CHAPTER V
DISCUSSION

Three objectives were involved in this mixed method study. The quantitative surveying was aimed at determining the prevalence of sexual experience among Thai youth, HCT service use among sexually experienced youth and intention to use HCT services among those who had never used HCT services and to examine the predictors of HCT service use and intention to use HCT services. In addition, telephone interviews were conducted to explore the characters of YFHCT service expectation by Thai youth. The discussion in this chapter will be presented as follows:

5.1 Sexually experienced among Thai youth, HCT service use among sexually experienced youth and intention to use HCT services among those who had never used HCT services

5.1.1 More than half of the vocational school youth and 1 out of 5 of the high school youth had sexual experience. A high prevalence of sexual experience found in LGBT, male and youth living without parents and 20% of those who were sexually experienced had sexual debuts at ages of less than 15 years.

5.1.2 Among sexually experienced youth, 4out of5 had been sexually active during the past year; 1out of 5 used condoms consistently while 1 out of 3 had had more than one sex partner. However half of these perceived no risk for HIV infection and only 3 out of 100 were able to correctly answer all questions about HIV/AIDS.

5.1.3 Less than 1 out of 5 of sexually experienced youth had ever used HCT services; the majorities were males, vocational school students and had sexual risk behaviors. In addition, 3 out of 5 of those who had never used HCT services intended to use these services in their future lives.

5.2 The predictors of HCT service use and intention to use HCT services among sexually experienced youth.

5.2.1 Predictors of HCT service use among sexually experienced youth.

5.2.2 Predictors of intention to use HCT services among those who have never used HCT services.

5.3 Characteristics of youth-friendly HCT service expected by youth

5.1 Sexual experience among Thai youth, HCT service use among sexually experienced youth and intention to use HCT services among those who have never used HCT services

As 2,945 students were invited to participate in the web-based survey, the response rate was 87.40% which was a high response rate when compared to other studies using web-based questionnaireson sensitive issues such as youth risk behaviorsurveillance among Grade 9-12 youths in the US in which the overall response rate was approximately 60-85% (Brener et al., 2013). However, the response rate in this study is likely to be slightly higher, possibly because the participants in this study were students who had been invited by classroom and completed the questionnaires during a computer class that allowed them to complete the questionnaires in the computer lab room. Using a web-based questionnaire, therefore, was appropriate for the participants who were youths aged 15-24 years and might have been more attractive than questionnaires using paper and pencil (Eaton et al., 2010; Larson et al., 2011). After cleaning up all data received from the web-based questionnaires, two thousand five hundred and thirty six questionnaires were finally selected for use.

From 2,536 youth participants who were surveyed, 3 important issues were found to require discussion as follows:

5.1.1 More than half of the vocational school youths and 1 out of 5 of the high school youths had sexual experience. A high prevalence of sexual experience was found in LGBT, males and youths living without parents, and

20% of those who were sexually experienced had had sexual debuts at ages less than 15 years

Among all of the participants, 738 youths reported to be sexually experienced (prevalence = 30.88%, N=2,536). Among the sexually experienced youths, 486 were studying in vocational school (prevalence = 54.9%, n = 867) and 307 were studying in high school (prevalence = 18.4%, n = 1669). By gender, 14 of the sexually experienced youths were LGBT (prevalence 45.16, n = 31) and 418 were males (prevalence 34%, n = 1225). Moreover, 131 of the sexually experienced youthswere not living with their parents or guardians (prevalence 87.92%, n = 149). There were 159 sexually experienced youths who had had sexual debuts when aged less than 15 years (20.57 %) and the mean age at sexual debut was 15.59 years (SD = 1.56, range = 8-20 years) (Table 4.1).

This study revealed the trends of the prevalence of sexual experience among Thai youth to have increased, particularly among those who were studying in vocational school. Although the mean age at first intercourse is slightly higher, the finding was consistent with the findings of the fifth annual behavioral surveillance survey of Grade 11 high school students and second-year vocational schools students in Bangkok (Srivanichakorn et al., 2009, 2010; Srivanichakorn et al., 2011) and other previous studies nationwide (Konggumnerd, Sindhu, & Tongkong, 2013; Tangmunkongvorakul et al., 2012). This finding may be a consequence of the flexibility inthe learning environments of vocational schools which lead to be freedom and time to meet boyfriends or girlfriendsto have sex, unlike in high school which is a rigorous learning environment and highly competitive concerning university admission.

Although hormonal changes have been found to cause sex drive and desire in adolescence since the age of approximately 9 years and peaking during 12-18 years of age (Giles, 2008; Herting, Maxwell, Irvine, & Nagel, 2012), the dynamics of social, environmental, economical, and communication technology may be the major factors of stimulation leading adolescents to try having sex sooner. This finding has been confirmed over the last 10 years of surveys which have found the age of sexual debut to be 15-16 years (Srivanichakorn et al., 2009, 2010; Srivanichakorn et al. 2011) in comparison to a sexual behavior survey in 1996 that found the mean age of sexual debut to be 18-19 years (http://www.hiso.or.th/hiso/tonkit/tonkits_22.php).

