HIV/AIDS PREVENTIVE BEHAVIOR AMONG YOUTHS IN URBAN SETTING OF YANGON

KYAW THET

A THEMATIC PAPER
SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF PUBLIC HEALTH
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2012

Thematic Paper
entitled

HIV/AIDS PREVENTIVE BEHAVIOR AMONG YOUTHS IN URBAN SETTING OF YANGON

.....
Mr. Kyaw Thet
Candidate

.....
Assoc. Prof. Oranut Pacheun,
Dr.P.H.
Major advisor

.....
Assoc. Prof. Chaweewon Boonshuyar,
M.S.P.H.
Co-advisor

.....
Prof. Banchong Mahaisavariya,
M.D.,Dip Thai Board of Orthopedics.
Dean
Faculty of Graduate Studies
Mahidol University

.....
Assoc. Prof. Pakpimol Mahannop,
Ph.D. (Tropical Medicine)
Program Director
Master of Public Health
Faculty of Public Health
Mahidol University

Thematic Paper
entitled

HIV/AIDS PREVENTIVE BEHAVIOR AMONG YOUTHS IN URBAN SETTING OF YANGON

was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Public Health
on
April 4, 2012

.....
Mr. Kyaw Thet
Candidate

Rawiwan Sangchai
.....
Assoc. Prof. Rawiwan Sangchai,
M.P.H. (Social Med.)
Chair

O. Pacheun
.....
Assoc. Prof. Oranut Pacheun,
Dr.P.H.
Member

.....
Assoc. Prof. Chaweewon Boonshuyar,
M.S.P.H.
Member

B. Mahi
.....
Prof. Banchong Mahaisavariya,
M.D., Dip Thai Board of Orthopedics
Dean
Faculty of Graduate Studies
Mahidol University

.....
Assoc. Prof. Phitaya Charupoonphol,
M.D., Dip. Thai Board of Epidemiology
Dean
Faculty of Public Health
Mahidol University

ACKNOWLEDGEMENTS

First, I would like to express my sincere gratitude to my major advisor, Assoc. Prof. Dr. Oranut Pacheun, for her continuous support, kindness, patience and persistent supervision. Without her guidance, coaching, experience sharing and constructive comments, this research would not have been possible.

I would also like to gratefully acknowledge Assoc. Prof. Chaweewon Boonshuyar, my co-advisor for her suggestions, assistance, useful statistical advices and encouragement throughout my study period. I have learned a great deal from her during the process of preparing proposal, sampling procedure and analyzing data.

I am greatly indebted to the chair of the defense committee, Assoc. Prof. Rawiwan Sangchai for her invaluable feedback, ideas and useful suggestions.

I would like to pay respect and extend my deepest thanks to the MPH Program Director, Assoc. Prof. Dr. Pakpimol Mahannop and Dean of Faculty of Public Health, all my Arjans, members of the Ethical Review Committee and all staff in the MPH office, Mahidol University, for their guidance, kind help, concern and support for the health research project.

My special thanks also send to the supervisors and peer educators of the Youth Development Programme of the Myanmar Medical Association for lending a helping hand during the data collection period. Then, my grateful appreciation goes to “Thapyay” organization which supported me with the research grant.

I would like to appreciate all study respondents for their willingness to participate in this study and share their information. This paper could not have been materialized without their assistance and active cooperation.

Finally, since I am blessed with the love of my parents and family who have always been a constant source of inspiration and encouragement for me, this study report is dedicated to them.

Kyaw Thet

HIV/AIDS PREVENTIVE BEHAVIOR AMONG YOUTHS IN URBAN SETTING OF YANGON

KYAW THET 5437381 PHMP/M

M.P.H.

THEMATIC PAPER ADVISORY COMMITTEE: ORANUT PACHEUN, Dr.P.H., CHAWEEWON BOONSHUYAR, M.S.P.H.

ABSTRACT

This cross-sectional study aimed to describe the preventive behavior of youths in three urban settings of Yangon, Myanmar. A total sample of 312 was collected by incidental sampling method and a self administered questionnaire was used for data collection. Statistical analyses performed were descriptive statistics and Chi-Square test.

