CHAPTER I
INTRODUCTION

1.1 Background and Significance of the Problem

Globally, access to HIV counseling and testing (HCT) has been the most challenging issue, especially in youth who are identified as the group with the highest HIV epidemic by age group. Early detection of HIV infection, therefore, is the most important entry point for access to prevention, treatment, care and support (UNAIDS/WHO, 2004b) in order to achieve the strategy of "getting to zero" by 2015 (UNAIDS/WHO, 2011a). In Thailand, only one-fifth of HIV infected youth aged 15-24 years are aware of their HIV positive status because only 0.6% of youth receive HIV testing each year (National Health Security Organization [NHSO], 2008). Among those who have HIV testing, the majority had HIV testing through mandatory HIV testing policies and illnesses due to low immunity; only a small number has voluntary testing. The great barriers to HIV testing access in the youth have been mentioned in a number of studies. Several countries have attempted to overcome these problems, finding success to be largely dependent on the sensitivity of services for the youth culture. Youth-friendly health services (YFHS) are the most significant strategy applied for HCT. Although, there are HCT service sites in every hospital in Thailand in the name of anonymous clinics, no evidence confirms the effectiveness in scaling up HCT utilization. How about the prevalence of use and intention to use HIV counseling and testing service among youth, what factors influence utilizes and intention to use these services among youth and what expected characters of youth-friendly HCT (YFHCT) services within Thai youth perspectives are the questions that need to be answered in order to improve toward proper service provision for this population in the future.

Thailand currently has 368,921 AIDS patients and most of these are in age group of 25-34 years (47.07%) (Bureau of Epidemiology, 2010), which means they have had HIV for 7-10 years, or when they were 15-24 years old. A survey of sexual

risk behaviors revealed that 20% of youth aged 15-24 years engage in sexual risk behaviors compared to 7.2% of adults aged 25-59 years, thereby reflecting that youth are three times more likely to engage in sexual risk behaviors than adults.

Moreover, a behavioral surveillance survey of Grade 11 secondary school students and 2nd year vocational students in Bangkok revealed that 20%, 22% and 39% had had sexual experience in 2008-2010, respectively, and approximately 20% of those had had first sexual intercourse before the age of 15 years. (Srivanichakorn, Thepthien, Tasee, & Wongsawass, 2009, 2010; Srivanichakorn, Thepthien, Wongsawass, & Tasee, 2011) Curiosity, physical development, sex drive, and changes in social environment could influence young people to have their first sexual experiences.

The major risk sexual behaviors among youth include declining ages for sexual activity, multiple sex partners and sex without condoms (Chamratrithirong, Kittisuksathit, Podhisita, Isarabhakdi, & Sabaiying, 2007). According to the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) Country Progress Report, Thailand Reporting Period: January 2008-December 2009, the HIV epidemic in Thailand indicates two significant issues among Thai youth: 1) The youth are at the center of the HIV spread and 2) The emergence of factors which increase the vulnerability of youth due to rapid socio-cultural changes and changing lifestyles, such as sexual norms with increasing acceptance of pre-marital sex, increases in sex for money or in-kind payment, lack of skills, knowledge and motivation for use of condoms to prevent HIV, increased alcohol consumption creating potential risk for unsafe sex and lack of knowledge and concern about self protection against HIV (Sirinirund, Khemngern, Danthamrongkul, Tangsaowapak et al., 2010).

In addition, an analysis of new HIV infections for the period of 1997-2010 estimates that half of people newly infected with HIV are youth (Kanchanachitra et al., 2009), but the situation of access to HCT is also a serious problem because most sexual experienced youth have never aware of their status.

As mentioned above, the prevalence, only 3% of youth at risk for HIV have access to HCT services, and 15-20% of these are found to be infected, which means more than 80% of infected youth are not aware of their HIV status. Each year, approximately 25,000 young pregnant women have mandatory HIV testing to prevent

mother-to-child transmission (PMTCT) policy as do 27,000 young men under military recruitment. In 2008, the NHSO reported that 57,000 young people aged 15-24 years were tested for HIV, so only 5,000 youth had voluntary HIV testing (NHSO, 2008).

Moreover, the UNGASS Thailand reported in 2010 that access to HIV testing had decreased 10-20% from 2008, especially among people younger than 25 years, except for pregnant women (Sirinirund et al., 2010). Similar situations have occurred in most parts of sub-Saharan Africa where fewer than one in ten people are aware of their HIV status (Joseph & Fredrick, 2007). In the U.S., approximately one-quarter of HIV infected individuals remains undiagnosed (Curt et al., 2005). These situations indicate that increased access to HIV testing is one of the most challenging health service systems for combating HIV/AIDS in all countries.

