pass screening criteria were given self-administered questionnaire.

Time-location samplings (TLS) were used to recruit this hard-to-reach group. Every population member who appeared at the site during the fixed time interval were included in the sample. Mapped information on venues/locations for the TLS sampling frame was provided by staff at the 'Sisters' project drop-in center and verified by the PSI Thailand research. The locations listed below were all mapped locations to recruit TG to the studyas follow;

Location		Day	Time	No. of TGs Recruited
Pattaya				
1	PattayaWalking street	Mon-Thr	10 pm – 12 am	194
2	PattayaSoi 6	Mon-Thr	8 pm – 10 pm	52

[4]THE LANCET • Vol 359 • January 12, 2002 • www.thelancet.com

Location		Day	Time	No. of TGs Recruited
3	SoiBua Kao	Mon-Thr	8 pm – 10 pm	43
4	Soi Na Klea 29	Mon-Thr	10 pm – 12 am	19
Sriracha				
1	SoiSrirachaNakorn 6	Fri-Sun	8 pm - 10 pm	11
2	Satang Pub	Fri-Sun	10 pm – 12 am	16
3	Nan Beauty Salon	Fri-Sun	10 pm – 12 am	5
4	Volleyball court	Sun	3 pm – 6 pm	6
5	Sriracha House Apartment	Fri-Sun	5 pm – 8 pm	9
Sattahip				
1	Bang Saray	Fri-Sun	11 pm – 1 am	2
2	Sumpatan Pub	Fri-Sun	11 pm – 1 am	2
3	SoiSukhumvit 43	Fri-Sun	9 pm – 11 pm	6
4	SoiSukhumvit 73	Fri-Sun	9 pm – 11 pm	9
5	KhunThep Wedding Studio	Fri-Sun	3 pm – 7 pm	12

A total of 308, 31 and 47 interviews were completed for Pattaya, Sattahip and Sriracharespectively. In total, 386 TG were recruited in this study.

2. DATA COLLECTION INSTRUMENTS

A structured questionnaire was used to collect data for identifying factors of behavior, monitoring logframe indicators and assessing program impact. This questionnaire included modules in the following areas: population characteristics, OAM factors of behavior, behavior, and exposure to Sisters interventions.

Questions about sexual behaviors were asked with four types of partners as follow;

- **"Commercial partner(s)"** means partner whom you give or are given money or other valuable thing in exchange with sex
- **"Regular Commercial partner(s)"** means partner whom you give or are given money or other valuable thing in exchange with sex more than one time
- **"Casual partner(s)"** means partner whom you have sex with but no emotional commitment, or feeling for, and not give or given money or other valuable thing in exchange with sex
- **"Regular partner(s)"** means partner whom you have sex with and have emotional commitment to, or feeling for

The questionnaires were translated into Thai and pre-tested by conducting approximately 10 interviews with TG in Silom area, Bangkok. These TG were excluded from participation in the actual study. The pre-test was used to check for understandability of questions and procedures for conducting interviews. It wasl also be used to revise the questionnaire based on the following points: ease or difficulty of statement, comprehension, confidence in response, level of discomfort and social desirability.

3. DATA COLLECTION AND MANAGEMENT PROCEDURES

Data Collection

One field manager and five experienced fieldworkers were recruited from Bangkok. PSI/Thailand Research Team provided training to all of them. They attended two days

training. Field manager received an additional training to improve quality control of data collection.

All transgender women (as advised by peer educators) at the location during the sampling time period were approached by interview teams and peer educators assisted in TG screening process. Fieldworkers introduced themselves and recruited them to a study. Initial screening questions were asked. This was done away from other people at the venue, with only the interviewer and potential recruitee presented.

All those that were approached and which met the screening criteria were then read the informed consent script by interviewers. Partcipants were interviewed in a private place that maintains their confidentiality. On completion of the interview, the compensation payment of 250 Thai baht were paid to the respondent.

Data entry

Data entry process was done by fieldworkers. Dataset was cleaned and checked by PSI Data Analyst. Data quality steps included checking the questionnaire for internal consistency (in accordance with a scrutiny note), filter errors, appropriate coding for non-response or missing values, values that fall out of range, and other logical checks. The variable for each question included in further survey rounds remained consistent. The data was laid out in a rectangular format with one record signifying one respondent. A copy of cleaned data was made available in SPSS format.