The results revealed the demographic characteristics of youths and their preventive behavior on HIV/AIDS. Most of them had significant associations: the adolescents (13-19 years) had a higher level of preventive behavior than young adults (20-24 years), females had a higher level of preventive behavior than males, and Buddhist youths had a higher level of preventive behavior than other religious groups. Youths whose education background was at university level were found to have better preventive behavior than other youths with lower education levels, and youths who were unemployed had better preventive behavior than those who were employed (p-value = 0.021 and p-value < 0.001). Concerning knowledge of HIV/AIDS and level of preventive behavior, a significant association was found (p-value = 0.018). Those who had a higher level of knowledge on HIV/AIDS had better preventive behavior. Neither the perception nor the preventive behaviors were different between youth groups. Furthermore, sources of information were not different between youths with different preventive behaviors. Lastly, youths who had attended the peer education session had higher knowledge on HIV/AIDS than those who had not attended.

According to the results of this study, health education programs in those areas should be more focused on HIV testing and counseling, tattooing and anti-retroviral treatment. A communication campaign for caregivers/ parents should be conducted. Behavior change communication and life-skill based training should be added in advance of the peer education program of YDP. Finally, easy accessibility and availability of condoms at all times should be ensured.

KEY WORDS: HIV/AIDS/ PREVENTIVE BEHAVIOR/ YOUTHS/ URBAN SETTING/ YANGON

86 pages

CONTENTS

CONTENTS (cont.)

CONTENTS (cont.)

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
HIV	Human Immunodeficiency Virus
CSW	Commercial Sex Workers
IDU	Injecting Drug Users
FSW	Female Sex Workers
MSM	Men Sex with Men
TB	Tuberculosis
STI	Sexually Transmitted Infection
ARH	Adolescent Reproductive Health
MMA	Myanmar Medical Association
UNFPA	United Nation Fund for Population Association
WHO	World Health Organization
AH	Adolescent Health
UNICEF	United Nations Children's Funds
UNAIDS	Joint United Nation Programs on HIV/AIDS
NARHS	National Aids Reproductive Health Survey
HBM	Health Belief Model
VCT	Voluntary Counseling and Testing
CBO	Community Based Organization
DOH	Department of Health
YDP	Youth Development Program
USAIDS	United States Agency for International Development
FAYS	Family and Youths Survey

CHAPTER I
INTRODUCTION

1.1 Rationale and justification

With estimated 33.3 million (31.4 – 35.3 million) people currently living with Human Immunodeficiency Virus (HIV), the HIV epidemic is still posing a serious public health threat around the world. In 2009, new infections amounted to an estimated 2.6 million (2.3–2.8 million) while about 1.8 million[(1)] succumbed to the disease.

In the same year, an estimated 3.5 million people in South-East Asian Region were living with HIV/AIDS. Every year, an estimated 220,000 are newly infected and 230,000 eventually die of it. The majority of patients contracted the infection through sexual contact and injecting drug use is the second most common mode of transmission. Among the South- East Asian countries, five countries namely India, Indonesia, Myanmar, Nepal and Thailand bear the brunt of disease burden while the remaining five countries, Bangladesh, Bhutan, Maldives, Sri Lanka and Timor-Leste, together represent less than 1% of the total HIV burden in the Region.

The very first case of HIV infection was discovered in 1988 in Myanmar. The country is experiencing a concentrated HIV epidemic although there was a downward trend in HIV prevalence in the general population aged 15-49, from 0.8% in 2001 to 0.6% in 2009. Myanmar's HIV prevalence is the third highest among countries in the South-East Asian Region. In numbers, the estimated number of people living with HIV in 2009 was 240,000 [(2)]. In 1994, the ratio of HIV-infected male-to-female was 8 to 1 but in 2009, it has become 3 to 1. This situation reflects a higher level of transmission from husbands to wives and a turnover of high-risk populations such as former injecting drug users (IDU), former female sex workers (FSW) and former clients of FSW[(3)].