It is known that access to HIV testing is the most significant strategy to combat HIV/AIDS by achieving "Getting to Zero: 2011–2015 Strategy of the Joint United Nations Programme on HIV/AIDS" (UNAIDS/WHO, 2011a, 2011b). Youth who obtain HIV testing can learn about their risk behaviors and consequently reduce those behaviors. Awareness of HIV positive status also increases the possibility of access to necessary ART when CD_4 is less than 350 cell/mm^3. This can increase long-term survival by at least 7.9 years, with an incremental cost-effectiveness ratio of $1,200 per year of life saved compared to the beginning of antiretroviral drugs when CD_4 <200 cell/mm^3 (Girard, Ford, Montaner, Cahn, & Katabira, 2010). If a treatment is effective and the number of viruses decreases, infectivity will also decrease by 2.5 times (Porco et al., 2004) with reduced possibility of HIV transmission for 96% of these patients.

Although Thailand had been able to achieve 77.76% in scaling up access to ART and new policy under the national scheme allows the provision of ART when PLWHA's CD4 < 350 cells/mm^3, the people with HIV found to meet this criteria seems to challenge Thailand in combating the HIV situation. Therefore, scaling up early HIV testing among youth is essential.

Studies throughout the world reflect that smaller numbers of people have access to HIV testing, especially among the youth because both environment and population characteristics are indicated as significant hurdles. Many countries, therefore, have been trying to find a service model capable of increasing access to HIV

testing among youth. Some countries in Africa and America use proactive strategies as well as youth-friendly services. These strategies include integrating HIV testing to reproductive health services and other health services; changing laws regarding ages requiring parental consent for HIV testing; training staff to have more understanding and abilities necessary for youth services; developing peer counselors; and routine HIV testing. The successes of each strategy are dependent upon the sensitivity of services to the needs of youth and their cultures (MacPhail, Pettifor, Coates, & Rees, 2008; Peltzer, Mpofu, Baguma, &Lawal, 2002; Ransom, Siler, Peters, & Maurer, 2005; Sebudde & Nangendo, 2009; Vermeer, Bos, Mbwambo, Kaaya, & Schaalma, 2009).

The policies regarding HIV testing declared by UNAIDS/WHO recommend that HIV testing services for youth should pay special attention to the provision of confidential youth-friendly health services (UNAIDS/WHO, 2004a). Youth-friendly health services need to be equitable, accessible, acceptable, appropriate and effective. These characteristics are based on the WHO Global Consultation in 2001 and discussions by a WHO expert advisory group in Geneva in 2002.

Youth-friendly HCT (YFHCT) services require fulfillment of the rights of youth; easy and confidential registration facilitation; technical competence in adolescent-specific area providers; support in understanding each youth client with equal care and respect; facilitation of a safe environment at a convenient location; involvement by youth and community; outreach and peer-to-peer services to increase coverage and accessibility; appropriate and comprehensive services; guidance by evidence-based protocols and effective guidelines; and management information system efficiency.

Although Thailand has established HCT services in all hospitals across the country in the name of “anonymous clinics” since 1991, the services are provided for the general population, so they are not sensitive to the needs of youth. Although the Department of Health has provided youth-friendly health services in some public hospitals since 2008, the services do not focus on HCT. Furthermore, the “Love Care Clinic” project, a youth-friendly service has been provided since 2008 by a non-government organization (NGO), the Program for Appropriate Technology in Health (PATH), which attempts to promote understanding about HIV among youth and

applies outreach strategies to assist youth. This project provides services only in Bangkok and in 6 other provinces. After two years of services, PATH has reported only 2,000 youths who have been tested in two years under this project which does not suggest success for PATH. Although the “Love Care Project” by PATH has been conducted in more than 20 settings across Bangkok, the behavioral surveillance survey of Grade 11 secondary students and 2nd year vocational students in Bangkok in 2008-2010 revealed that only 7.7, 5.9, and 6.1% had obtained HIV testing, respectively (Srivanichakorn et al., 2009, 2010; Srivanichakorn et al., 2011).