4. DATA ANALYSIS

The segmentation tables were produced based on multiple logistic regression analyses. Explanatory variables which significantly contribute to the explanation of the variance in the behavior of interest (condom use and HIV test) were identified. Odds ratio of involvement in the behavior of interest were reported for each significant explanatory variable. Analysis of variance (UNIANOVA) was employed to estimate the adjusted means or proportions of each explanatory variable by the behavior of interest. Coarsened Exact Matching (CEM) was used to match treated individuals with those in a control group, based on specific covariates. The effect of treatment on outcome is the difference between treated and non-treated group.

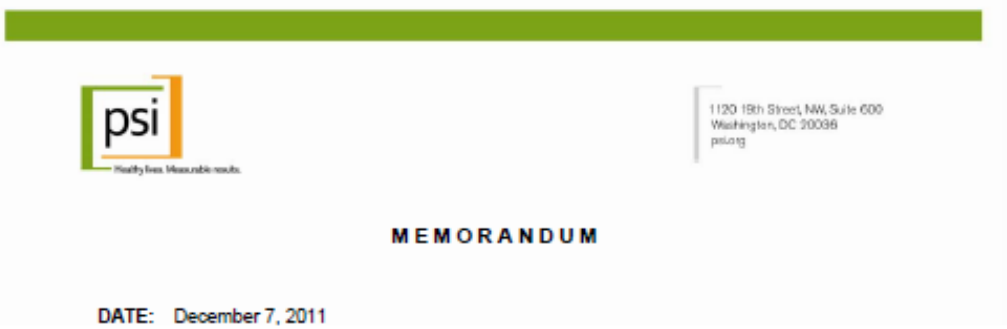
5. HUMAN SUBJECTS PROTECTION

This study was approved by PSI Research Ethics Board (PSI REB) as in ANNEX B.

6. IMPROVEMENT FOR NEXT STUDY ROUND

During the next study round, there are several improvements to be applied to the study. First, questions about regular commercial partner should consider to be removed due to similarity to commercial partner. Second, before starting the fieldwork, permission letter should be prepared and submitted to some restricted area for ease of data collection. Appropriate time and venue for the interview should be considered i.e. 2-5 pm at beauty salon. Third, methodology should be improved to include TG who work in closed setting i.e. soldier camp. Fourth, increase the sample size for TG in Sattahip and Sriracha while considering their travel between Pattaya and these areas. Finally, data should also be recorded number and reason of TG who refuse to be included in this study.

ANNEX B: Ethical Considerations



1120 19th Street, NW, Suite 600
Washington, DC 20036
psi.org

MEMORANDUM

DATE: December 7, 2011

TO: Duangta Pawa

FROM: PSI Research Ethics Board

RE: REB Submission #52.2011

TITLE: Baseline HIV/AIDS TRaC Study among Transgenders in Pattaya, Sattahip and Sriracha, Thailand 2011

The PSI Research Ethics Board (PSI REB) has reviewed and approved the above referenced study via its expedited review process on December 6, 2011 for a period of 12 months. This approval will expire on December 5, 2012.

The IRB determined that study meets the criteria for expedited review under category, 45, CFR 46.110 Category 7 *(Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies).*