According to the annual sentinel surveillance, IDU, men who have sex with men (MSM) and sex workers carried a high risk of exposure to HIV. The 2009

sentinel surveillance reported highest HIV prevalence among IDU (34.6%), followed by MSM (22.3%), FSW (11.2%), newly diagnosed TB patients (9.2%), male patients with sexually transmitted infection (STI) patients (4.9%), new military recruits (1.6%), pregnant women (1.0%) and blood donors (0.3%)[(4)].

The HIV pandemic is also taking a heavy toll on young lives as youth are disproportionately infected and affected by HIV/AIDS around the world. Every day 5,000 to 6,000 young people aged 15–24 contract HIV corresponding to roughly half of all new adult infections. Moreover, about 12 million, or over one quarter of all people living with HIV belong to 15–24 year age group**.** [(5)] Given the fact that youth are more likely to make decisions without adequately considering the consequences, they are risk takers especially when it comes to sexual intercourse. Fewer than half of all sexually active youth report using condoms, even where prevalence is high. Adolescents carry special risk since they are more likely to engage in high-risk sex and even less likely to use condoms.

AIDS has orphaned 14 million children and youth, and hence young people are often adversely affected in one way or another by the spread of the pandemic even when not infected themselves. This situation is compounded by lack of knowledge because many young people still do not know how to prevent HIV infection. Nowadays, youth are comparatively better informed about HIV/AIDS, but more than 80% of young women still do not have sufficient knowledge about how to prevent HIV. The real challenge, however, is to change risky behaviors by translating knowledge into practice. Even among those who know that condoms prevent HIV, few actually use them[(5)].

According to HIV and AIDS data hub for Asia-Pacific (Evidence to action) in 2011, Myanmar country data on male IDUs with comprehensive HIV knowledge showed 82.6% in Yangon, 87.7% in Mandalay, 62.5% in Lashio and 80% in Myitkyina. The percentage of IDUs who knew the sources to get new needles was 100% in Yangon and Mandalay, 98.8% in Lashio and 78% in Myitkyina. About 90% of IDUs and sex workers in Yangon, Mandalay, Lashio and Myitkyina knew the sources to get the condoms according to the survey from 2007-2008. However, the percentage of out of school youth (male and female) who knew comprehensive HIV knowledge were only 46% and 42% in Yangon, 52% and 49% in Mandalay, 37% and

46% in Meiktila, 48% and 50% in Lashio, and 51% and 56% in Monywa respectively[6]. These data clearly indicate that the comprehensive HIV knowledge of youth is significantly low, putting the future of the country at stake. In addition, knowledge related to HIV prevention and transmission show only 57% in "no incorrect belief about HIV" and 63% in "HIV can be prevented by abstinence"[6].

Given this situation, programs need to reach and equip youth with correct Adolescent Reproductive Health (ARH) and HIV prevention messages and these interventions also need to be evaluated. Education is no doubt a powerful protective weapon against HIV infection and training peers to become positive role models can have a positive effect young peoples' behaviors. Peer to peer education facilitates access to young people and creates trust among them. Peer education and other community-based programs are especially effective in reaching out-of-school youth and other groups particularly vulnerable to infection. The most notable impacts of such programmes are evidenced by increased HIV/AIDS awareness and some behavioral indicators such as increased condom use at last sex. According to most evaluation results of peer education programs, an even greater impact was seen in the peer educators themselves than on their intended target audience, though both may benefit.

In addition, peer education has the benefit of instilling young people with aspirations for their future, increasing their expectations of future earnings and their ability to process health-related information. On the other hand, active involvement of youth in these peer education interventions is imperative for a successful outcome. How youth relate to their service providers and how these providers and institutions succeed in empowering and integrating young people also significantly influence the success of youth-specific interventions.

In Myanmar, Youth Development Program, jointly organized by Myanmar Medical Association (MMA) and the United Nation Population Funds (UNFPA), conducts the peer education activities within the selected townships of the Yangon. Their main objective is to increase access of adolescents and youth to reproductive health and HIV/AIDS information, education and services, including counseling in selected townships. Peer educators from that program search for the peer education sites in the communities they live. Most of the chosen places are teashops, beauty

parlors, auto workshops, home industries, private tuition, and private hostels etc. where many youth could be found.