Due to rapid developments in communication technology and social environments leading to an accessible world of wild information, youth have easy access to pornography (Chen, Kazanjian, & Wong, 2008; Owens, Behun, Manning, & Reid, 2012; Peter & Valkenburg, 2011). Previous studies have found adolescents to use their free time surfing the worldwide net and most of them have been exposed to pornographic media media (Chen et al., 2008; Owens et al., 2012; Peter & Valkenburg, 2011; Srivanichakorn et al., 2009, 2010; Srivanichakorn et al., 2011).Current economic situations result in working parents who do not have enough time to spend with their children; hence, the lack of role models to convey valuesmay be insufficient to develop adolescents' ability to distinguish right and wrong and self-control(Hardy, Bhattacharjee, Reed, & Aquino, 2010), especially in youth who do not live with parents or guardians.

The acceptance of sexual rights by Thai people has increased concerning unmarried sex and sex during the study years (Morrison, 2004). Thus, youths may have girlfriends and boyfriends openly among today's Thai youthsand might have sex, particularly among male and LGBT youths, unlike female youths who are expected to abstain from having sex and maintain virginity until marriage (Fongkaew et al., 2012; Rhucharoenpornpanich et al., 2011; Sridawruang, Crozier, & Pfeil, 2010; Sridawruang, Pfeil, & Crozier, 2010). The above factors may support the finding of a high prevalence of sexual experience in males and LGBT youths in the present study.

5.1.2 Among sexually experienced youths, 4out of 5 had been sexually active in the past year; 1out of 5 used condoms consistently while 1out of 3had had more than one sex partner; however, half of these perceived no risk for HIV infection and only 3 out of 100 were able to correctly answer all questions about HIV/AIDS

Among sexually experienced youths, 81.1% (n= 635) reported having sexual intercourse during the past year. During the past year, only 21.84% (n=171) of those who were sexually experienced had used condoms consistently during every sexual intercourse in which 8.43% (n=66) had multiple sexual partners and 13.41% (n=105) hadonly one sex partner. Among those who used condoms inconsistently (n = 464, percentage= 59.26), 25.67% (n = 201) had multiple sexual partners and 33.59% (n = 263) have only one partner

(Table4.1). Unfortunately, 46.36 % of the sexually experienced youths perceived no risk for HIV infection and 32.69 % perceived low risk while only 11.24 % and 9.07% perceived high and moderate risk for HIV infection (Table 4.2).

The results on condom use and number of sexual partners in the present study were no different with previous annual behavioral surveillance surveys of Grade 11 high school students and second-year vocational school students in Bangkok (Srivanichakorn et al., 2009, 2010; Srivanichakorn et al., 2011). This finding was also consistent with previous studies in America and Africa that found most sexually experienced youths to perceive their risk for HIV to be less than their actual risk (Adefuye, Abiona, Balogun, & Lukobo-Durrell, 2009; Madebwe, Madebwe, Pazvakavambwa, & Muringaniza, 2012). These findings may reflect the challenges of policy and strategic planning of HIV/AIDS prevention and control, especially on the issue of how to improve youths' health literacy toward HIV/AIDS and sexual health by comprehensive sex education.

Although Thailand has been able to provide sex education as part of primary, secondary and vocational education for more 40 years, the push for those curriculums was not successful until the HIV/AIDS epidemic occurred in 2006. The comprehensive sex education had been promoted in schools by PATH with global funding support. However, providing sex education in schools has also been difficult because there was not a consensus of the objectives and teaching strategies of all stakeholders, particularly school administrators and parents(Sirinirund et al., 2010; Sirinirund et al., 2012; Suwanphatthana, 2010). The conflict between abstinence only and comprehensive sex education is clear. Moreover,most teachers who teach sex education continue with deficient confidence for effective teaching strategy(Kay, Jones, & Jantaraweragul, 2010). Sex education in Thailand also offers inadequate coverage and effectiveness evaluation(Thato, Jenkins, & Dusitsin, 2008). Of the sexually experienced youths, however, 89.91% are unable to correctly answer the HIV/AIDS questions following UNGASS's criteria and only 3.19% were able to correctly answer all 9 questions. The aforementioned finding may reflect deficient HIV knowledge among Thai youths which is no different from previous surveys (Srivanichakorn et al., 2009, 2010; Srivanichakorn et al., 2011).

Although HIV/AIDS information has been available for provision to youths in schools, including comprehensive sex education which is expanding nationwide, the information may not be sufficient to improve literacy on HIV/AIDS and sexual health. The process of sex education in school can develop only functional health literacy while youths are able to access more information through the worldwide internet. Therefore, communication and critical literacyare needed to scale up theability to share and communicate about health with health providers, assess personal health risks and set proper goalsin self-care for HIV prevention(Berkman, Davis, & McCormack, 2010; Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011; Berkman et al., 2011; Champion, Harlin, & Collins, 2013; Needham, Wiemann, Tortolero, & Chacko, 2010; Steptoe & Freedland, 2010; VanDevanter et al., 2011).