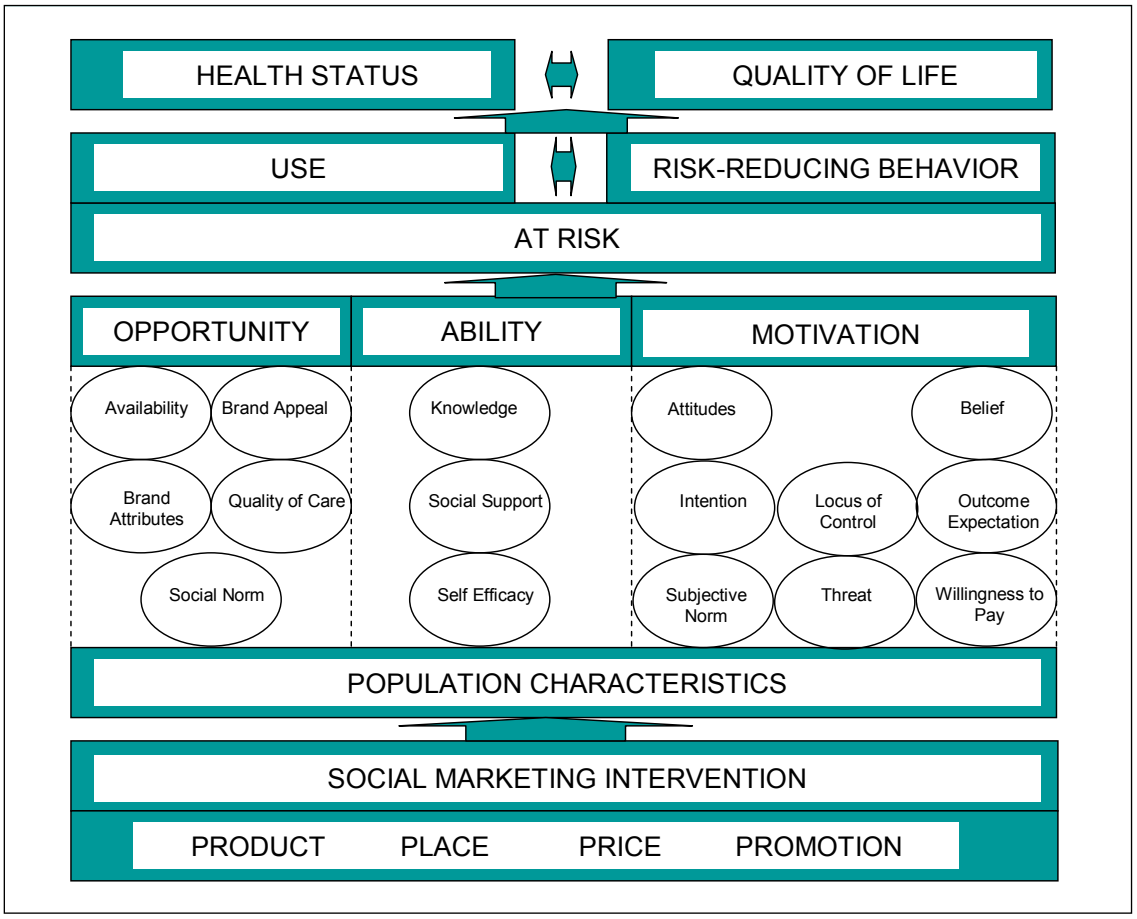
The PI is required to inform the REB immediately of unanticipated problems or new information which could change the risk/benefit ratio. Modifications to study design, data collection tools, study forms, or PI staffing must be approved by the PSI REB prior to implementation. For more information concerning modification request or reporting unanticipated problems, please refer to the PSI/REB website (http://www.psi.org/resources/research-ethics-board) or contact Kelly O'Keefe (kokeefe@psi.org).

Sincerely,

K. O'Keef

Kelly O'Keefe
Research Ethics Board Coordinator
(202) 572-4515
kokeefe@psi.org

ANNEX C: Performance Framework for Social Marketing



ANNEX D: Reliability Analysis

Composite Variables	Cronbach's Alpha Year 2011 (N=386)
MOTIVATION	
Attitude: **It is necessary to use condom even a client look healthy or attractive**[+] 1. I am likely to use condom even a commercial partner looks attractive 2. I am likely to use condom even a commercial partner looks healthy 3. It is necessary to use condom even a commercial partner does not have any STI symptom	.847
Attitude: **Condom use with regular partner represents love and trust**[++] 1. I love my boyfriend so I have to protect him by using condom every time 2. Using condom is appropriate for people who love each other 3. Using condom is appropriate for people who trust each other 4. My regular partner still think that I trust him if I suggested using a condom 5. My regular partner still think that I love him if I propose to use condom	.772

Note:

OAM determinant values ranged from 1-6 "1=Strongly Disagree, 2=Disagree, 3=Mildly Disagree, 4= Mildly Agree, 5=Agree, 6=Strongly Agree"

\+ Among those who have commecial and regular commercial partner (n=320)
++ Among those who have regular partner (n=102)

SEGMENTATION TABLE

Behavioral determinants of consistent condom use with regular commercial partner in the past 3 months among TGs inPattaya, Sattahip and Sriracha, 2011

Risk: Transgenders, 18-35 years old in Pattaya, Sattahip and Sriracha

Behavior: Consistent condom used with regular commercial partner

INDICATORS	Consistent Condom Use with Regular Commercial Partner		Odds Ratio	Sig.
	Yes n=144 (86.7%)	No n=22 (13.3%)		
MOTIVATION	Mean	Mean		
Attitude				
- It is OK to not using condom with a handsome man	2.10	3.18	-	NS
- If I get more money, it is OK to not using condom	1.97	2.99	0.65	**
- I am less likely to use condoms with a regular commercial partner	1.77	2.82	0.58	**
- It is necessary to use condom even a client look healthy or attractive (SCALE)	5.39	4.24	-	NS
Belief				
- Carrying condom will make me lost new commercial sex partner	1.86	2.68	-	NS
Intention				
- I intend to not having sex without condom	4.59	3.72	1.43	*
Locus of Control				
- When I was drunk and could not control myself so not using condom	2.31	3.32	-	NS
- When I have sex, condom always leak or break	2.70	3.59	-	NS
POPULATION CHARACTERISTICS				
	Mean	Mean		
- Number of sexual partner	45.81	85.00	-	NS
- Number of regular commercial partner	7.04	5.23	-	NS
	%	%		
- Ever had sex while drunk on alcohol or high on drug	53.5	77.3	-	NS

