

CHAPTER IV

RESULTS

In this chapter, the findings of study were presented into two phases, according to the phases of this study. The first phase (phase I) presents the findings of factors predicting condom use behavior, based on the ARRM model. The factors in this first phase included the demographic factors (age, nationality, living status, educational level, work experience, income, history of STDs), the psychosocial factors (AIDS knowledge, perceived infection risk, peer norms, cues to action, self-efficacy and respond self-efficacy), intention to use condoms and condom use. Data were analyzed using descriptive statistics, for frequency, percentage, mean and standard deviation. Logistic regression analyses were used to indicate the significance predictors for condom use behavior. The significant predictors were used to design an HIV/AIDS prevention program aimed at MSWs in second phase (phase II). A quasi-experimental design with one group's pre-test / post-test was used in this phase II. The outcomes were collected at baseline, immediately after the intervention, one-month, and three-month after providing the intervention. The two phase's findings of this study were shown as following.

4.1 Phase I: Factors predicting condom use based on the ARRM model

4.2 Phase II: Effectiveness of the HIV/AIDS prevention program

4.1 Phase I: Factors predicting condom use based on the ARRM model

4.1.1 Demographic Characteristics of the sample

The mean of age MSWs were 23.70 ± 3.40 years old with range of 20 to 35. Sixty five percent of MSWs were Thai nationality. Almost 60% of subjects (58.5%) were living with boyfriend or girlfriend. In terms of educational level, 67.0% of them had primary or secondary school education. The median of work experience of subjects were 9 months (IQR=10). Median income was 9,000 baths per month

(IQR=4,000). Eighty one point five percent of subjects had never history of STDs, as shown in table 2

Table 2 Demographic and Background (n=200)

Demographic	n (%)
Nationality	
Thai	130 (65.0)
Thaiyai	70 (35.0)
Living status	
Alone	83 (41.5)
With boyfriend	63 (31.5)
With girlfriend	54 (27.0)
Education level	
No education	18 (9.0)
Elementary education	59 (29.5)
Secondary education	75 (37.5)
Some college	29 (14.5)
Bachelor's degree	19 (9.5)
History of STDs	
Yes	37 (18.5)
No	163 (81.5)
Work experience in month; Median (IQR)	9 (10)
Income in baht; Median (IQR)	9,000 (4,000)
Age in year (mean ± SD)	23.7± 3.4

4.1.2 The psychosocial factors

AIDS knowledge

The mean score was 7.36 ± 2.36 (total score = 10). For knowledge about HIV/AIDS transmission, 84% of subjects had correct knowledge that AIDS was not affected only gay men and having wound in mouth, have chances of getting AIDS

when have kiss. Seventy one percent of subjects had correct knowledge that AIDS could not transmission by sharing food and did not use condom when oral sex, have chances of getting AIDS. However, 44.5% of the participants misunderstood that people had only AIDS symptoms could transmit to another. For knowledge about HIV/AIDS prevention, more than 90% of the participants had correct knowledge that using condom correctly and every time could protect them from HIV. However, 44.5% of the participants had misunderstood that the withdrawal technique would reduce a chance of getting AIDS and 35% of them had misunderstood that cleaning of sexual organ after sex would reduce a chance of getting AIDS (as shown in table 3).

Table 3 Percent correct answers on each item of AIDS knowledge (n=200)

Items	Correct answer	
	No	%
<u>Transmission</u>		
1. AIDS affects only gay men (F)	168	(84.0)
2. AIDS cannot transmission by sharing food (T)	142	(71.0)
3. People with only AIDS symptoms can transmit to another (F)	111	(55.5)
4. Anal sex is the only type of sex that can expose people to AIDS (F)	130	(65.0)
5. Having wound in mouth, have chances of getting AIDS when have kiss(T)	168	(84.0)
6. Don't use condom when oral sex, have chances of getting AIDS(T)	142	(71.0)
<u>Prevention</u>		
7. The withdrawal will reduce getting AIDS (F)	111	(55.5)
8. Cleaning of sexual organ after sex will reduce getting AIDS(F)	130	(65.0)
9. Using condom correctly will give protection from HIV(T)	185	(92.5)
10. Using condom every time will give protection from HIV(T)	186	(93.0)
Total score (mean \pm SD) (Total = 10)	7.36 \pm 2.36	

Perceived infection risk

Perceived infection risk measured by using five-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5). The sum of participant's scores (ranging from 5 to 25) reflected their perceived infection risk - a higher score indicating a higher perceived risk.

Mean score of perceived infection risk was 18.05 ± 2.89 (total score = 25). This figure show that subjects' perceived infection risk were high level. Almost 90% of the participants strongly agreed and agreed that if they did not use condom every time they had a chance of getting AIDS. About 72% of the participants strongly agreed and agreed that they had a chance of getting AIDS from their occupation. On the other hand, 34.5% of subjects uncertain that they might have sex with someone who was infection HIV/AIDS and they uncertain that if they had sex with more people they had a chance of getting AIDS. Thirty four percent of subjects strongly disagreed and disagreed that they were strong man then they had not chances of getting AIDS. However, 38% of them uncertain that they were strong man then they had not chances of getting AIDS (as shown in table 4)

Peer norms

Peer norms measured by using a five-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5). The sum of participant's scores ranging from 4 to 20 with higher score indicating a stronger belief of their co-workers, bar owners, boyfriend/girlfriend, and clients thought the subjects should use condoms when they had sex.

Mean score of peer norms was 15.53 ± 2.74 (total score = 20). Sixty four point five percent of subjects strongly agreed and agreed that their co-workers thought they should use condoms when they had sex. However, 34.5 % of them uncertain that their co-workers thought they should use condoms when they had sex. Sixty-eight point five percent of subjects strongly agreed and agreed that bar owners thought they should use condoms when they had sex. On the other hand, 30.5% of them uncertain that bar owners thought they should use condoms when they had sex. Sixty two percent of subjects strongly agreed and agreed that boyfriend/girlfriend thought they

should use condoms when they had sex. However, 33.5 % of them uncertain that boyfriend/girlfriend thought they should use condoms when they had sex. Sixty five percent of subjects strongly agree and agree that their clients thought they should use condoms when they had sex. However, 34% of subjects uncertain that their clients thought they should use condoms when they had sex (as shown in table 4).

Cues to action

Cues to action measured by using the five-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5). The sum of participants score (ranging from 6 to 30) identified triggers for condom use behaviour. The higher scores reflect a better trigger for the promotion of condom use among MSWs.