5.1.3 Less than 1 out of 5 sexually experienced youths have ever used HCT services; the majority of these were males, vocational students and youths who engaged in sexual risk behaviors; moreover, 3 out of 5 of those who had never used HCT services intended to use these services in their future lives.

This study was found 143 sexually experienced youthsto have used HCT services (prevalence = 18.26%, N = 783). Among those who had used HCT services, 58.04% were males, none were LGBT, 87.41% had had sex during the past year, 37.60% had multiple sex partners, 61.54% used condoms inconsistently (Table 4.1-4.2), 96.50% knew their HIV blood test results and 33.57% had used HCT services more than once. Among HCT service use times, services were used 222 times, while 35.59% and 31.18% of services usage times were at public hospitals and HCT mobile services at schools, respectively (Table 4.5).

In previous studies, the prevalence was analyzed by using all youth participants. In the present study, however, the researcher focused only on sexually experienced youths who were identified as being at risk for HIV infection. A higher the prevalence of HCT service use, therefore, was obviously found in this study. Sexually experienced youths who suspect they are infected with HIV, particularly those who had sexual risk behaviors such not using condoms during sex with multiple casual sex partners, need to know their HIV status. Moreover, more than 90% of the sexually experienced youths were able to correctly answer 2 questions (multiple sex

partners and not using condomscan lead to HIV transmission). According to the interviews with 20 youth participants, most of the youths reflected that youths who tested for HIV were those who need to know their HIV status because they have had risk behaviors. This finding is consistent with previous global studies (MacPhail, Pettifor, Moyo, & Rees, 2009; Mullins, Braverman, Dorn, Kollar, & Kahn, 2012).

This study demonstrates that more than 80 % of sexually experienced youths in Thailand have never used HCT servicesas needed. Although the findings are similar to the evidence in other countries during the past 5-10 years(Denison, Mccauley, Dunnett-Dagg, Lungu, & Sweat, 2008; Jereni & Muula, 2008; Thomsen et al., 2006; Tolou-Shams et al., 2007), they are lower than recent evidence(Amadi, 2012; Baumgartner, Otieno-Masaba, Weaver, Grey, & Reynolds, 2012; Daniyam et al., 2010; Kabiru, Beguy, Crichton, & Zulu, 2011; Kabiru, Luke, Izugbara, & Zulu, 2010; Kebaabetswe et al., 2010; Oppong Asante, 2013). The difference in the above findings might be due to the fact that HCT services are not provided especially for youth. HCT services are not accessible and available for youths, particularly those aged less than 18 years old for whom parental consent is required. Although youth-friendly servicesare identified as the challenge issues of Thailand HIV/AIDS management(Sirinirund et al., 2012), the priority of HCT service scaling up has also been seen among MSMs, IDUs, and CSWs while only primary prevention with sex education and safer sex are provided as service packages for youth. However, it is not enough for today when so many youthsare at risk for HIV. According to the evidence in other countries, scaling up HCT service use among youths means servicesneed to be available, accessible, acceptable, appropriate and effective with wide service provision (Cherutich, Bunnell, & Mermin, 2013; Musheke et al., 2013).

Although the prevalence of HCT service use among sexually experienced youths was lower than the findings of the current study, among those who had never used HCT services (n = 640), 74.07% reported intention to use HCT services in the future (53.91 % intend to use the services without conditionsand 20.16% intend to use them with conditions). The majority of those who intend to use HCT services were found among at-risk youths (inconsistent condom use) (Table 4.2).

These findings may reflect youths' need to know their HIV status, therefore, to be tested for HIV as needed whenever they have unsafe sex. Youth who suspect HIV

infection will intend to use HCT services as revealed from the interviewsand which is consistent with studies among MSM and students (MacPhail et al., 2009; Mullins et al., 2012). The aforementioned findings are also consistent with previous studies across the world which found more than 70% of youths to intend to use HCT services at least once in their lifetimes (Diteweg et al., 2013; Oppong Asante, 2013).

Although the findings of the present study may reveal that many sexually experienced youths intend to use HCT services at least once in their lifetimes, the prevalence of HCT service use is very low when compared to other countries. Providing appropriate HCT servicesthat are friendly to youth; providing information about HCT services and campaigning to encourage the use of HCT services (Berkmanet al., 2010; Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011; Berkman, Sheridan, Donahue, Halpern, Viera et al., 2011; Champion et al., 2013; Steptoe & Freedland, 2010; VanDevanter et al., 2011) are all key factors.

5.2 Predictors of HCT service use and intention to use HCT services among sexually experienced Thai youths

5.2.1 Predictors of HCT service use among sexually experienced Thai youths

Based on Andersen's behavioral model of health service use applied to the conceptual framework for theresearch (figure 1.1),the first research hypotheses was that HCT service use among sexually experienced Thai youthsis influenced by youth characteristics factors (predisposing characteristics, need components and enabling resources) and healthcare service factors (YFHCT characteristic expectation) The Binomial Multivariate Logistic Regression Model was analyzed to indicate the significant predictors. The findings were consistent withhypotheses (Table 4.6). The following discussion presents the youth (predisposing, need and enabling) and service characteristics.