Note:

* < .05 p-value
** < .01 p-value
*** < .001 p-value
BS Borderline Significant (<.08 p-value)
NS Not Significant
Cox & Snell R square =.174
Negellkerke R square =.320
Chi square = 31.654, p-value = .000
Hosmer and Lemeshow Chi square = 8.699, df = 7, p-value =.275

OAM determinant values ranged from 1-6 “1=Strongly Disagree, 2=Disagree, 3=Mildly Disagree, 4= Mildly Agree, 5=Agree, 6=Strongly Agree”

Attitude (Scaled Items)

It is necessary to use condom even a client look healthy or attractive

1) I am likely to use condom even a commercial partner looks attractive
2) I am likely to use condom even a commercial partner looks healthy
3) It is necessary to use condom even a commercial partner does not have any STI symptom

ANNEX F: Population Characteristics

Population Characteristics	Pattaya N=308		Sattahip N=31		Sriracha N=47		Total N=386	
	n	%	n	%	n	%	n	%
Age								
18 – 20 years old	57	19%	7	23%	6	13%	70	18%
21 – 25 years old	132	43%	11	35%	26	55%	169	44%
26 – 30 years old	95	31%	5	16%	11	23%	111	29%
31 – 35 years old	24	8%	8	26%	4	9%	36	9%
Mean	24.56		26.00		24.09		24.60	
Median	25.00		25.00		23.00		24.00	
Education								
Primary school and lower	19	6%	4	13%	3	6%	26	7%
Secondary school	121	39%	12	39%	12	26%	145	38%
High school	133	43%	11	35%	23	49%	167	43%
Diploma	18	6%	2	6%	5	11%	25	6%
University or higher	17	6%	2	6%	4	9%	23	6%
Personal monthly income								
No income	0	0%	1	3%	1	2%	2	1%
1 - 10,000	61	20%	14	45%	19	40%	94	24%
10,001 - 20,000	113	37%	10	32%	23	49%	146	38%
more than 20,000	134	44%	6	19%	4	9%	144	37%
Mean	23,722.40		16,006.45		14,191.49		21,943.00	
Median	20,000.00		11,000.00		12,000.00		20,000.00	
Occupation								
Employee in night entertainment venues (i.e. bar, pub, disco)	170	55%	15	48%	15	32%	200	52%
Freelance	121	39%	1	3%	0	0%	122	32%
Entertainer/Show girl	32	10%	1	3%	1	2%	34	9%
Employee in Turkish Baht	12	4%	0	0%	0	0%	12	3%
Employee in beauty salon	12	4%	2	6%	1	2%	15	4%
Employee (not in night entertainment venues)	8	3%	7	23%	3	6%	18	5%
Self-employed	3	1%	3	10%	3	6%	9	2%
Employee in factory	2	1%	0	0%	26	55%	28	7%
Student	0	0%	0	0%	2	4%	2	1%
Unemployed	0	0%	1	3%	0	0%	1	0%

Population Characteristics	Pattaya N=308		Sattahip N=31		Sriracha N=47		Total N=386	
	n	%	n	%	n	%	n	%
Nationality								
Thai	301	98%	30	97%	47	100%	378	98%
Lao	7	2%	1	3%	0	0%	8	2%
Period of living								
1 year or less	163	53%	10	32%	11	23%	184	48%
More than 1 year	145	47%	21	68%	36	77%	202	52%
Mean	2.59		8.12		4.82		3.31	
Median	1.00		3.00		4.00		1.42	
Place of living before moved into Pattaya, Sattahip or Sriracha								
Northeastern Region	159	52%	10	32%	20	43%	189	49%
Central Region	62	20%	5	16%	6	13%	73	19%
Northern Region	42	14%	3	10%	11	23%	56	15%
Eastern Region	18	6%	8	26%	5	11%	31	8%
Southern Region	14	5%	1	3%	1	2%	16	4%
Western Region	5	2%	0	0%	2	4%	7	2%
Neghboring Countries	5	2%	1	3%	0	0%	6	2%
Local Residence	3	1%	3	10%	2	4%	8	2%
Had vaginal surgery								
Yes	10	3%	0	0%	1	2%	11	3%
No	298	97%	31	100%	46	98%	375	97%
Sexual role								
Receive partner every times	118	38%	23	74%	45	96%	186	48%
Penetrate partner every times	3	1%	1	3%	0	0%	4	1%
Both receive and penetrate partner	187	61%	7	23%	2	4%	196	51%