Mean score of cues to action was 22.98 ± 3.90 (total score = 30). More than 84% of participants strongly agreed and agreed that they had used condoms after having a conversation with health care provider and co-workers. Eighty seven point five percent of subjects strongly agreed and agreed that they had used condoms after having a conversation with volunteers of the Mplus (an NGO working in HIV/AIDS prevention program). About 64.5% of subjects strongly agreed and agreed that they had used condoms after receiving AIDS information from advertising, radio and TV. And 63% of them strongly agreed and agreed that they had use condoms after receiving AIDS information from magazine. On the other hand, almost 30% of subjects were uncertain that they would use condoms after receiving AIDS information from advertising, radio, TV, or magazine (as shown in table 4).

Self-efficacy and respond self-efficacy

Perceived self-efficacy measured by using the five-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5), the sum of participant's score (ranging from 5 to 25) represented their confidence in using condoms. Higher scores indicated a higher level of perceived self-efficacy.

Mean score of self-efficacy was 20.67 ± 2.60 (total score = 25). All of item of self –efficacy had a mean score more than 3.5. Almost 100% of respondents answered that using a condom was easy for them. Eighty-three point five percent of subjects strongly agreed and agreed that they would refuse to have sex if a male

partner would not use a condom, and 85% of them strongly agreed and agreed that they knew how to correctly use a condom when they had sex with someone. Approximately 75% of them strongly agreed or agreed that they were able to discuss the using correctly a condom. However, 25% of them uncertain that they were able to discuss correctly use a condom. While, 76% of subjects strongly agreed or agreed that they were able to discuss benefit the use of a condom. (as shown in table 4)

Regarding the respond self-efficacy could prevent the chance of getting AIDS measured by using the five-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5). Participant's score (ranging from 1 to 5) represented his belief about the efficacy or benefits of the condom as a preventative measure for reducing the risk of AIDS transmission. A higher score indicates a higher beliefs response efficacy.

Mean score of respond self-efficacy was $4.40 \pm .62$ (total score = 5). This figure show that respond self-efficacy were high level. Ninety three percent of respondents strongly agreed or agreed that using condoms prevented the chance of getting AIDS (as shown in table 4).

Table 4 Percent and mean score of each psychosocial factor item (n=200)

Items	Strongly Agree (%)	Agree (%)	Uncertain (%)	Disagree (%)	Strongly disagree (%)	Mean±SD
Perceived infection risk						
1. You may have had sex with someone who was infection HIV/AIDS	32(16.0)	70(35.0)	69(34.5)	23(11.5)	6(3.0)	3.50±1.00
2. If you don't use condom every time you have chances of getting AIDS	75(37.5)	104(52.0)	19(9.5)	2(1.0)	-	4.26±.67
3. You are strong man then you have not chances of getting AIDS (reversed score for mean)	18(9.0)	38(19.0)	76(38.0)	57(28.5)	11(5.5)	2.97±1.03
4. You have chances of getting AIDS from your occupation	37(18.5)	107(53.5)	41(20.5)	13(6.5)	2(1.0)	3.82±.84
5. If you have sex with more people you have chances of getting AIDS	32(16.0)	70(35.0)	69(34.5)	23(11.5)	6(3.0)	3.50±1.00
Total score (mean ± SD) (Total = 25)						18.05±2.89
Peer norm						
1. Your co-workers think you should use condoms when you have sex.	51(25.5)	78(39.0)	69(34.5)	2(1.0)	-	3.89±.80
2. Your owner thinks you should use condoms when you have sex.	53(26.5)	84(42.0)	61(30.5)	2(1.0)	-	3.94±.78
3. Your boy/girl friend thinks you should use condoms when you have sex.	44(22.0)	80(40.0)	67(33.5)	9(4.5)	-	3.79±.83
4. Your client thinks you should use condoms when you have sex.	52(26.0)	78(39.0)	68(34.0)	2(1.0)	-	3.90±.80
Total score (mean ± SD) (Total = 20)						15.53±2.74

Table 4 Percent and mean score each psychosocial factors item (n=200) (continued)

Items	Strongly Agree (%)	Agree (%)	Uncertain (%)	Disagree (%)	Strongly disagree (%)	Mean±SD
Cue to action						
1. You use condoms after having a conversation with a health care provider.	48 (24.0)	121(60.5)	22(11.0)	7(3.5)	2(1.0)	4.03±.76
2. You use condoms after having a conversation with your co-workers.	36(18.0)	132(66.0)	22(11.0)	9(4.5)	1(0.5)	3.97±.72
3. You use condoms after having a conversation with volunteers who work for Mplus	42(21.0)	133(66.5)	19(9.5)	5(2.5)	1(0.5)	4.05±.67
4. You use condoms after received AIDS information from advertising	23(11.5)	106(53.0)	53(26.5)	14(7.0)	4(2.0)	3.65±.85
5. You use condoms after received AIDS information from radio and TV	23(11.5)	106(53.0)	55(27.5)	11(5.5)	5(2.5)	3.66±.85
6. You use condoms after received AIDS information from magazine	23(11.5)	103(51.5)	56(28.0)	14(7.0)	4(2.0)	3.63±.85
Total score (mean ± SD) (Total = 30)						22.98±3.90
Perceived self-efficacy						
1. Using a condom is easy for you.	75(37.5)	122(61.0)	2(1.0)	1(0.5)	-	4.36±.53
2. You will refuse to have sex if a male partner will not use a condom.	88(44.0)	79(39.5)	21(10.5)	3(1.5)	9(4.5)	4.17±1.00
3. You know how to use correctly a condom when you have sex with someone.	64(32.0)	106(53.0)	30(15.0)	-	-	4.17±.67
4. You are able to discuss the using correctly a condom	45(22.5)	105(52.5)	50(25.0)	-	-	3.98±.69
5. You are able to discuss benefit the use of a condom	48(24.0)	104(52.0)	47(23.5)	1(0.5)	-	4.00±.71
Total score (mean ± SD) (Total = 25)						20.67±2.60
Respond self-efficacy						
1. Using condoms prevents the chance of getting AIDS.	95(47.5)	91(45.5)	14(7.5)	-	-	4.40±.62

Intention to use condom

When asked about the respondents' intention to use condom, 96.5% of them would use condom during anal sex in the future. Fifty eight percent of them would use condom during vaginal sex and 41% of them would use condom during oral sex. About 45.5% of respondents answered that they did not sure they would use condom during oral sex in the future. These finding were presented in table 5.