5.2.1.1 Youths' predisposing characteristics (gender, HIV knowledge, attitude toward HIV testing and perceived HIV/AIDS stigma)

In the present study, HIV knowledge and attitude toward HIV testing could predict HCT service usewith statistical significance. HCT service use was raised 3.105 times (95% CI= 1.289-7.432, $p < .05$) when participants were able to correctly all 9 questions compared to those who could not correctly answer 5 questions of UNGASS. It was also increased 1.029 time (95% CI = 1.010-1.049, $p < .005$) with each one point increase in the participants' attitude toward HIV testing scores. However, correctly answering only 5 questions of UNGASS, gender, and perceived HIV/AIDS stigma were not significant predictors of HCT service use among sexually experienced youths (Table 4.6). This finding supports the research hypothesis and Andersen's model that knowledge and attitude are counted as predisposing characteristics of youth and influencing behavior (HCT service use) (Andersen, 1995; Andersen & Davidson, 2007).

Significant predictors of ***HIV knowledge*** on HCT service use was consistent with the study among college youths which found those who had HIV knowledge to be likely to increase the chance ofseeking HIV testing at 1.05 and 1.15 times in males and females, respectively (Sabato, Burnett, Kerr, & Wagner, 2013). Furthermore, a study among undergraduate students in Ghanawhich found HCT service use to increase two-fold when youths were able to correctly identify the route of HIV transmission.Furthermore, HIV knowledge and awareness about ART available leads to reduced fear about knowing personal HIV status then influenced young adults in northern Thailand to decide to be tested for HIV (Srithanaviboonchai et al., 2010). Although HIV knowledge is a significant predictor of HCT service use among the sexually experienced youths in this study, correctly answering only all 5 questions of UNGASS could not predict HCT service use significantly. The aforementioned finding might be explained in that the 5 questions on HIV knowledge by UNGASS are questions about HIV transmission which cannot gain youth's awareness concerning the advantages of HCT service use. The aforementioned finding is also supported by a previous study among sports team members aged 14-30 years from Limpopo (Diteweg et al., 2013).

Attitude toward HIV testingisa significant predictor of HCT service use which supported the research hypotheses. This finding is consistent with previous studies throughout the world. The experience among youths who have used HCT services leads them to knowing that testing for HIV does not have any negative effect, but they can gain the significant benefit of HCT services to assess their own risk accuracy during pre-counseling and can get a chance to be advised about how to prevent HIV infection during post-counseling. Youth who have used HCT services, therefore, have positive attitudes toward HIV testing (Kitara & Ecik, 2011; lliyasu et al., 2006; Shin et al., 2007). Moreover, the hypotheses were also supported by other models and theories suggesting that behaviors are influenced by attitude. Whenever a person has a good attitude, they seem to have the corresponding behavior. In contrast, whenever a person has a negative or bad attitude, they seem to avoid having thatbehavior.

In the present study, however, ***gender and perceived AIDS stigma***were excluded from the logic modelwhich does not support the research hypotheses. This finding contradicted previous evidence, particularly the evidence finding gender and stigma to be significant predictors of HCT service use (Angotti et al., 2009; Asenso, 2012; Bwambale et al., 2008; Creela & Rimal, 2011; MacKellar et al., 2011; Ransom et al., 2005). Equality is a major concern in Thai national strategic planning on HIV/AIDS, therefore, no discrimination in regard to gender differences should be made in access to information, especially in sex education for young people in schools for at least 15 hours per year,which is promoted in all schoollevel as much as possible (NAMc, 2012; Sirinirund et. al, 1012)

Increasing acceptance of youth's rights, particularly freedom from gender discrimination have been changing in Thai society (Morrison, 2004) and led a chance to access necessary information as well as perceive and understand the risks of HIV infection while further allowing Thai youths to use HCT service equality with no gender discrimination by national laws (Bureau of Reproductive Health, 2010).The ART treatment policy under the national theme determines that all Thais living with HIV should have access to ART treatment when CD_4 < 350 cells/mm^3 (NHSO, 2013)and the effectiveness of ART treatment with good adherence has been confirmed to suppress HIV progression to AIDS. Therefore, PLWHA can as well as others and it is unnecessary to disclose their HIV status to othersunless necessary.

These situations affect the HIV stigma in Thailand which has shiftedfrom suspicions and gossip with disgust, expulsion, discouragement and curses like in the past (UNAIDS/WHO, 2012).

5.2.1.2 Youths' need components (perceived level of risk for HIV and actual risk for HIV)

Only 2 factors were selected from the need components in this study, namely, perceived of level of risk for HIV and actual risk for HIV. The results of the logistic regression analysis indicated only actual risk for HIV to strongly and significantly predict HCT service use among sexually experienced youths while perceived risk for HIV could not influence to HCT service use among those who had had sexual experience.