This study will be conducted in these project areas. Since the researcher worked in adolescent reproductive health and Youth development program was interested to study youths' HIV/AIDS preventive behavior, this study would be beneficial for the work in this field.

1.2 Objectives

1.2.1 General Objective

- To assess the HIV/AIDS preventive behaviors of youths in urban setting of Yangon.

1.2.2 Specific Objectives

- To describe the general characteristics of youths such as age, sex, education, race, religion, marital status and occupation**.**
- To assess the level of knowledge of youths on HIV/AIDS.
- To explain the perception of youths on HIV/AIDS such as perceived susceptibility, perceived severity, perceived benefits and perceived barriers.
- To identify the sources of information from which youths are getting HIV/AIDS related knowledge**.**
- To find the association between the general characteristics, knowledge, perception, source of information and HIV/AIDS preventive behaviors among youths.

1.3 Hypotheses

- There is an association between general characteristics of youths i.e. age, sex, education level, race, religion, marital status, occupation and their preventive behaviors to HIV/AIDS.
- There is an association between source of information on HIV/AIDS and preventive behaviors among youths.
- There is an association between level of knowledge of youths on HIV/AIDS and their preventive behaviors.

- There is an association between perception of youth on HIV/AIDS and their preventive behaviors.

1.4 Variables of the study

Dependent variable

- HIV/AIDS preventive behaviors

Independent variables

- General characteristics such as age, sex, educational background, race, religion, marital status and occupation.

- Knowledge on HIV/AIDS
  - Modes of transmission
  - Preventive methods

- Perception on HIV/AIDS
  - Perceived susceptibility to HIV/AIDS
  - Perceived severity to HIV/AIDS
  - Perceived benefits of prevention to HIV/AIDS
  - Perceived barriers in practice of preventions