ANNEX G: Sexual Behavior Information

Partners in the past 3 months	Pattaya N=308		Sattahip N=31		Sriracha N=47		Total N=386	
	n	%	n	%	n	%	n	%
Had partner in the past 3 months								
Commercial partner	289	94%	10	32%	10	21%	309	80%
Regular commercial partner	155	50%	6	19%	5	11%	166	43%
Casual partner	43	14%	25	81%	37	79%	105	27%
Regular partner	55	18%	14	45%	33	70%	102	26%
Number of partners in the past 3 months								
Commercial partner[1]								
1 to 10	75	26%	5	50%	7	70%	87	28%
11 to 20	66	23%	2	20%	1	10%	69	22%
21 to 30	44	15%	1	10%	1	10%	46	15%
More than 30	104	36%	2	20%	1	10%	107	35%
Mean	38.63		23.30		15.50		37.38	
Median	25.00		10.50		3.00		20.00	
Regular commercial partner[2]								
1 to 2	49	32%	3	50%	4	80%	56	34%
3 to 4	41	26%	1	17%	0	0%	42	25%
More than 4	65	42%	2	33%	1	20%	68	41%
Mean	7.01		4.83		2.80		6.80	
Median	3.00		2.50		1.00		3.00	
Casual partner[3]								
1 to 4	18	42%	13	52%	24	65%	55	52%
5 to 8	7	16%	4	16%	6	16%	17	16%
More than 8	18	42%	8	32%	7	19%	33	31%
Mean	8.86		7.56		6.05		7.56	
Median	5.00		4.00		3.00		4.00	
Regular partner[4]								
1 person	48	87%	10	71%	25	76%	83	81%
More than 1	7	13%	4	29%	8	24%	19	19%
Mean	1.15		1.43		1.39		1.26	
Median	1.00		1.00		1.00		1.00	

Note:

	Pattaya	Sattahip	Sriracha	Total
1 Among those having commercial partner	289	10	10	309
2 Among those having regular commercial partner	155	6	5	166
3 Among those having casual partner	43	25	37	105
4 Among those having regular partner	55	14	33	102

Oral sex in the past 3 months	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
Have oral sex with partner in the past 3 months								
With commercial partner[1]								
Yes	284	98%	8	80%	8	80%	300	97%
No	5	2%	2	20%	2	20%	9	3%
With regular commercial partner[2]								
Yes	147	95%	3	50%	5	100%	155	93%
No	8	5%	3	50%	0	0%	11	7%
With casual partner[3]								
Yes	41	95%	22	88%	32	86%	95	90%
No	2	5%	3	12%	5	14%	10	10%
With regular partner[4]								
Yes	52	95%	13	93%	31	94%	96	94%
No	3	5%	1	7%	2	6%	6	6%
Number of time having oral sex with partner in the past 3 months								
Commercial partner[5]								
1 to 15	82	29%	4	50%	7	88%	93	31%
16 to 30	91	32%	1	13%	1	13%	93	31%
31 to 45	31	11%	1	13%	0	0%	32	11%
46 to 60	35	12%	0	0%	0	0%	35	12%
more than 60	45	16%	2	25%	0	0%	47	16%
Mean	40.43		41.12		6.50		39.55	
Median	26.50		20.00		3.50		25.00	
Regular commercial partner[6]								
1 to 10	80	54%	2	67%	4	80%	86	55%
11 to 20	26	18%	0	0%	0	0%	26	17%
21 to 30	17	12%	1	33%	1	20%	19	12%
31 to 40	7	5%	0	0%	0	0%	7	5%
more than 40	17	12%	0	0%	0	0%	17	11%
Mean	24.56		9.67		6.60		23.70	
Median	10.00		4.00		1.00		10.00	
Casual partner[7]								
1 to 5	19	46%	11	50%	18	56%	48	51%
6 to 10	8	20%	5	23%	5	16%	18	19%
11 to 15	6	15%	3	14%	4	13%	13	14%
16 to 20	5	12%	1	5%	2	6%	8	8%
more than 20	3	7%	2	9%	3	9%	8	8%
Mean	10.22		12.41		9.19		10.38	
Median	9.00		5.50		4.50		5.00	