Actual risk for HIV infection was a significant predictor of HCT service use among sexually experienced youth. Youth who had had more than one sex partners and used condoms inconsistently and those who had had only one sex partner and used condoms consistently had increasing use of HCT services at 1.961 and2 .356 times, respectively (95% CI =3.722-1.033 and4.794-1.158 , $p < .05$) (Table 4.6).

These findings are consistent with previous studies among youth and young adults in other countries worldwide revealing that most youth who have everused HCT serviceshad had multiple sex partners or used condoms inconsistently (Kawichai et al., 2006; Kawichai et al., 2005; Sabato et al., 2013; Swenson, Hadley, Houck, Dance, & Brown, 2011; Tenkorang & Maticka-Tyndale, 2013). The aforementioned findings are also concurrent with previous studies about the effectiveness of HCT services which is able to decrease sexual risk behaviors. This evidence supports the reason why having one sex partner and using condoms consistently can predict HCT service used among the sexually experienced youth in this study (Cremin et al., 2009; Tenkorang & Maticka-Tyndale, 2013). It was influenced by the process of HCT services which consisted of pre-post counseling and testing. It does not only encourage youths to know their HIV status but further encourages them to learn and assess their own risk and consequence to change behaviors and eliminate their own risks (UNAIDS/WHO, 2004b, 2011b).

Perceived risk for HIV infection, however, did not influence HCT service use in this study. The aforementioned finding does not support the

research hypotheses and contradicts previous evidence revealing that youth who use HCT services are likely to perceive their own risk for HIV(Lauby, Bond, Eroglu, & Batson, 2006; Sabato et al., 2013). This finding might be explained in that most sexually experienced youth perceive no risk or low risk for HIV infection which is not consistent with actual risk (Table 4.2).The youths, therefore, assess their need to use HCT servicesbased on their behavior. In particular, when the mobile HCT services come to schools, the providers gave them information on what behaviorsindicated a necessity for HIV testing. Although they perceived no or low risk, they needed to know their HIV status based on the providers' initiation.

5.2.1.3 Youths' enabling resources (knowledge and awareness of HCT service, willingness to pay)

This logistic regression model revealed that knowledge and awareness of HCT service, one of the enabling components, could be a strong predictor of HCT service use. Youths who were informed about HCT services and knew the locations where HCT service were available were 4.373 times (95% CI= 2.319-6.249, $p < .001$) more likely to use HCT services comparedwith youths who were never informed and did not know the location of HCT services. Willingness to pay did not influence HCT service use among sexually experienced youths (Table 4.6).

This finding, ***knowledge and awareness of HCT service*** is a significant predictor of HCT service use, is consistent with previous studies conducted in secondary school students in Kenya and students in tertiary institutions in Enugu State, Nigeria, which found participants who had been informed about HCT services and knew where HCT serviceswere located to be likely to use these services increasingly in comparison to youth who had never beeninformed and did not know where HCT services were located (Tenkorang & Maticka-Tyndale, 2013; Uzochukwua et al., 2011). The aforementioned finding can be explained in that informing youths about HCT services makes the youth knowledgeable and conscious of HCT serviceswith further knowledge about where HCT services are located, which also facilitatesthe youths in accessing these servicesmore easily than youths who were never informed or did not know where HCT services werelocated, which is one of the major obstaclesto access and use of HCT services (Andersen, 1995; Creela & Rimal, 2011).

Willingness to pay for HCT service*s,* however, was unableto predict HCT service use among the sexually experienced Thai youthsin this study. This finding was different from previous studies which indicated a person's willingness to pay for services to indicate that they would use the services because willingness and ability to pay is an enabling factor in accessing and use service(Uzochukwua et al., 2011). The aforementioned finding can be explained in that the Thai health care system specifically offering HIV counseling and testing is a free service for all under the national scheme. NHSO provides this service free twice a year for all Thai people at risk for HIV (NHSO, 2013). Most of the HCT service use reported in this study was at public hospitals and mobile HCT service units. These services are free servicesunder the national scheme.

5.2.1.4 YFHCT service expectations

The findings of the present study revealed YFHCT service expectation to not influence HCT service use among sexually experienced youths and was not consistent with the research hypotheses while further differing from previous evidence thatyouth-friendly characteristics lead to increased service use, particularly sexual and reproductive health services which are included in HCT services (Kitara & Ecik, 2011; MacPhail et al., 2009).

The aforementioned findings reflect that sexually experienced youth who had both used and never used HCT services had similar expectations for YFHCT services (Table 4.4) because use of HCT services are sensitive for those who are vulnerable; therefore, friendly HCT servicesare needed for the youth. Although Thailand promotesyouth-friendly services by determining reproductive health Acts in recent years, it has focused on prevention of infection and unwanted pregnancy more than interests in HCT service. In addition, requiring parental consent among youths under 18 years is also a great barrier to using HCT services among those who are sexually experienced (Sirinirund et al., 2012; Suwanphatthana, 2010).