Table 5 Percent of intention to use condom (n=200)

Statements	Yes	No	Not sure
	n (%)	n (%)	n (%)
1. In the future you will use condoms during sex with women (vaginal sex).	116(58.0)	27(13.5)	57(28.5)
2. In the future you will use condoms during anal sex.	193(96.5)	3(1.5)	4(2.0)
3. In the future you will use condoms during oral sex.	82(41.0)	27(13.5)	91(45.5)

Condom use

Regarding condom use behavior, 93.5% of subjects used condoms every time when they had vaginal sex. Six point five percent of them reported that they used condoms some time when they had vaginal sex. Sixteen point five percent of them reported that use condom every time when they had anal sex and 30% of them had condom use every time for oral sex. While, forty four percent of participants reported that they used condom some time when they had anal or oral sex. However, 39.5% of them answered that they had never use condoms for anal sex. Only 26% of participants reported that they had never use condom for oral sex. These finding were presented in table 6.

Table 6 Percent of condom use (n=200)

Statements	Every- time n (%)	Some -time n (%)	Never use n (%)
1. In the past month you used condoms when you had sex with women (vaginal sex).	187(93.5)	13(6.5)	-
2. In the past month you used condoms when you had anal sex.	33(16.5)	88(44.0)	79(39.5)
3. In the past month you used condoms when you had oral sex.	60(30.0)	88(44.0)	52(26.0)

4.1.3 Factors influencing intention to use condom and condom use behavior using multiple logistic regressions

4.1.3.1 Factors influencing intention to use condom

Univariate analysis

Univariate analysis was performed to determine the association of each independent variable on the dichotomized outcome (intention to use condom). This study was divided intention to use condom into three types, including intention to use condom for vaginal sex, anal sex, and oral sex. The results found that the factors associated with intention to use condom for vaginal sex was age (Crude OR =1.13, 95% CI = 1.07–1.80, p= .002), history of STDs (Crude OR = 0.48, 95% CI = 0.23–0.99, p=.047), peer norm (Crude OR = 1.28, 95% CI = 1.13–1.43, p=.001), cue to action (Crude OR = 1.20, 95% CI = 1.07–1.35, p=.037), and self-efficacy (Crude OR = 1.20, 95% CI = 1.07–1.35, p=.002). These findings were presented in table 7.

The factors associated with intention to use condom for anal sex was AIDS knowledge (Crude OR =1.39, 95% CI = 1.04–1.85, p=.025). These findings were presented in table 7.

The factors associated with intention to use condom for oral sex was living with boyfriend or girlfriend (Crude OR =1.13, 95% CI = 1.10 –1.50, p= .021), income

(Crude OR = 1.00, 95% CI = 1.00–1.00, $p=.046$), peer norm (Crude OR = 1.20, 95% CI = 1.09–1.33, $p=.002$), cues to action (Crude OR = 1.16, 95% CI = 1.06–1.27, $p=.001$), self-efficacy (Crude OR = 1.22, 95% CI = 1.09–1.37, $p<.001$), and respond self-efficacy (Crude OR = 1.96, 95% CI = 1.20–3.19, $p<.007$). These findings were presented in table 7.

Multivariate logistic analysis was used to identify independent effects of each factor on intention to use condom. This study was divided the intention to use condom into three types, including intention to use condom for vaginal sex, anal sex, and oral sex. Only factors significant associated with intention to use condom in univariate analyses were entered into multivariable logistic regression model.

Intention to use condom for vaginal sex

From multivariate logistic analysis, only four variables were found to be significant predictors to intention to use condom for vaginal sex: increasing age (adjusted OR = 1.16, 95% = 1.10-1.29, $p=.011$), history of STDs (adjusted OR = .41, 95% = .18-.97, $p=.042$), higher peer norm (adjusted OR = 1.25., 95% = 1.11-1.42, $p=.000$) and higher self-efficacy (adjusted OR = 1.19., 95% = 1.05-1.35, $p=.008$). These findings were presented in table 7.

Intention to use condom for anal sex

Higher AIDS knowledge participants showed 1.39 fold significant intention to use condom for anal sex, compared to lower AIDS knowledge participants (adjusted OR = 1.39, 95% = 1.04-1.85, $p=.025$). These findings were presented in table 7.

Intention to use condom for oral sex

From multivariate logistic analysis, only two variables were found to be significant predictors to intention to use condom when they had oral sex: living with boyfriend or girlfriend (adjusted OR = 1.15, 95% = 1.06-1.46, $p=.015$), and higher cues to action (adjusted OR = 1.14, 95% = 1.04-1.25, $p<.005$) at statistically significant level of .05. These findings were presented in table 7.

4.1.3.2 Factors influencing condom use behavior

Univariate analysis

Univariate analysis was performed to determine the association of each independent variable on the dichotomized outcome (condom use). This study were divided the behavior of preventing HIV/AIDS into three types, including condom use for vaginal sex, anal sex, and oral sex. The results found that the factors associated with condom use when they had vaginal sex was age (Crude OR = 1.31, 95% CI = 1.05–1.63, $p = .015$), experience of work (Crude OR = 1.29, 95% CI = 1.08–1.54, $p = .005$), AIDS knowledge (Crude OR = 1.47, 95% CI = 1.17–1.84, $p < .001$), and self-efficacy (Crude OR = 1.46, 95% CI = 1.12–1.90, $p = .005$). These findings were presented in table 8.

The factors associated with condom use when they had anal sex was living with boyfriend or girlfriend (Crude OR = 1.28, 95% CI = 1.13–1.63, $p = .002$), perceived infection risk (Crude OR = 1.21, 95% CI = 1.05–1.39, $p = .007$), peer norms (Crude OR = 1.29, 95% CI = 1.11–1.50, $p = .001$), cues to action (Crude OR = 1.21, 95% CI = 1.07 – 1.38, $p = .003$), self-efficacy (Crude OR = 1.41, 95% CI = 1.19–1.66, $p < .001$), and respond self-efficacy (Crude OR = 1.79, 95% CI = 0.92–3.48, $p < .001$). These findings were presented in table 8.