Oral sex in the past 3 months	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
Regular partner[8]								
1 to 15	26	50%	9	69%	18	58%	53	55%
16 to 30	9	17%	2	15%	7	23%	18	19%
31 to 45	3	6%	1	8%	0	0%	4	4%
46 to 60	6	12%	1	8%	3	10%	10	10%
more than 60	8	15%	0	0%	3	10%	11	11%
Mean	29.77		13.31		27.55		26.82	
Median	17.50		6.00		12.00		12.00	

Condom use when having oral sex	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
Condom use when having oral sex with partner in the past 3 months								
Commercial partner [5]								
Every time	31	11%	2	25%	4	50%	37	12%
Sometime	79	28%	3	38%	0	0%	82	27%
Never	174	61%	3	38%	4	50%	181	60%
Regular commercial partner[6]								
Every time	26	18%	0	0%	2	40%	28	18%
Sometime	11	7%	1	33%	0	0%	12	8%
Never	110	75%	2	67%	3	60%	115	74%
Casual partner [7]								
Every time	13	32%	6	27%	6	19%	25	26%
Sometime	4	10%	7	32%	1	3%	12	13%
Never	24	59%	9	41%	25	78%	58	61%
Regular partner[8]								
Every time	5	10%	3	23%	4	13%	12	13%
Sometime	2	4%	1	8%	1	3%	4	4%
Never	45	87%	9	69%	26	84%	80	83%

Note:

	Pattaya	Sattahip	Sriracha	Total
1 Among those having commercial partner	289	10	10	309
2 Among those having regular commercial partner	155	6	5	166
3 Among those having casual partner	43	25	37	105
4 Among those having regular partner	55	14	33	102
5 Among those having oral sex with commercial partner	284	8	8	300
6 Among those having oral sex with regular commercial partner	147	3	5	155
7 Among those having oral sex with casual partner	41	22	32	95
8 Among those having oral sex with regular partner	52	13	31	96

Sex in the past 3 months	Pattaya N=308		Sattahip N=31		Sriracha N=47		Total N=386	
	n	%	n	%	n	%	n	%
Have sex with partner in the past 3 months								
With commercial partner								
Yes	289	94%	10	32%	10	21%	309	80%
No	19	6%	21	68%	37	79%	77	20%
With regular commercial partner								
Yes	155	50%	6	19%	5	11%	166	43%
No	153	50%	25	81%	42	89%	220	57%
With casual partner								
Yes	43	14%	25	81%	37	79%	105	27%
No	265	86%	6	19%	10	21%	281	73%
With regular partner								
Yes	55	18%	14	45%	33	70%	102	26%
No	253	82%	17	55%	14	30%	284	74%
Number of time having sex with partner in the past 3 months								
Commercial partner[1]								
1 to 15	88	30%	3	30%	7	70%	98	32%
16 to 30	87	30%	4	40%	2	20%	93	30%
31 to 45	36	12%	1	10%	0	0%	37	12%
46 to 60	35	12%	0	0%	0	0%	35	11%
more than 60	43	15%	2	20%	1	10%	46	15%
Mean	40.93		27.90		15.80		39.70	
Median	27.00		18.50		3.50		25.00	
Regular commercial partner[2]								
1 to 10	80	52%	2	33%	4	80%	86	52%
11 to 20	31	20%	3	50%	0	0%	34	20%
21 to 30	18	12%	1	17%	1	20%	20	12%
31 to 40	8	5%	0	0%	0	0%	8	5%
more than 40	18	12%	0	0%	0	0%	18	11%
Mean	24.77		14.00		7.00		23.85	
Median	10.00		17.50		3.00		10.00	
Casual partner [3]								
1 to 5	20	47%	12	48%	23	62%	55	52%
6 to 10	9	21%	7	28%	5	14%	21	20%
11 to 15	5	12%	2	8%	5	14%	12	11%
16 to 20	4	9%	1	4%	1	3%	6	6%
more than 20	5	12%	3	12%	3	8%	11	10%
Mean	10.67		13.08		8.35		10.43	
Median	8.00		6.00		4.00		5.00	

Sex in the past 3 months	Pattaya N=308		Sattahip N=31		Sriracha N=47		Total N=386	
	n	%	n	%	n	%	n	%
Regular partner [4]								
1 to 15	28	51%	11	79%	20	61%	59	58%
16 to 30	7	13%	2	14%	8	24%	17	17%
31 to 45	5	9%	1	7%	0	0%	6	6%
46 to 60	6	11%	0	0%	0	0%	6	6%
more than 60	9	16%	0	0%	5	15%	14	14%
Mean	32.75		10.14		22.24		26.25	
Median	15.00		6.00		12.00		12.00	