- Source of information on HIV/AIDS

1.5 Conceptual framework

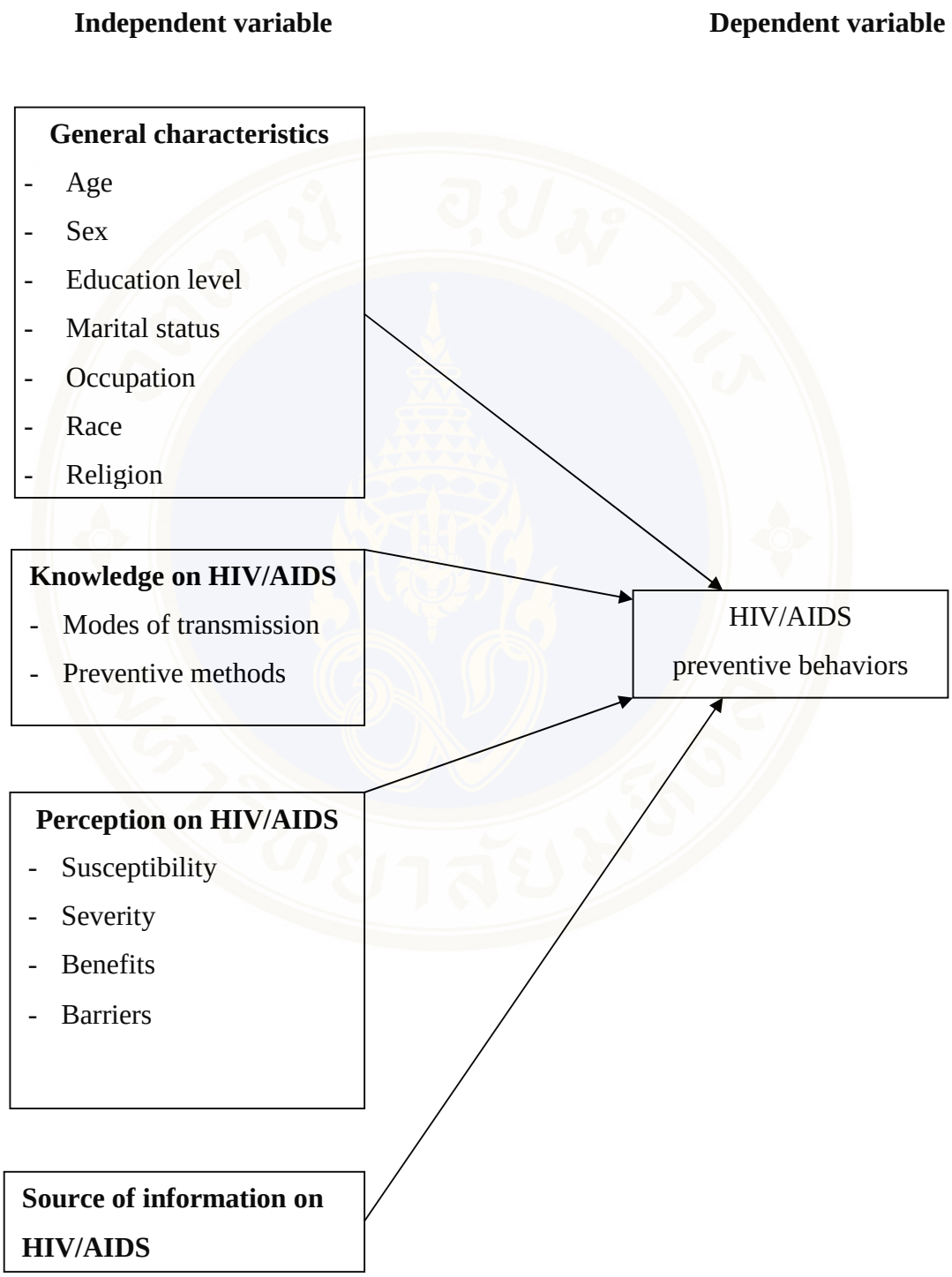

Figure 1.1: Conceptual framework for HIV/AIDS preventive behavior of youths

1.6 Operational definitions

1.6.1 Youth in this study means “those persons between ages of 13 to 24 years”.

1.6.2 Peer education program means “the program that conducts the activities of sharing HIV/AIDS related information among youths by youth leaders who are also a member of youth community and are of equal standing with another”.

1.6.3 General characteristics in this paper refer to “socio-demographic characteristics of studied youths such as age, sex, educational level, marital status, occupation, race and religion.”

- Age means “the number of years up to his or her last birthday”. Age in this study is divided into two groups; adolescent (13 - 19 years) and young adult (20-24 years).
- Sex means “the state of being either male or female reported by respondents”.
- Education level refers to “the status of education at which youth has achieved and it is included five groups such as able to read and write, primary, secondary, high school level and university level.” And then, education level in this study was also reorganized into two groups by university level and below university level.
- Marital status refers to “youths’ condition of being married or unmarried at the time of data collection.”
- Occupation means “the principal activity or profession or the type of job that youths are currently doing to earn for living, and it is also included five categories such as staff, odd job holder, student, vendor and others etc”. Then, the occupation was further grouped into unemployed and employed groups.
- Ethnic in this research refers to “different group of youths distinguished from each other by genetically transmitted physical characteristics or their original race with their language or local dialect.”
- Religion means “the state of belief in Buddhist or Christ or Islam or Hindu reported by respondents”.

1.6.4 Knowledge on HIV/AIDS means “knowing or understanding the information and facts related to HIV/AIDS such as causal agent, mode of transmission and preventive behaviors”. The level of knowledge was then categorized again into three levels such as; high, moderate and poor.

1.6.5 Perception on HIV/AIDS means individuals’ acceptance of risk of getting HIV, believing its serious consequences, conceiving available HIV interventions are beneficial in reduction of susceptibility to infection or its severity and trusting the benefits of taking interventions outweigh the barriers to interventions.

- Perceived susceptibility refers to “perceptions about the chances of getting HIV infection”.
- Perceived severity means that “perceptions on seriousness of HIV/AIDS and its sequelaes”.
- Perceived benefits mean “perception on efficiency of preventive actions to reduce risk or seriousness of impacts”.
- Perceived barriers refer to “perception about tangible and psychological cost of the preventive actions”.

Each perception in this study was leveled into three such as; high, moderate and low. High level in perceived susceptibility, severity and benefits mean that youths had high perception in risk of getting infection, high perception on seriousness of HIV/AIDS and high perception of benefits in using preventive methods. Then, high perceived barrier means that youths have high potential to overcome the barriers of practicing the preventive behavior to HIV/AIDS.