The factors associated with condom use when they had oral sex was age (Crude OR = 0.88, 95% CI = 0.80–0.98, $p = .014$), experience of work (Crude OR = 0.96, 95% CI = 0.92–0.99, $p = .034$), history of STDs (Crude OR = 0.40, 95% CI = 0.15–0.99, $p = .048$), perceived infection risk (Crude OR = 1.21, 95% CI = 1.08–1.36, $p = .001$), peer norms (Crude OR = 1.35, 95% CI = 1.19–1.53, $p < .001$), cues to action (Crude OR = 1.17, 95% CI = 1.06–1.30, $p = .001$), self-efficacy (Crude OR = 1.39, 95% CI = 1.21–1.60, $p < .001$) and intention to use for oral sex (Crude OR = 5.21, 95% CI = 2.71–10.03, $p < .001$). These findings were presented in table 8.

Multivariate analysis

Multivariate logistic analysis was used to identify independent effects of each factor on condom use behavior. This study were divided the behavior of preventing HIV/ AIDS into three types, including condom use for vaginal sex, anal sex and oral

sex. Only factors significant associated with condom use in univariate analyses were entered into multivariable logistic regression model.

Condom use for vaginal sex

Only three variables were found to be significant predictors to condom use for vaginal sex: increasing age (adjusted OR = 1.33, 95% = 1.02-1.74, $p=.036$), higher AIDS knowledge (adjusted OR = 1.35, 95% = 1.02-1.80, $p=.036$) and higher self-efficacy (adjusted OR = 2.19., 95% = 1.06-4.52, $p=.033$), while experience of work showed no significance. These findings were presented in table 8.

Condom use for anal sex

From multivariate logistic analysis, only two variables were found to be significant predictors to condom use when they had anal sex: living with boyfriend or girlfriend (adjusted OR = 1.23, 95% = 1.04-1.42, $p=.002$), and higher self-efficacy (adjusted OR = 1.25, 95% = 1.05-1.50, $p=.012$), while perceive infection risk, peer norm, and cues to action showed no significance. These findings were presented in table 8.

Condom use for oral sex

From multivariate logistic analysis, only three variables were found to be significant predictors to condom use when they had oral sex: higher peer norm (adjusted OR = 1.26, 95% = 1.08-1.48, $p=.003$), higher self-efficacy (adjusted OR = 1.35, 95% = 1.14-1.60, $p<.001$) and higher intention to use condom for oral sex (adjusted OR = 3.71, 95% = 1.66-8.29, $p<.001$) at statistically significant level of .05, while age, experience of work, history of STDs, perceived infection risk, and cues to action showed no significance. These findings were presented in table 8.

Table 7 The factors influencing intention to use condom by multivariable logistic regression analysis

Variables	Vaginal sex		Anal sex		Oral sex	
	Unadjusted OR/(95%CI)	Adjusted OR/(95%CI) ¹	Unadjusted OR/(95%CI)	Adjusted OR/(95%CI) ²	Unadjusted OR/(95%CI)	Adjusted OR/(95%CI) ³
Age	1.13(1.07-1.80)*	1.16(1.10-1.29)*	1.09(0.85-1.39)	-	0.93(0.85-1.01)	-
race	1.36(0.75-2.47)	-	0.71(0.15-3.26)	-	1.07(0.59-1.93)	-
Living boy/girlfriend	1.10(0.62-1.95)	-	1.06(0.23-4.86)	-	1.13(1.10-1.50)*	1.15(1.07-1.46)*
Education	0.98(0.51-1.90)	-	0.52(0.61-4.41)	-	0.96(0.50-1.86)	-
Experience of work	0.98(0.95-1.01)	-	0.98(0.92-1.06)	-	0.98(0.95-1.02)	-
Income	1.00(1.00-1.00)	-	1.00(1.00-1.00)	-	1.00(1.00-1.00)*	1.00(1.00-1.00)
History of STDs	0.48(0.23-0.99)*	0.41(0.18-0.97)*	1.38(0.16-11.78)	-	0.74(0.35-1.55)	-
AIDS knowledge	1.02(0.91-1.15)	-	1.39(1.04-1.85)*	1.39(1.04-1.85)*	0.98(0.87-1.10)	-
Perceived infection risk	1.02(0.93-1.13)	-	1.06(0.82-1.37)	-	0.99(0.89-1.09)	-
Peer norm	1.28(1.13-1.43)*	1.25(1.11-1.42)*	0.92(0.69-1.21)	-	1.20(1.09-1.33)*	1.10(0.98-1.24)
Cue to action	1.20(1.07-1.35)*	1.03(0.95-1.12)	1.02(0.85-1.23)	-	1.16(1.06-1.27)*	1.14(1.04-1.25)*
Self-efficacy	1.20(1.07-1.35)*	1.19(1.05-1.35)*	1.36(0.98-1.91)	-	1.22(1.09-1.37)*	1.07(0.92-1.24)
Respond self-efficacy	1.46(0.92-2.31)	-	2.74(0.86-8.69)	-	1.96(1.20-3.19)*	1.69(0.91-3.14)

*p<0.05, ¹ Adjusted for vaginal sex, R²= .245, ² Adjusted for anal sex, R²= .093, ³ Adjusted for oral sex, R²= .223

Table 8 The factors influencing condom use by multivariable logistic regression analysis