5.2.2 Predictors of intention to use HCT services

In terms of predictors of HCT service use based on Andersen's behavioral model of health service use applied as the conceptual framework of the research (figure 1.1), these findings also confirm the second research hypothesis. Intention to use HCT services among sexually experienced Thai youths who had never used HCT

servicesis influenced by youths' characteristics (predisposing characteristics, need components and enabling resources) and health care services (YFHCT characteristic expectations) by using the Multinomial Multivariate Logistic Regression model. The discussion will present the following three components of youths' characteristics and YFHCT characteristic expectations (Table 4.7-4.8).

5.2.2.1 Youth's predisposing characteristic (gender, HIV knowledge, attitude toward HIV testing and perceived HIV/AIDS stigma)

These findings reveal attitude toward HIV testing to be only one variable in the predisposing characteristics of youthscapable of predicting intention to use HCT services among sexually experienced youths who have never used HCT services with statistical significance. Each one point increase in participants' attitude toward HIV testing scores, made intention to use HCT services without any condition higher at 1.027 times (95% CI=1.006-1.048, $p < .05$) compared to conditional intention which was higher at 1.038 times (95% CI=1.016-1.062, $p<.005$) when compared to no intention to use HCT services .Other predisposing characteristics variables such as gender, HIV knowledge and perceived HIV/AIDS stigma could not significantly predict intention to use HCT.

Attitude toward HIV testing could significantly predict intention to use HCT services among the sexually experienced youths who never used HCT services which supports the research hypotheses and is also concurrent with previous evidence (Addis et al., 2013; Gadegbeku, Saka, & Mensah, 2013; Munthali, Mvula, & Maluwa-Banda, 2014). The effect is caused by paying attention to scaling up HCT service use in national strategic plans for HIV/AIDS (NAMc, 2012). The public relations under the campaign ***"Early Detection =Treatable"*** through radio, TV and the internet, including posters in some schoolsto give youths good attitudes toward HIV testing. The confidential use of HCT services offers particular safety and no negative effectson the lives of youths. Moreover, if they know family and friends will support them because they understand the reasons for being tested for HIV, youthswill be encouraged to use HCT services. Unsurprisingly, therefore, youths will intend to use HCT services with no conditions.

However, HIV knowledge, gender and perceived AIDS stigma were unable to significantly predict intention to use HCT services among sexually

experienced youth who had never used HCT services in this study. This finding does not support the research hypotheses or previous evidence revealing that intention to use HCT services is influenced by HIV knowledge (Addis et al., 2013; Gatta & Thupayagale-Tshweneagae, 2012; Munthali et al., 2014), gender (Chirawu et al., 2010; Sebudde & Nangendo, 2009; Siegel et al., 2010)and perceived AIDS stigma (Bwambale et al., 2008; Daniyam et al., 2010; Kitara & Ecik, 2011; Uzochukwua et al., 2011; Vermeer et al., 2009). This result was affected by nearly all of the sexually experienced youths who had never used HCT servicesand were unable to correctly answer all 5 questions of UNGASS who were found at 88.55 – 93.02%,whether or not they intended to use HCT services and only 1.55 – 3.61 % were able to correctly answer all 9 questions (Table 4.3). Moreover, there was no difference in the knowledge between each group category by intention to use HCT servicesas revealed in this study. The limitation of sex education in many aspects in Thailand has already been discussed in 5.1.2.

Similarly, gender and perceived AIDS stigma were also unable to predict intention to use HCT services as a result of policy, strategic planning and Thailand's laws to enhance gender equality and access to ART as presented by the researcher in 5.2.1.

5.2.2.2 Youth's need components (perceived of level of risk for HIV and actual risk for HIV)

This study revealed that both variables in youth's need components, namely, perceived risk for HIV and actual risk for HIV, were able to significantly predict intention to use HCT services among sexually experienced youth who had never used HCT services.

Among the sexually experienced youth who had never used HCT services, the youths perceived high risk for HIV infection, while intention to use HCT services was higher than no intention by 2.452 times (95% CI = 1.133- 5.307, $p<.05$) without conditions (Table 4.7) and an increase of 1.896 times (95% CI = 1.086 -3.312, $p<.05$) with some conditions compared to those who perceived no risk for HIV (Table 4.8).

These findings supported previous evidence across the world (Lauby et al., 2006; Sabato et al., 2013), namely,when youths perceived their risks they were likely to want to know their HIV status, particularly when they perceived

high risk for HIV infection. Therefore, youths intend to use HCT services without any conditions. Among those who perceived low risk for HIV infection, however, the youths might want to know their HIV status, but their intention to use HCT services was also based on some conditions.

Moreover, actual risk for HIV infection was able to significantly predict intention to use HCT services among sexually experienced youth who had never used HCT services. Youth who had multiple sex partners and used condoms consistently were more likely intend to use HCT services without any conditions at 3.714 times compared to those who had had no sex in the past year (95% CI=1.354-10.185, $p<.05$) while there was no significant predictive ability about when the youths had multiple sex partners and used condoms inconsistently, and had one sex partner and used condoms both consistently and inconsistently. This finding concurred with previous studies finding correction between risk behaviors and intention to use HCT services (Longmore, Johnson, Manning, & Giordano, 2012; Musheke et al., 2013; Ober, Martino, Ewing, & Tucker, 2012).