1.6.6 Source of information means “the places or persons (such as radio, television, video, internet, friends, peer education program, family members, newspaper, journal, magazine and health professional) from which youths can receive HIV/AIDS related information”.

1.6.7 HIV/AIDS preventive behaviors means “youths’ behaviors including abstinence from sex before marriage, correct condom use, avoidance of alcohol drinking, substance abuse and tattooing, refrain from multiple sex partners and refrain from commercial sex workers to prevent the transmission of HIV/AIDS.”

- Abstinence in this study refers to “the practice of refraining from sexual activity in youths in order to prevent transmission of HIV by sexual method”.
- Condom usage means “using of a barrier device or a thin rubber covering properly during sexual intercourse”.
- Refrain from CSWs means “stopping the behavior of having sex with commercial sex workers”.
- Avoidance of alcohol drinking refers to “absence of excessive alcohol drinking habits which can misjudge a person’s consciousness and lead to risky sexual intercourse”.
- Avoidance of tattooing refers to “not practicing the tattooing habits”.
- Refrain from multiple sex partners means that “the act of not having sex with the other partners”.
- Avoidance of substance abusing means that “not practicing the habits of using narcotics and heroin”.

The preventive behavior in this study was divided into two levels such as poor and better preventive behavior.

CHAPTER II
LITERATURE REVIEW

This chapter reviews the major concepts relevant to HIV/AIDS preventive behaviors among youths. It is organized into six sections in which the first five sections deal with the concepts and the last section focuses on the related researches. The followings are the reviewed topics in this chapter:

2.1. Youth and HIV

2.2. Concept of knowledge, perception and preventive behavior

2.3. Source of information

2.4. Peer education

2.5. Preventive behaviors for HIV/AIDS

2.6. Related researches

2.1 Youth and HIV

According to the World's Youth report; published by the Population Reference Bureau, Washington DC in 2000, population in the world is growing. By 2025, this number is expected to rise by some 400 million. Recognizing the numbers of youth which will contribute to this increase the reproductive health needs of adolescents are becoming a priority concern in an increasing number of countries.

The World Health Organization (WHO) classifies adolescent as the age group between 10 and 19 years. Youth is defined by the United Nations as people of 15-24 years of age. And, the term “young people” encompasses the composite age group of 10-24 years. As 20 to 24 years-olds and late adolescent share similar health problems and issues, the term “adolescence” and “adolescent health (AH)” cover the broader age range of young people of 10-24 years old. The definitions of the terms “youth”, “young people” and “adolescents” can vary according to each society’s cultural norms, social expectations and political consideration.

Adolescence is generally a complex period, often not very well understood both by adolescents and adults alike. It is characterized by the onset of puberty; it is also a transitional period from childhood to adulthood and a time of rapid physical, social, emotional and intellectual development. They encounter many challenges one of which is reproductive health problems. According to the WHO, adolescents are neither children, adults, and this period of change is full of paradox. During the adolescent years, young people are fond of engaging in new life experiences including both positive and negative impacts which may mould their life into becoming adults. As they become mature, they are sexually active putting more young people at serious health risks.

Sex is rarely discussed openly in the family or seriously in society in general. Information on sexual matters is usually given by the mother to her daughter when the girl reaches menarche, but after that there is no discussion in the family regarding sex. For boys, knowledge about sex is mostly gained from informal sources such as peers, pornography and the press. There is almost no communication between father and son or mother and son on these matters[(7)].

Globally, an estimated 40 million people were living with HIV/AIDS at the end of 2005. More than 10 million of them are young people aged 15–24 years. Half of the 4.2 million new infections in adults in 2005 occurred in this age group. Each day round about five to six thousand of new infections are contracting to young people. The region with the second highest prevalence is Asia, with an estimated 2.2 million young people living with the virus[(8)]. In countries where HIV is concentrated among sex workers, injecting drug users or men who have sex with men, high-risk behavior commences during adolescence for most, and large proportions of these high risk populations are younger than 25 years. In countries with generalized epidemics, the epidemic is also driven by youth. Youth are exposed to HIV infection in different ways depending on the type of epidemic present in the country in which they live.