Variables	Vaginal sex		Anal sex		Oral sex	
	Unadjusted OR/(95%CI)	Adjusted OR/(95%CI) ¹	Unadjusted OR/(95%CI)	Adjusted OR/(95%CI) ²	Unadjusted OR/(95%CI)	Adjusted OR/(95%CI) ³
Self-efficacy	1.46(1.12-1.90)*	2.19(1.06-4.52)*	1.41(1.19-1.66)*	1.25(1.05-1.50)*	1.39(1.21-1.60)*	1.35(1.14-1.60)*
Age	1.31(1.05-1.63)*	1.33(1.02-1.74)*	0.92(0.81-1.03)	-	0.88(0.80-0.98)*	0.89(0.79-1.02)
race	1.17(0.37-3.73)	-	1.85(0.78-4.34)	-	1.73(0.89-3.36)	-
Living boy/girlfriend	1.22(0.40-3.78)	-	1.28(1.13-1.63)*	1.23(1.04-1.42)*	0.55(0.30-1.02)	-
Education	1.95(0.63-6.03)	-	1.83(0.80-4.18)	-	1.90(0.99-3.65)	-
Experience of work	1.29(1.08-1.54)*	1.25(0.97-1.61)	0.96(0.91-1.01)	-	0.96(0.92-0.99)*	0.38(0.10-1.04)
Income	1.00(1.00-1.00)	-	1.00(1.00-1.00)	-	1.00(1.00-1.00)	-
History of STDs	1.40(0.00-1.00)	-	0.24(0.06-1.07)	-	0.40(0.15-0.99)*	1.15(1.00-1.32)
AIDS knowledge	1.47(1.17-1.84)*	1.35(1.02-1.80)*	0.98(0.84-1.15)	-	0.96(0.84-1.09)	-
Perceived infection risk	1.01(0.83-1.22)	-	1.21(1.05-1.39)*	1.06(0.09-1.24)	1.21(1.08-1.36)*	1.02(0.91-1.14)
Peer norm	1.13(0.91-1.40)	-	1.29(1.11-1.50)*	1.06(0.09-1.24)	1.35(1.19-1.53)*	1.26(1.08-1.48)*
Cue to action	0.99(0.85-1.15)	-	1.21(1.07-1.38)*	1.14(0.97-1.35)	1.17(1.06-1.30)*	1.02(0.91-1.14)
Respond self-efficacy	1.30(0.54-3.15)	-	1.79(0.92-3.48)*	1.14(0.99-1.29)	1.55(0.93-2.59)	-
Intention to use for vaginal sex	0.59(0.18-2.00)	-	-	-	-	-
Intention to use for anal sex	-	-	1.40(0.00-1.00)	-	-	-
Intention to use for oral sex	-	-	-	-	5.21(2.71-10.03)*	3.71(1.66-8.29)*

*p<0.05, ¹ Adjusted for vaginal sex, R²= .426, ² Adjusted for anal sex, R²= .332, ³ Adjusted for oral sex, R²= .465

Summary phase I

The results showed that there were seven factors influencing intention to use condom for vaginal, anal and oral sex including age, history of STDs, Living boy/girlfriend, AIDS knowledge, peer norm, cues to action, and self-efficacy.

The results showed that there were six factors influencing condom use for vaginal, anal and oral sex including age, AIDS knowledge, Living boy/girlfriend, self-efficacy, peer norm and intention to use condom for oral sex. Therefore, the activities were conducted in HIV/AIDS prevention program was a series of activities designed for enhancing and encouraging participants' AIDS knowledge, peer norm, self-efficacy, and intention to use condoms.

4.2 Phase II: Effectiveness of the HIV/AIDS prevention program

The quasi-experimental research was conducted to develop and evaluate the effectiveness of the HIV/AIDS prevention program amongst MSWs based in gay bars and gay massage parlours in Chiang Mai province. The researcher collected the data at before intervention, immediately after the intervention, one-month and three months after providing the intervention. Of 160 MSWs were recruited from a pool of MSWs working in gay bars and gay massage parlours in Chiang Mai province. The samples were selected equally from all gay bars and all gay massage parlours. Data were analyzed by using descriptive statistics, in terms of frequency, percentage, mean and standard deviation. The mean scores of participating MSWs relating to AIDS knowledge, perceived infection risk, peer norm, attitude toward condom use, and perceived self-efficacy in HIV/AIDS prevention were compared using the repeated measurements of ANOVA. McNemar's test was used to test the difference between proportions of subjects who had changed their intention to use condoms and condom use behaviour before and after intervention. The results of this study were presented as follows:

4.2.1 Demographic Characteristics of phase II participants

The mean of age MSWs were 23.6 ± 3.2 years old with range of 20 to 34. Fifty five point six percent of MSWs have nationality were Thai. Fifty three point eight percent had living with boyfriend/girlfriend. In terms of educational level, 50.7% of them had primary or secondary school. The median of work experience was five months (IQR=10). Median incomes were 8,000 baths per month (IQR=4,000), 85.6% of subjects never had history of STDs, as shown in table 9

Table 9 Demographic of phase II participants (n=160)

Demographic	n (%)
Nationality	
Thai	89 (55.6)
Thaiyai	71 (44.4)
Living status	
Alone	74 (46.2)
With boyfriend	47 (29.4)
With girlfriend	39 (24.4)
Education level	
No education	59 (36.9)
Elementary education	35 (21.9)
Secondary education	46 (28.8)
Some college	13 (8.1)
Bachelor's degree	7 (4.4)
History of STDs	
Yes	23 (14.4)
No	137 (85.6)
Work experience in month; Median (IQR)	5(10)
Income in baht; Median (IQR)	8,000 (4,000)
Age in year (mean \pm SD)	23.6 \pm 3.2

4.2.2 The psychosocial factors of participants before and after intervention

AIDS knowledge

Regarding participants' knowledge about HIV/AIDS transmission and prevention, the repeated measurements of ANOVA were used to compare difference on the mean scores of AIDS knowledge before intervention and after intervention. The results showed that there were increased significantly from before the intervention to immediately, one-month and three months after the intervention (from 5.84 ± 2.21 to 7.74 ± 1.44 , 7.64 ± 1.95 , and 7.28 ± 1.76 , respectively, $p < .001$) (as shown in table 10).

The means scores of AIDS knowledge increased significantly from before intervention to immediately (5.84 ± 2.21 to 7.74 ± 1.44 , $p < .001$), before intervention to one-month (5.84 ± 2.21 to 7.64 ± 1.95 , $p < .001$), before intervention to three months (5.84 ± 2.21 to 7.28 ± 1.76 , $p < .001$), and from immediately to three months after the intervention (7.74 ± 1.44 to 7.28 ± 1.76 , $p < .001$).

However, there were not significantly different of AIDS knowledge from at immediately to one month ($p = .61$) and from one-month to three months after the intervention ($p = .08$).