Furthermore, most studies about HCT in Thailand focus on most at risk persons (MARPs) and the general population. A small numbers of studies have focused on HCT among youth and also stressed issues related to HIV testing histories and behaviors, or disclosure of persons who have been tested and the reasons for being tested rather than exploring why persons at risk do not want to be tested (Jiraphongsa et al., 2002; Kawichai et al., 2007; Kawichai et al., 2006; Kawichai et al., 2005; Kiertiburanakul, Boonyarattaphun, Atamasirikul, &Sungkanuparph, 2008; Liu et al., 2003; Müller, Sarangbin, Ruxrungtham, Sittitrai, &Phanuphak, 1995; Nhurod et al., 2010; Wimonsate et al., 2010).

According to the above background and significance of this issue, strengthening HIV/AIDS combat strategy among youth is a daunting challenge. YFHCT services seem to be the best strategy for achieving the “getting to zero” goal. However, the research evidence providing the information and knowledge is insufficient for Thailand’s health system. To arrange YFHCT services, prevalence of use and intention to use, the predictive factors of utilization and intention to use HCT services among Thai youth who had sexually experienced should be answered. Furthermore, the character of YFHCT services expected by youth should be explored. In this study, the access model and WHO guidance for YFHS assessment will be applied; moreover, the qualitative data interviewed from voluntary youth will be interpreted.

Generally, access to health care services has been applied to health system research to develop and improve health policies and strategies for the past five decades. The diversity of definitions and measuring are guided by different frameworks. An emerging of behavioral model of health service use will be applied to

this study (Andersen, 1995). The characteristics of youth will be examined to predict used and intention to use HCT services in-school youth.

Based on Andersen's behavioral model of health service use, predisposing characteristics, enabling resources and need components are counted in youth characteristics influencing willingness to use HCT services. Predisposing characters are reflected in an individuals' propensity to use services while an enabling resource means resources that enhance youths' use of HCT services and need components refer to the level of risk or illness bringing youth to seek HIV testing services (Andersen, 1995). The literature review guided the selection of four predisposing factors; two enabling factors and one need factor for this study.

Research evidences have shown that gender (Sebudde & Nangendo, 2009), knowledge of HIV (lliyasu, Abubakar, Kabir, & Aliyu, 2006; Mabunda, 2006; Sebudde & Nangendo, 2009; Shin, Kang, & Moneyham, 2007; Uzochukwua, Ugurub, Ezeokea, Onwujekweb, & Sibeuduc, 2011), attitude toward HIV testing (lliyasu et al., 2006; Shin et al., 2007; Vermeer et al., 2009), and perceived HIV/AIDS stigma, et al., (Bwambale, Ssali, Byaruhanga, Kalyango, &Karamagi, 2008; Daniyam, Agaba, & Agaba, 2010; Kitara & Ecik, 2011; McCauley, 2004; Meiberg, Bos, Onya, & Schaalma, 2008; Ransom, Siler, Peters, & Maurer, 2005; Uzochukwua et al., 2011) are influencing factors for predisposing characteristics.

Moreover, knowledge of HCT services (Mabunda, 2006; Sebudde & Nangendo, 2009; Uzochukwua et al., 2011) and willingness to pay, including ability to pay for HCT (Sanchaisuriya et al., 2008; Uzochukwua et al., 2011), are counted as enabling resources. In addition, perceived and actual risk for HIV infection such as number of sexual partners and condom use are also significant factors in need components predicting use and intention to use HCT services.(Shin et al., 2007).

In addition, WHO guidelines on quality assessment of health services for adolescent/young adult clients will guide the assessment of the expected characteristics of YFHCT services. They are composed of 5 major characteristics, i.e. equitable, accessible, acceptable, appropriate and effective. Those characters are significant barriers and facilitating factors for HCT service use among the youth (Agampodi, Agampodi, & UKD, 2008; Chirawu et al., 2010; Khalaf, Moghli, &Froelicher, 2010; MacPhail et al., 2008; Mathews et al., 2009; McCauley 2004;

Sebudde & Nangendo, 2009; Suwanphatthana, 2010; Thomsen et al., 2006). Therefore, all expected characteristics of YFHCT services are applied to predict use and intention to use HCT services among the Thai youth in this research. Moreover, open-ended and telephone interviews will be integrated to explore how the characteristics of YFHCT services should be arranged in the Thai health system as suggested by in-school youth.