Condom use when having sex	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
Condom use when having sex with partner in the past 3 months								
Commercial partner[1]								
Every time	234	81%	8	80%	9	90%	251	81%
Sometime	39	13%	2	20%	0	0%	41	13%
Never	16	6%	0	0%	1	10%	17	6%
Regular commercial partner[2]								
Every time	134	86%	6	100%	4	80%	144	87%
Sometime	13	8%	0	0%	1	20%	14	8%
Never	8	5%	0	0%	0	0%	8	5%
Casual partner[3]								
Every time	32	74%	19	76%	16	43%	67	64%
Sometime	6	14%	2	8%	5	14%	13	12%
Never	5	12%	4	16%	16	43%	25	24%
Regular partner[4]								
Every time	39	71%	10	71%	15	45%	64	63%
Sometime	5	9%	2	14%	5	15%	12	12%
Never	11	20%	2	14%	13	39%	26	25%
Condom use at last sex								
Commercial partner[1]								
Yes	265	92%	8	80%	10	100%	283	92%
No	24	8%	2	20%	0	0%	26	8%
Regular commercial partner[2]								
Yes	142	92%	6	100%	4	80%	152	92%
No	13	8%	0	0%	1	20%	14	8%

Condom use when having sex	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
Casual partner[3]								
Yes	38	88%	20	80%	20	54%	78	74%
No	5	12%	5	20%	17	46%	27	26%
Regular partner[4]								
Yes	44	80%	12	86%	17	52%	73	72%
No	11	20%	2	14%	16	48%	29	28%

Note:

	Pattaya	Sattahip	Sriracha	Total
1 Among those having commercial partner	289	10	10	309
2 Among those having regular commercial partner	155	6	5	166
3 Among those having casual partner	43	25	37	105
4 Among those having regular partner	55	14	33	102

Water-based lubricant use	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
Water-based lubricant use when having sex with partner in the past 3 months								
Commercial partner [1]								
Every time	250	87%	7	70%	10	100%	267	86%
Sometime	38	13%	3	30%	0	0%	41	13%
Never	1	0%	0	0%	0	0%	1	0%
Regular commercial partner [2]								
Every time	135	87%	5	83%	4	80%	144	87%
Sometime	15	10%	1	17%	0	0%	16	10%
Never	5	3%	0	0%	1	20%	6	4%
Casual partner [3]								
Every time	33	77%	18	72%	29	78%	80	76%
Sometime	7	16%	7	28%	6	16%	20	19%
Never	3	7%	0	0%	2	5%	5	5%
Regular partner [4]								
Every time	33	60%	10	71%	16	48%	59	58%
Sometime	7	13%	1	7%	4	12%	12	12%
Never	15	27%	3	21%	13	39%	31	30%
Water-based lubricant use at last sex								
Commercial partner [1]								
Yes	276	96%	8	80%	10	1	294	95%
No	13	4%	2	20%	0	0	15	5%
Regular commercial partner [2]								
Yes	147	95%	6	100%	4	80%	157	95%
No	8	5%	0	0%	1	20%	9	5%
Casual partner [3]								
Yes	38	88%	21	84%	32	86%	91	87%
No	5	12%	4	16%	5	14%	14	13%
Regular partner [4]								
Yes	36	65%	11	79%	17	52%	64	63%
No	19	35%	3	21%	16	48%	38	37%

Note:

	Pattaya	Sattahip	Sriracha	Total
1 Among those having commercial partner	289	10	10	309
2 Among those having regular commercial partner	155	6	5	166
3 Among those having casual partner	43	25	37	105
4 Among those having regular partner	55	14	33	102

ANNEX H: Product Related Information

Product related information	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
Know a place to buy water-based lubricant								
Yes	298	97%	28	90%	44	94%	370	96%
No	10	3%	3	10%	3	6%	16	4%
Can buy water-based lubricant when needed								
Yes	304	99%	28	90%	47	100%	379	98%
No	4	1%	3	10%	0	0%	7	2%
Have water-based lubricant in hand when needed								
Yes	306	99%	30	97%	45	96%	381	99%
No	2	1%	1	3%	2	4%	5	1%
Water-based lubricant is affordable								
Yes	303	98%	28	90%	44	94%	375	97%
No	5	2%	3	10%	3	6%	11	3%