Table 10 AIDS transmission and prevention knowledge before and after intervention (n=160)

Items	n (%)				p-value
	before intervention	After intervention			
		Immediately	One month	Three month	
Transmission					
1. AIDS affects only gay men (F)	119(74.4)	141(88.1)	154(96.2)	143(89.4)	
2. AIDS cannot transmission by sharing food (T)	92(57.5)	114(71.2)	127(79.4)	95(59.4)	
3. People with only AIDS symptoms can transmit to another (F)	44(27.5)	115(71.9)	98(61.2)	97(60.6)	
4. Anal sex is the only type of sex that can expose people to AIDS (F)	107(66.9)	137(85.6)	133(83.1)	132(82.5)	
5. Having wound in mouth, have chances of getting AIDS when have kiss(T)	17(10.6)	15(9.4)	34(21.2)	15(9.4)	
6. Don't use condom when oral sex, have chances of getting AIDS(T)	108(67.5)	150(93.8)	128(80.0)	136(85.0)	
Prevention					
7. The withdrawal will reduce getting AIDS (F)	72(45.0)	125(78.1)	126(78.8)	133(70.6)	
8. Cleaning of sexual organ after sex will reduce getting AIDS(F)	65(40.6)	126(78.8)	125(78.1)	122(76.2)	
9. Using condom correctly will give protection from HIV(T)	149(93.1)	158(98.8)	152(95.0)	153(95.6)	
10. Using condom every time will give protection from HIV(T)	150(93.7)	158(98.8)	146(91.2)	159(99.4)	
Total score (mean ± SD) , Total score = 10	5.84±2.21^{a, b, c}	7.74±1.44^{a, d}	7.64±1.95^b	7.28±1.76^{c, d}	<.001

a,b,c,d = pairs which the mean score significantly difference at p<.05

Perceived infection risk

The repeated measurements of ANOVA were used to compare difference on the mean scores of perceived infection risk before intervention and after intervention. The result showed that there was increased significantly of the mean scores the person's perceived chance of contracting AIDS from before the intervention to immediately, one-month and three months after the intervention (from $4.11 \pm .57$ to $4.41 \pm .52$, $4.45 \pm .58$, and $4.40 \pm .52$, respectively, $p < .001$) (as shown in table 11).

The means scores of perceived infection risk increased significantly from before intervention to immediately ($4.11 \pm .57$ to $4.41 \pm .52$, $p < .001$), before intervention to one-month ($4.11 \pm .57$ to $4.45 \pm .58$, $p < .001$), before intervention to three months ($4.11 \pm .57$ to $4.40 \pm .52$, $p < .001$), and from immediately to three months after the intervention ($4.41 \pm .52$ to $4.40 \pm .52$, $p < .001$).

However, there were not significantly different of perceived infection risk from at immediately to one month ($p = .473$) and from one-month to three months ($p = .473$) after the intervention.

Table 11 Perceived infection risk before and after intervention (n=160)

Items	Mean ± SD				p-value
	Before intervention	After intervention			
		Immediately	One month	Three month	
Perceived infection risk					
1. You may have had sex with someone who was infection HIV/AIDS	3.90±1.15	4.39±.96	4.47±.76	4.39±.96	
2. If you don't use condom every time you have chances of getting AIDS	4.55±.68	4.73±.57	4.72±.50	4.73±.57	
3. You are strong man so that you have not chances of getting AIDS(R)	3.36±1.35	3.70±1.35	3.91±1.29	3.70±1.35	
4. You have chances of getting AIDS from your occupation	4.41±.68	4.59±.69	4.63±.57	4.59±.69	
5. If you have sex with more people you have chances of getting AIDS	4.35±.85	4.63±.69	4.54±.75	4.63±.69	
Total score (mean ± SD) , Total score = 5	4.11±.57^{a, b, c}	4.41±.52^{a, d}	4.45±.58^b	4.40±.52^{c, d}	<.001

a,b,c = pairs which the mean score significantly difference at p<.05

Peer norms

The repeated measurements of ANOVA were used to compare difference on the mean scores of peer norm before intervention and after intervention. The result showed that the mean scores of peer norm increased significantly from before the intervention to immediately, one-month and three months after the intervention (from $4.22 \pm .62$ to $4.57 \pm .52$, $4.53 \pm .57$, and $4.57 \pm .52$, respectively, $p < .001$) (as shown in table 12).

The means scores of peer norm increased significantly from before intervention to immediately ($4.22 \pm .62$ to $4.57 \pm .52$, $p < .001$), before intervention to one-month ($4.22 \pm .62$ to $4.53 \pm .57$, $p < .001$), before intervention to three months ($4.22 \pm .62$ to $4.57 \pm .52$, $p < .001$).

However, there were not significantly different of peer norm from at immediately to one month ($p = .433$) and from one-month to three months ($p = .433$) after the intervention.

Table 12 Peer norm before and after intervention (n=160)

Items	Mean ± SD				p-value
	Before intervention	After intervention			
		Immediately	One month	Three month	
Peer norm					
1. Your co-workers think you should use condoms when you have sex.	4.24±1.02	4.62±.64	4.51±.67	4.62±.64	
2. Your owner thinks you should use condoms when you have sex.	4.52±.64	4.72±.55	4.62±.58	4.72±.55	
3. Your boy/girl friend thinks you should use condoms when you have sex.	3.81±1.15	4.33±.93	4.39±.79	4.33±.93	
4. Your client thinks you should use condoms when you have sex.	4.34±.75	4.61±.62	4.61±.58	4.61±.62	
Total score (mean ± SD) , Total score = 5	4.22±.62^{a, b, c}	4.57±.52^a	4.53±.57^b	4.57±.52^c	<.001

a,b,c = pairs which the mean score significantly difference at p<.05

Attitude toward condom use

The result showed that there was increased significantly of attitude toward condom use from before the intervention to immediately, one-month and three months after the intervention (from $3.53 \pm .72$ to $3.70 \pm .80$, $3.82 \pm .71$, and $3.70 \pm .80$, respectively, $p < .001$) (as shown in table 13).

The means scores of attitude toward condom use increased significantly from before the intervention to immediately ($3.53 \pm .72$ to $3.70 \pm .80$, $p < .001$), before intervention to one-month ($3.53 \pm .72$ to $3.82 \pm .71$, $p < .001$), before intervention to three months ($3.53 \pm .72$ to $3.70 \pm .80$, $p < .001$), and from immediately to three months after the intervention ($3.70 \pm .80$ to $3.70 \pm .80$, $p < .001$).

However, there were not significantly different of attitude toward condom use from immediately to one month ($p = .056$) and from one-month to three months after the intervention ($p = .056$).

Self-efficacy

The result showed that there was increased significantly of participants' self-efficacy from before the intervention to at immediately, one-month and three months after the intervention (from $4.25 \pm .69$ to $4.58 \pm .52$, $4.61 \pm .55$, and $4.58 \pm .52$, respectively, $p < .001$) (as shown in table 14).

The means scores of self-efficacy increased significantly from before intervention to immediately ($4.25 \pm .69$ to $4.58 \pm .52$, $p < .001$), before intervention to one-month ($4.25 \pm .69$ to $4.61 \pm .55$, $p < .001$), before intervention to three months ($4.25 \pm .69$ to $4.58 \pm .52$, $p < .001$), and from immediately to three months after the intervention ($4.58 \pm .52$ to $4.58 \pm .52$, $p < .001$).