1.2 Research framework

In this study, the researcher proposes a relevant framework that focuses on access to HCT services among Thai youth, particularly sexually experienced youth. The concept of Andersen's behavioral model of health service use will be applied. Richard Mark Anderson initiated his framework in the 1960s and revised four times in the 1970s, 1980s, 1995 and 2006. The major aim of this model was to study equity access to health care services among minorities in America. For this study, the researcher will apply the 4th version to explore population characteristics affecting use and intention to use HCT services among in-school Thai youth.

The fourth edition of the model revised in 1995 consists of 4 parts, including environment (health system), population characteristics, health behavior (service use) and outcomes of service use (Andersen, 1995). Environmental factors indirectly influence health and health care behaviors through population characteristics directly influencing behaviors and outcomes (Andersen, 1995).

Based on Andersen's access model and the research evidence reviewed, the research framework was created. The researcher will begin by considering Thai youth at risk for unidentified HIV infection because high risk behavior is stigmatized in the Thai context while increasing numbers of youth are reported to be at risk. Although HCT seem to be the entry point strategy for combating this situation, a small number of youth have used these services. The prevalence of use, intention to use HCT services and their factors influencing will be determined by this study.

The population characteristics comprise predisposing characteristics, enabling resources and need components. The predisposing characteristics refer to individual propensity to use services, include of variables that exist before the onset of

the illness. Measures of this component including age, gender, race, and religion and values about health and illness. While enabling resources refer to sources that enhance youths' use of HIV testing services, these include individual or family resources such as income and insurance coverage. As in Andersen's model, the need components of population characteristics refer to the level of risk or illness bringing youth to HIV testing services (Andersen, 1995).

Moreover, Andersen pointed out that enabling resources are potential access while predisposing characteristics and need are reflected in equitable access (Andersen, 1995). Population characteristics, therefore, are major access domains in this study. Predisposing characteristics; gender, HIV knowledge, attitude toward HCT and perceived HIV/AIDS stigma, affect need components; perceived risk for HIV infection and actual HIV risk behaviors such as number of sexual partners, and condom used. Both predisposing and need components influence enabling resources; willingness to pay for HCT services with awareness and knowledge of HCT services. All of these are predictors of use and intention to use HCT services.

Furthermore, environmental factors are also significant predictors of use and intention to use HCT services. Environment is a characteristic of the health care service system (Andersen, 1995). In this study, the expectations for YFHCT service characteristics are representative of characteristics of health care services because most of the in-school youth participants had no experience with HCT services utilization, while most of the HCT services in Thailand are rather unclear about how to organize youth-friendly services. Expectations for YFHCT will answer this question. The expectations for YFHCT service characteristics derived from the WHO guidelines consist of 5 characteristics; equitable, accessible, acceptable, appropriate, and effective of services. The policy, structure and resources supported will comprise all characteristics. All of the characteristics of YFHCT services expected will also predict use and intention to use HCT services.

All variables and their relationships are presented as the framework of the study in Figure 1.1

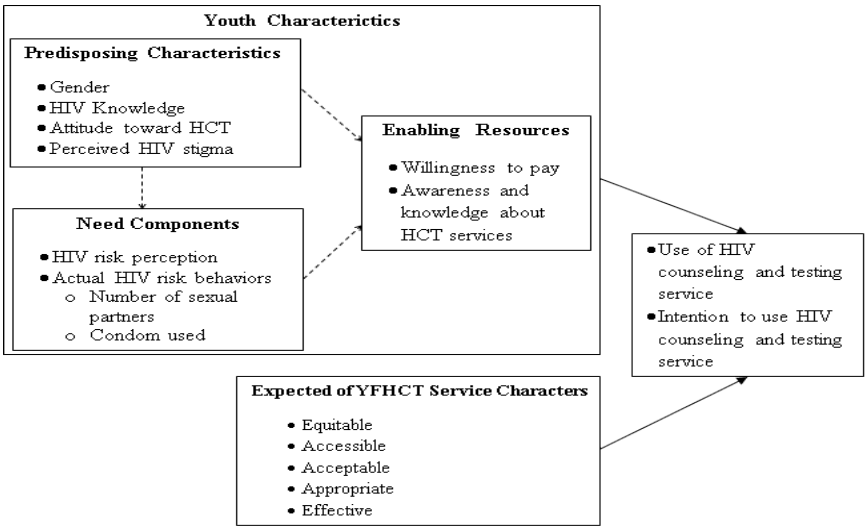

Figure 1.1 Framework of the Study

1.3 Research Objectives:

This research was conducted with the following three objectives:

1) To determine the prevalence of sexual experienced, use and intention to use HCT services among sexually experienced youth.