ANNEX I: VCT and HIV Test

VCT and HIV test	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
VCT received in the past 6 months								
Pre testing counseling	51	17%	3	10%	2	4%	56	15%
HIV testing voluntary	159	52%	11	35%	15	32%	185	48%
Post testing counseling	52	17%	4	13%	4	9%	60	16%
Has never been tested	167	54%	13	42%	17	36%	197	51%
HIV Test								
Ever received								
Yes	210	68%	18	58%	29	62%	257	67%
No	98	32%	13	42%	18	38%	129	33%
Number of times having HIV test[1]								
More than 10 times	44	21%	1	6%	3	10%	48	19%
6 – 10 times	29	14%	1	6%	2	7%	32	12%
3 – 5 times	56	27%	5	28%	8	28%	69	27%
2 times	52	25%	7	39%	7	24%	66	26%
Once	29	14%	4	22%	9	31%	42	16%
Places for getting HIV test[1]								
Clinic in Chon Buri	85	40%	4	22%	5	17%	94	37%
SISTERS	45	21%	4	22%	2	7%	51	20%
Hospital outside Chon Buri	31	15%	2	11%	6	21%	39	15%
Hospital in Chon Buri	23	11%	9	50%	12	41%	44	17%
Pattayarak Hospital	18	9%	1	6%	0	0%	19	7%
Banglamung Hospital	12	6%	1	6%	1	3%	14	5%
Last HIV test[1]								
Within last 30 days (1 month)	47	22%	1	6%	6	21%	54	21%
Within last 90 days (3 months)	93	44%	6	33%	6	21%	105	41%
Within last 180 days (6 months)	26	12%	5	28%	4	14%	35	14%
Within a year	23	11%	1	6%	4	14%	28	11%
More than 1 year ago	21	10%	5	28%	9	31%	35	14%
Know result after got the test[1]								
Yes	202	96%	18	100%	29	100%	249	97%
No	8	4%	0	0%	0	0%	8	3%
Main reason for not having HIV test[2]								
Afraid of test result.	71	72%	6	46%	7	39%	84	65%
Think that he/she is not at risk.	35	36%	4	31%	9	50%	48	37%
Have no time.	10	10%	2	15%	4	22%	16	12%
Do notknow where to go.	3	3%	1	8%	2	11%	6	5%

VCT and HIV test	Pattaya N= 308		Sattahip N= 31		Sriracha N= 47		Total N=386	
	n	%	n	%	n	%	n	%
Afraid of not being well treated	0	0%	2	15%	1	6%	3	2%
Do not want to spend money.	1	1%	0	0%	1	6%	2	2%
Do not want register their name when go for testing	1	1%	0	0%	1	6%	2	2%
Do not need to know their HIV test result	2	2%	0	0%	0	0%	2	2%

Note:

	Pattaya	Sattahip	Sriracha	Total
1 Among those who have ever received HIV test	210	18	29	257
2 Among those who never received HIV test	98	13	18	129

ANNEX J: STI Screening

STI Screening	Pattaya N=308		Sattahip N=31		Sriracha N=47		Total N=386	
	n	%	n	%	n	%	n	%
Had STI symptom in the past 12 months								
Yes	18	6%	4	13%	2	4%	24	6%
No	290	94%	27	87%	45	96%	362	94%
When had STI symptom [1]								
Do nothing	3	17%	1	25%	0	0%	4	17%
Consult with friend	0	0%	1	25%	0	0%	1	4%
Buy drug from pharmacy	6	33%	2	50%	1	50%	9	38%
See doctor	9	50%	0	0%	0	0%	9	38%
Other	0	0%	0	0%	1	50%	1	4%
Places for getting STI test [2]								
Clinic in Chon Buri Province	3	33%	0	0%	0	0%	3	33%
BangLamung Hospital	2	22%	0	0%	0	0%	2	22%
Hospital in Chon Buri Province	2	22%	0	0%	0	0%	2	22%
Hospital outside Chon Buri Province	2	22%	0	0%	0	0%	2	22%
SISTERS	0	0%	0	0%	0	0%	0	0%
Pattayarak Hospital	0	0%	0	0%	0	0%	0	0%
Types of STI [2]								
Warts	7	78%	0	0%	0	0%	7	78%
Chlamydia	1	11%	0	0%	0	0%	1	11%
Herpes	1	11%	0	0%	0	0%	1	11%
Main reason for not having STI test [3]								
Think that it is not necessary	4	44%	0	0%	1	50%	5	33%
Afraid of test result	3	33%	1	50%	1	50%	5	33%
Afraid of not being well treated	1	11%	2	100%	0	0%	3	20%
Do not know where to go	1	11%	1	50%	0	0%	2	13%
Think that they will be cured without getting STI treatment	2	22%	0	0%	0	0%	2	13%

Note:

	Pattaya	Sattahip	Sriracha	Total
1 Among those who had STI symptom in the past 12 months	210	18	29	257
2 Among those who see doctor	9	0	0	9
3 Among those who did not see doctor	9	4	2	15