However, there were not increased significantly of self-efficacy from at immediately to one month ($p = .68$) and from one-month to three months after the intervention ($p = .68$).

Table 13 Attitude toward condom use before and after intervention (n=160)

Items	Mean ± SD				p-value
	Before intervention	After intervention			
		Immediately	One month	Three month	
Attitude toward condom use					
1. Using condoms prevent the chance of getting AIDS	4.64±.64	4.76±.51	4.81±.43	4.76±.51	
2. The proper use of a condom could enhance sexual pleasure	2.54±1.22	2.66±1.32	2.91±1.21	2.66±1.32	
3. Condoms are irritating	3.85±1.18	3.91±1.23	3.88±1.17	3.91±1.23	
4. You enjoy sex more without a condom	3.89±1.17	4.05±1.05	4.11±1.01	4.05±1.05	
5. You may lose your erection if a condom is used	2.74±1.39	3.13±1.44	3.39±1.32	3.13±1.44	
Total score (mean ± SD) , Total score = 5	3.53±.72^{a, b, c}	3.70±.80^a	3.82±.71^b	3.70±.80^c	<.001

a,b,c = pairs which the mean score significantly difference at p<.05

Table 14 Perceived self-efficacy before and after intervention (n=160)

Items	Mean ± SD				<i>p-value</i>
	Before	After intervention			
	intervention	Immediately	One month	Three month	
Perceived self-efficacy					
1. Using a condom is easy for you.	4.31±.86	4.59±.75	4.66±.55	4.59±.75	
2. You will refuse to have sex if a male partner will not use a condom.	4.14±1.29	4.45±1.16	4.60±.83	4.45±1.16	
3. You know how to use correctly a condom when you have sex with someone.	4.37±.81	4.64±.69	4.53±.73	4.64±.69	
4. You are able to discuss the using correctly a condom	4.21±.82	4.62±.62	4.61±.56	4.62±.62	
5. You are able to discuss benefit the use of a condom	4.24±.83	4.62±.59	4.62±.62	4.62±.59	
Total score (mean ± SD) , Total score = 5	4.25±.69^{a, b, c}	4.58±.52^a	4.61±.55^b	4.58±.52^c	<.001

a,b,c = pairs which the mean score significantly difference at $p < .05$

Intention to use condom for vaginal sex

Regarding participants' intention to use condom, McNemar's test was used to test the difference between proportions of subjects who had changed their intention to use condoms before and after intervention. The results found that the proportion of subjects who had intention to use condom for vaginal, anal, and oral sex changed significantly between before the intervention and after intervention ($p < .001$). Especially, intention to use condom changed significantly at immediately after intervention ($p < .001$).

The proportion of subjects who had intention to use condom for vaginal sex increased significantly from before intervention to after intervention ($p < .001$). The number of subjects with no intention to use condom for vaginal sex before intervention were 29 (18.13%). After the intervention, the results found that the number of subjects with no intention to use condom for vaginal sex decreased to 7 (4.38%) at immediately, 12 (7.50%) at one-month and 9 (5.62%) at three month after the intervention (as shown in table 15, 16, 17).

Intention to use condom for anal sex

The proportion of subjects who had intention to use condom for anal sex increased significantly from before intervention to immediately after intervention ($p < .001$). The number of subjects with no intention to use condom for anal sex before intervention were 8 (5.00%). Immediately after the intervention, the results found that the number of subjects with no intention to use condom for anal sex decreased to 0 (0.00%) (as shown in table 15).

However, there was no increased significantly from before intervention to at one-month and at three months after the intervention (as shown in table 16, 17).

Intention to use condom for oral sex

The proportion of subjects who had intention to use condom for oral sex increased significantly from before intervention to immediately and at three month after intervention ($p < .001$). The number of subjects with no intention to use condom for oral sex before intervention were 40 (25.00%). After the intervention, the results found that the number of subjects with no intention to use condom for oral sex

decreased to 9 (5.62%) at immediately and 12 (7.50%) at three month after the intervention (as shown in table 15, 17).

However, there was no increased significantly from before intervention to at one-month after the intervention (as shown in table 16).

Table 15 Intention to use condom for vaginal, anal, and oral sex before and immediately after the intervention (n=160)

Before intervention	Immediately after the intervention						p-value
	No intention		Intention		Total		
	Number	(%)	Number	(%)	Number	(%)	
<u>Intention to use condom for vaginal sex</u>							
No intention	7	(4.38)	22	(13.75)	29	(18.13)	<.001*
Intention	3	(1.87)	128	(80.00)	131	(81.87)	
Total	10	(6.25)	150	(93.75)	160	(100.00)	
<u>Intention to use condom for anal sex</u>							
No intention	-	(0.00)	8	(5.00)	8	(5.00)	.039*
Intention	1	(0.63)	151	(94.37)	152	(95.00)	
Total	1	(0.63)	159	(99.37)	160	(100.00)	
<u>Intention to use condom for oral sex</u>							
No intention	9	(5.62)	31	(19.37)	40	(24.99)	<.001*
Intention	4	(2.51)	116	(72.50)	120	(75.01)	
Total	13	(8.13)	147	(91.87)	160	(100.00)	

*Statistically significant at $p < 0.05$, using McNemar test

Table 16 Intention to use condom for vaginal, anal, and oral sex before and one month after intervention (n=160)

Before intervention	One month after the intervention						p-value
	No intention		Intention		Total		
	Number	(%)	Number	(%)	Number	(%)	
<u>Intention to use condom for vaginal sex</u>							
No intention	12	(7.50)	17	(10.62)	29	(18.12)	<.001*
Intention	1	(0.63)	130	(81.25)	131	(81.88)	
Total	13	(8.13)	147	(91.87)	160	(100)	
<u>Intention to use condom for anal sex</u>							
No intention	1	(0.63)	7	(4.37)	8	(5.00)	.070
Intention	1	(0.63)	151	(94.37)	152	(95.00)	
Total	2	(1.26)	158	(98.74)	160	(100)	
<u>Intention to use condom for oral sex</u>							
No intention	14	(8.75)	26	(16.25)	40	(25.00)	.164
Intention	16	(10.00)	104	(65.00)	120	(75.00)	
Total	30	(18.75)	130	(81.25)	160	(100)	

*Statistically significant at $p < 0.05$, using McNemar test

Table 17 Intention to use condom for vaginal, anal, and oral sex before and three months after intervention (n=160)