However, the aforementioned finding reflects that only youth who have had multiple sex partners and used condoms consistently are likely to have increased intent to use HCT services likely because they want to be certain their sex behaviors are safe because they believe using condoms every time is safe. On the contrary, those who have had multiple sex partners and used condoms inconsistently, which is the highest risk,may beafraid of becoming infected with HIV, afraid of knowing their HIV status, and afraidof having AIDS. Therefore, there was no influence on the intention to use HCT services in this study.

5.2.2.3 Youth's enabling resources (knowledge and awareness of HCT services; willingness to pay)

This logistic regression model revealed that both knowledge and awareness of HCT services in youths who were informed about HCT services, knew where HCT serviceswere located and were willing to pay for HCT services could be strong predictors of intention to use HCT services.

Youths who were informed about HCT services and knew where HCT services were located were 2.348 times more likely to intend to use HCT services compared to youths who had never been informed and did not know the

location of HCT services (95% CI=1.387-3.977, p<.005). Moreover, those who were willing to pay for HCT services were more likely to intend to use HCT services without any conditionsat 3.453 time (95%CI = 2.138-5.573, p<.001) and 2.959 times (95%CI = 1.649-5.308, p<.001) among those who intended to use HCT services with some conditions.

This finding is similar to the findings of previous studies conducted in secondary school students in Kenya and students in tertiary institutions in Enugu State, Nigeria (Tenkorang & Maticka-Tyndale, 2013; Uzochukwua et al., 2011). HCT service knowledge and awareness, therefore, might lead to accessible and available HCT services for youths because youths might realize the advantages of HCT service use, the services available for youths and how and where to access the services which gave them more confidence in requesting to use HCT services (Andersen, 1995; Creela & Rimal, 2011)

The aforementioned findings also confirmed previous evidence revealing willingness to pay for HCT servicesto be significant predictors of intention to use HCT services (MacKellar et al., 2011; Sanchaisuriya et al., 2008; Uzochukwua et al., 2011; Wallace, McLellan-Lemal, Harris, Townsend, & Miller, 2011). When youths are willing to pay for HCT services, it is possible that they perceive the servicesto be more valuable and have enough money with readiness to pay when they use the services. The aforementioned finding also supports Andersen's model in that ability to pay for services is one important enabling resource influencing utilization of the services (Andersen, 1995). However, this study was also revealed that youths willing and able to pay should payapproximately 100-300 baht which is appropriate for them according to this survey.

5.2.2.4 YFHCT service expectations

Lastly, the characteristics of YFHCT service expectation by youth are indicated as a significant predictor of intention to use HCT services, both unconditionally and conditionally, among sexually experienced Thai youths who had never used HCT services. With each one point increase in their YFHCT expectation score, intention to use HCT services without any condition was higher by 1.020 times (95% CI=1.012-1.029, p< .001) and intention to use HCT services with some

conditions was higher by 1.018 times (95% CI=1.016-1.062, p<.005) compared to no intention to use HCT services.

To examine the predictors of intention to use HCT services in this study, youths who had never used HCTservices were counted. Because of the sensitive issue on HCT service use, youth who want to know their HIV status and intend to use the services would be uncomfortable because they have never experienced in HCT service use and do not know what they will face when they use these services. Hence, the youths would have high expectations about YFHCT services. Therefore this finding confirms that youth-friendly HCT servicesare very important factors in increasing the use of HCT services as found in previous studies (Ford, English, & Sigman, 2004; Gloppen, David-Ferdon, & Bates, 2010; House, Bates, Markham, & Lesesne, 2010; House, Mueller, Reininger, Brown, & Markham, 2010).

5.3 Characteristics of youth-friendly HCT services expected by youth

The telephone interviews were conducted in this study with 20 voluntary youths who were interviewed; 4 of the youths had never had sexual experience. Of those who had had sexual experience (n=16), 8 youths had been tested for HIV.

This qualitative study, therefore, reflects the views of Thai youths with different backgrounds and experience. Although 4youth interviewees had never had sexual experience, the results of this qualitative study could confirm the similarity of the expectations of sexually experienced youths, HCT service use experience and no sexual experience on the characteristics of YFHCT service.

The findings of the content analysis revealed the characteristics of youth-friendly HCT services expected by youths who volunteered to be interviewedon 3 major themes, namely, 1) HCT service locations should not be in hospitals and should be private with good atmospheres; 2) Youth-friendly HCT services should provide accessibility, no limitation, convenient times, and suitable payment options; and 3) friendly providers should be of the same gender with understanding, confidentiality and no judgment.