2) To examine the predictors of use and intention to use HCT services among sexually experienced youth.

3) To explore Thai youth expectations regarding the characteristics of YFHCT services.

1.4 Research Questions

1) What are prevalence of sexual experienced, use and intention to use HCT services among sexually experienced youth?

2) What are the predictors of use and intention to use HCT services among sexually experienced Thai youth?

3) What are the characteristics of YFHCT services in the expectations of Thai youth?

1.5 Research Hypotheses

1) Use and intention to use HCT services among sexually experienced Thai youth is influenced by youth characteristics (predisposing characteristics: gender, HIV knowledge, attitude toward HCT and perceived HIV/AIDS stigma; enabling resources: awareness and knowledge of HCT services and willingness to pay; and need components: perceived HIV risk and actual risk behaviors).

2) Use and intention to use HCT services among sexually experienced Thai youth is influenced by the YFHCT service characteristics expected by Thai youth.

1.6 Expected Outcomes and Benefits

1) This study will produce health system research leading to improvement in health care services (youth-friendly HCT services) and service accessibility.

2) This study will provide knowledge concerning Thai youth characteristics and expected characteristics of YFHCT services as important predictors of use and intention to use HCT services.

3) This study will provide information about Thai youth expectations of the characteristics of YFHCT services. The results will guide health care organizations in utilizing resources efficiently.

1.7 Definition of Terms

1.7.1 Intention to use HCT is defined as the mental readiness or willing of Thai youth to obtain HCT services in order to learn their own HIV sero-status. It can be measured by two questions; “Would you needed intend to use HCT services?” and “when?”

1.7.2 Youth characteristics are attributes of Thai youth consisting of the predisposing characteristics, enabling resources and need components of Thai youth.

1.7.2.1 Predisposing Characteristics are individuals' propensity to use services. In this study, gender, HIV knowledge, attitude toward HIV testing and perceived HIV/AIDS stigma are the factors selected.

1) Gender is the distinguishing characteristic between male and female youth.

2) HIV knowledge is the level of Thai youths' knowledge about HIV infection and transmission. It can be measured by HIV knowledge questionnaire based on UNGASS criteria.

3) Attitude toward HIV testing is the perception or feeling of youth about HCT services. It can be measured by the HIV Antibody Testing Attitude Scale (HTAS) with 5 dimensions, i.e. trust and support, general concerns, fear, confidential concerns and friends' concerns.

4) Perceived HIV/AIDS Stigma is the perception of Thai youth about prejudice, negative attitudes, abuse and maltreatment directed at people living with HIV/AIDS which can result in being shunned by family, peers and the community at large and can be evaluated by HIV stigma scores with 3 subscales: Shame/blame/ social isolation, discrimination and equity.

1.7.2.2 Enabling Resources are sources that enhance the use of HIV testing services by Thai youth. Awareness and knowledge of HCT service, and willingness to pay are selected for this study.

1) Awareness and knowledge of HCT services are Thai youths' perceptions of existing available HCT services provided for them and how to make those services available. It can be measured by three questions; "Have you ever heard about HIV counseling and testing service?", "where did you hear?" and "do you know where this service available for youth?"

2) Willingness to Pay is the maximum amount of income Thai youth is willing to give up in order ensures that proposed youth-friendly HCT services are available. It can be measured by 2 questions; "if you want to test for HIV, do you will to pay for?" and "how much maximum that you will to pay?"

1.7.2.3 Need Components are the level of risk or illness bringing youth to HIV testing services. In this study, only the youths' perceived HIV risk is counted

1) Perceived HIV Risk is the level of Thai youths' perception about behaviors making them susceptible to HIV infection. It can be measured by a question "Do you think, what level are you at risk for HIV infection?"

2) Actual HIV Risk Behaviors are the youths' actions that lead to HIV infection. Number of sexual partners and condom use during have sex are included. It can be assessed by 2 questions particularly in one who have sex within a year. "How many sexual partners you have within a year?" and "Do you always use condom during have sex?"

1.7.3 The expected characteristics of YFHCT services are defined as Thai youths' viewpoints what the characteristics of HCT services provided for them should be. It is composed of policy, organization and structure of HCT services which are equitable, accessible, acceptable, appropriate and effective. It can be measured by the YFHCT service expectation questionnaire.