Before intervention	Three months after the intervention						p-value
	No intention		Intention		Total		
	Number	(%)	Number	(%)	Number	(%)	
<u>Intention to use condom for vaginal sex</u>							
Intention	1	(0.63)	130	(81.25)	131	(81.88)	<.001*
Total	10	(6.25)	150	(93.75)	160	(100)	
<u>Intention to use condom for anal sex</u>							
No intention	2	(1.25)	6	(3.75)	8	(5.00)	.125
Intention	1	(0.63)	151	(94.37)	152	(95.00)	
Total	3	(1.88)	157	(98.12)	160	(100)	
<u>Intention to use condom for oral sex</u>							
No intention	12	(7.50)	28	(17.50)	40	(25.00)	<.001*
Intention	12	(7.50)	108	(67.50)	120	(75.00)	
Total	24	(15.00)	1136	(85.00)	160	(100)	

*Statistically significant at $p < 0.05$, using McNemar test

Condom use behavior

Regarding participants' condom use behaviour, McNemar's test was used to test the difference between proportions of subjects who had changed condom use before and after intervention. The results found that the proportion of subjects who used condom for vaginal and anal sex increased significantly from before the intervention to after intervention ($p < .001$). Especially, there were changed significantly at one and three month after intervention ($p < .001$). However, the proportion of subjects who used condom for oral sex was not changed between before the intervention and after the intervention

Condom use for vaginal sex

The proportion of subjects who used condom for vaginal sex increased significantly from before intervention to three months after intervention ($p < .001$). The numbers of subjects with used condom for vaginal sex before intervention were 70 (43.75%). Three months after the intervention, the results found that the number of subjects with no used condom for vaginal sex decreased to 10 (6.25%) (as shown in table 20).

However, there was no increased significantly from before intervention to at immediately and at one-month after the intervention (as shown in table 18, 19).

Condom use for anal sex

The proportion of subjects who used condom for anal sex increased significantly from before intervention to one month and three month ($p < .001$). The numbers of subjects with used condom for anal sex before intervention were 14 (8.75%). After the intervention, the results found that the number of subjects with no used condom for anal sex decreased to 0 (0.00%) at one-month and three month after the intervention (as shown in table 19, 20).

However, there was no increased significantly from before intervention to at immediately after the intervention (as shown in table 18).

Condom use for oral sex

The proportion of subjects who used condom for oral sex was not changed between before the intervention and after the intervention (as shown in table 18, 19, 20).

Summary phase II

The HIV/AIDS prevention program was a series of activities designed for enhancing the factors influencing condom use which were found from phase I study.

After the HIV/AIDS prevention program were conducted, the results showed that the mean scores of AIDs knowledge, perceived infection risk, peer norm, attitude toward condom use, self-efficacy increased significantly from the mean scores before the intervention and at every post intervention period ($p < .001$). Intention to use condom increased significantly at immediately after the intervention ($p < .001$). Condom use behavior into three types of sex did not change immediately after the intervention. However, condom use for anal sex increased significantly at one month and three months after the intervention ($p < .001$). And condom use for vaginal sex increased significantly at three months after the intervention ($p < .001$).

Table 18 Condom used for vaginal, anal, and oral sex before and immediately after intervention (n=160)

Before intervention	Immediately after the intervention						p-value
	No condom use		Condom use		Total		
	Number	(%)	Number	(%)	Number	(%)	
<u>Condom use for vaginal sex</u>							
No condom use	41	(25.63)	29	(18.12)	70	(43.75)	.253
Condom use	20	(12.50)	70	(43.75)	90	(56.25)	
Total	61	(38.13)	99	(61.87)	160	(100)	
<u>Condom use for anal sex</u>							
No condom use	4	(2.50)	10	(6.25)	14	(8.75)	.180
Condom use	4	(2.50)	142	(88.75)	146	(91.25)	
Total	8	(5.00)	152	(95.00)	160	(100)	
<u>Condom use for oral sex</u>							
No condom use	47	(29.37)	29	(18.13)	76	(47.50)	.894
Condom use	27	(16.88)	57	(35.62)	84	(52.50)	
Total	74	(46.25)	86	(53.75)	160	(100)	

*Statistically significant at $p < 0.05$, using McNemar test

Table 19 Condom used for vaginal, anal, and oral sex before and one month after intervention (n=160)

Before intervention	One month after the intervention						p-value
	No condom use		Condom use		Total		
	Number	(%)	Number	(%)	Number	(%)	
<u>Condom use for vaginal sex</u>							
No condom use	33	(20.63)	37	(23.12)	70	(43.75)	.260
Condom use	27	(16.87)	63	(39.38)	90	(56.25)	
Total	60	(37.50)	100	(62.50)	160	(100)	
<u>Condom use for anal sex</u>							
No condom use	-	(0.00)	14	(8.75)	14	(8.75)	<.001*
Condom use	2	(1.25)	144	(90.00)	146	(91.25)	
Total	2	(1.25)	158	(98.75)	160	(100)	
<u>Condom use for oral sex</u>							
No condom use	44	(27.50)	32	(20.00)	76	(47.50)	1.00
Condom use	31	(19.38)	53	(33.12)	84	(52.50)	
Total	75	(46.88)	85	(53.12)	160	(100)	

*Statistically significant at $p < 0.05$, using McNemar test

Table 20 Condom used for vaginal, anal, and oral sex before and three month after intervention (n=160)

Before intervention	Three months after the intervention						p-value
	No condom use		Condom use		Total		
	Number	(%)	Number	(%)	Number	(%)	
<u>Condom use for vaginal sex</u>							
No condom use	10	(6.25)	60	(37.50)	70	(43.75)	<.001*
Condom use	12	(7.50)	78	(48.75)	90	(56.25)	
Total	22	(13.75)	138	(86.25)	160	(100.00)	
<u>Condom use for anal sex</u>							
No condom use	-	(0.00)	14	(8.75)	14	(8.75)	.016*
Condom use	1	(0.63)	145	(90.62)	146	(91.25)	
Total	1	(0.63)	159	(99.37)	160	(100.00)	
<u>Condom use for oral sex</u>							
No condom use	33	(20.63)	43	(26.87)	76	(47.50)	.160
Condom use	30	(18.75)	54	(33.75)	84	(52.50)	
Total	63	(39.38)	97	(60.62)	160	(100.00)	

*Statistically significant at $p < 0.05$, using McNemar test