5.3.1 HCT service locations should not be in hospitals and should be private with good atmospheres

Most of the youth expected the youth-friendly HCT services to not be located in hospitals. The results of the content analysis reflected that all three groups felt the hospital was not a place where youths want to go which is consistent with studies in other countries because they think hospitals are for sick people, not for young people who are strong establishing HCT services in hospitals is not attractive to youth. The findings also reflected, however, that youth-friendly services should be accessible and located where youthsare such as in schools or shopping malls rather than in hospitals. It is similar to the study in Uganda, found that Ugandian youths' likely to get HIV testing at mobile VCT service and service in market place (Sebudde & Nangendo, 2009). It also supported to the results of the project accept which underway in ten communities in Tanzania, eight in Zimbabwe, and 14 in Thailand. It found increasing of use of HCT service in community-based VCT was four times and ten times higher in Tanzania and Zimbabwe as well as about three times higher in Thailand than in Standard-based VCT communities (Sweat et al., 2011). Moreover, YFHCT services require proactive strategy in publicity and in schools, including word-of-mouth where youth tell friends because youth spend more time with close friends more than parents or teachers.It was similar to the study of youth-friendly reproductive health services in Jordan that youth need to be informed the location of reproductive health service available (Khalaf et al., 2010). Not only is the location of HCT services important, but the appearance of HCT service sites should also be youth-friendly. Youth do not want to attract the attention of others when they seek HCT services, but they want to go in comfortable and relax places with natural settings. It was similar to Jordanian youth who need a reproductive health service where they will feel relaxed and cared for (Khalaf et al., 2010). They do not like busy atmospheres crowded with a lot of people. Therefore, the HCT services sites should have a quiet place to talk to providers privately and should have separate entrance and exit ways to avoid meeting others. If it is impossible to arrange service delivery out of hospitals, finding and selecting some areasthat are separate from general patients and easily accessible for youths would be necessary.

5.3.2 Youth-friendly HCT services should provide accessibility, no limitations, convenient times and appropriate cost

The characteristics of youth-friendly HCT services should be accessible and available for all youths and without any limitations. This study revealed the characteristics of youth-friendly HCT servicesto be flexibility, particularly concerning permission fora close friend to sit with when talkingto the provider or allowingyouths to come and use services with their peers. Youths need someone to understand and friends may be the best choice because youths seem to talk about everything with their close friends.

The findings also reflect that requiring parental consent is a major limitation leading to unfriendly access to HCT services in all three groups. In Thailand, if youths are aged less than 18 years, parental consent is required to use HCT services (Sirinirund et al., 2012) Although the national scheme provides free HCT service use twice a year in all Thai people, the youths aged less than 18are not allowed to usethe services unless they have parental consent (NHSO, 2013; Sirinirund et al., 2012; Suwanphatthana, 2010). Hence, parental consent is a major barrier for youths in using HCT services which is concurrent with previous evidence in many countries (Horizons, 2001; Thomsen et al., 2006). Attempts to change this law have been established for more five years but these attempts have been unsuccessful (Suwanphatthana, 2010). However, this finding confirms that it is necessary to offer opportunities to all at-risk youths to access and use HCT services without any limitations.

Moreover, service time and payment are revealed as characteristic of YFHCT service expectations. All youths reflected that the HCT services for youth should be opened in the evenings and on weekends because most youth are studying; hence, weekday times are not convenient for youths (Kawichai et al., 2012; Kennedy et al., 2013; Tangmunkongvorakul et al., 2012). Similarly, the payments for HCT services for youth who have had sexual experience show that these youths expect the HCT services to be free for all youths. However, the participants who had never had sex reflected those at-risk youths should pay something because they should be responsible for their risk, but the fees should not be more than they can afford (Kennedy et al., 2013). It is similarly to the previous RCT research to test the efficacy

of community mobilization (CM), mobile voluntary counseling and testing (MVCT) in Chaingmai, Thailand found that free MVCT in community settings during evening hours increased VCT uptake and was particularly attractive to younger adults (Kawichai et al., 2012; Tangmunkongvorakul et al., 2012).

5.3.3 Friendly providers should have the same gender with understanding, confidentiality and no judgment

The final issue of the characteristics of YFHCT services in terms of youth expectations is provided by a youth-friendly provider. The results of the interviews reflected the characteristics of youth-friendly providers consisting of respect for privacy and confidentiality, understanding and ability to advise youth about preventing HIV infection, including the provision of emotional support as necessary. Also included are recognition, understanding, and no blame (Kennedy et al., 2013). This study reflects that YFHCT service expectations support the WHO guide for youth-friendly services (UNAIDS/WHO, 2004b; WHO, 2009).

Moreover, the previous evidence, a Cluster Randomized Trial among young people in rural Tanzania, also confirmed that youth-friendly health services can increase the utilization of health services for suspected STIs by young people particularly if they were provided service by the trained providers who tended to be less judgmental and provided more comprehensive information(Larke et al., 2010).

However, the findings also reflect that youth needs on HCT services should include availability and accessibility for youths in today's society. Policy makers should pay more attention with greater focus on the youth with ideas about how to provide YFHCT services in order to manage and solve HIV/AIDS issues nationwide with potential for achieving the goal of "getting to zero" because YFHCT services can be promoted for young people to access and use (Feleke, Koye, Demssie, & Mengesha, 2013; Larke et al., 2010; Tangmunkongvorakul et al., 2012). If Thai youth have opportunities to use HCT services, they will learn and know their HIV status, which will lead them to preventing HIV transmission and accessing ART appropriately.