Youth are the citizens of our community endowed with intelligence, skill and ability that could make larger contribution in community development efforts. On the other hand, they are falling in a period of psychosocial turmoil as they learn to cope with many new demands arising from lasting partnerships, marital relationships, parenthood and careers. For those who enter adulthood poorly equipped with skills

and plagued by self-doubts, many aspects of adult life can be stressful and depressing. Youth are often the victims of modern society and they easily engage in risk-taking behavior because of their psychological nature[9].

At the same time, the ability of youth to resist peers' influence is weak; hence, they are exposed to positive and negative peer pressures. Youth associated with deviant peers are more likely to engage in antisocial behavior than those without deviant peers. Youth with poor attachment to families, schools and community are strongly attached to antisocial peers and are more likely to engage in risk-taking behavior. Youth with strong attachments to members of positive reference groups are less likely to engage in risk-taking behaviors for concern of harming their valued relationships.

Nowadays, early sex initiation is growing up among youths in many countries and unmarried girls and boys become sexually active before the age of 15. Recent surveys in Brazil, Hungary and Kenya conducted by UNICEF, WHO and UNAIDS found that more than a quarter of boys were having sex before the age of 15 years old. Early marriage occurs across the globe and it is prevalent in some part of Africa and South Asia. Youth who start having sex early are more likely to have sex with high risk partners or multiple partners and they are less likely to use condoms. Besides, lack of necessary knowledge and skills of youth on HIV/AIDS make them less likely to protect from HIV[10].

2.2 Concept of knowledge, perception and behavior

2.2.1 Concept of knowledge

In HIV education, knowledge is very important and a pre-requisite for protecting oneself from HIV infection. However, studies have also reported a poor correlation between knowledge and sexual behavior since knowledge have been shown not to be enough and people practice unsafe sex despite their knowledge of HIV/AIDS. Knowledge essentially is the recall recognition of specific and universal elements in a subject area. In the context of HIV/AIDS, having knowledge implies ability to recall facts concerning causes, transmission and prevention. It is expected

that when one has the knowledge of HIV/AIDS, the accompanying behavior would be logical. That is having the knowledge of prevention, transmission and other facts would motivate logical preventive behavior. In relation to HIV/AIDS; the possibility that the possession of adequate and correct knowledge is highly correlated to preventive efforts is a strong motivating factor in most educational projects since it is assumed that knowledge will help to overcome fear, denial and also contribute to behavior modification. Therefore, most HIV/AIDS education programme place emphasis on the power of increased knowledge to motivate logical preventive behavior to reduce HIV infection and modify preventive behavior change.

The process of provision of information and education is based on assumption that youths would practice preventive behavior. However it seems there is lack of balance between the knowledge of HIV/AIDS and the advancement in preventive behavior of many youths. According to the National Aids Reproductive Health Survey (NARHS) accurate knowledge on key basic information on HIV/AIDS which is the pre-requisite for taking preventive and care actions was generally low[11].

2.2.2 Concept of perception

Perception is a process by which individuals organize and interpret their sensory perception in order to give meaning to their environment. However, one's own perception can be substantially different from objective reality. People's behavior is based on their perception of what reality is, not on reality itself.

Perception is the process by which an individual selects, organizes, and interprets information inputs to create a meaningful picture of the world. Perception precedes and affects decision making, planning, and productivity, listening and understanding others[12]. In this study, some concepts of the Health Belief Model (HBM) are used to describe the perception on HIV/AIDS.

HBM contains several primary concepts that predict why people are taking actions to prevent, to screen for, or to control illness conditions; these include susceptibility, seriousness, benefits and barriers to a behavior, cues to action, and most recently, self-efficacy. Provided that individuals consider themselves as susceptible to a condition, are convinced that a particular condition would have potentially serious

consequences, that a course of action available to them would be beneficial in reducing either their susceptibility to or severity of the condition, and that the anticipated benefits of taking action outweigh the barriers to (or costs of) action, they are likely to take action that they believe will reduce their risks[13].

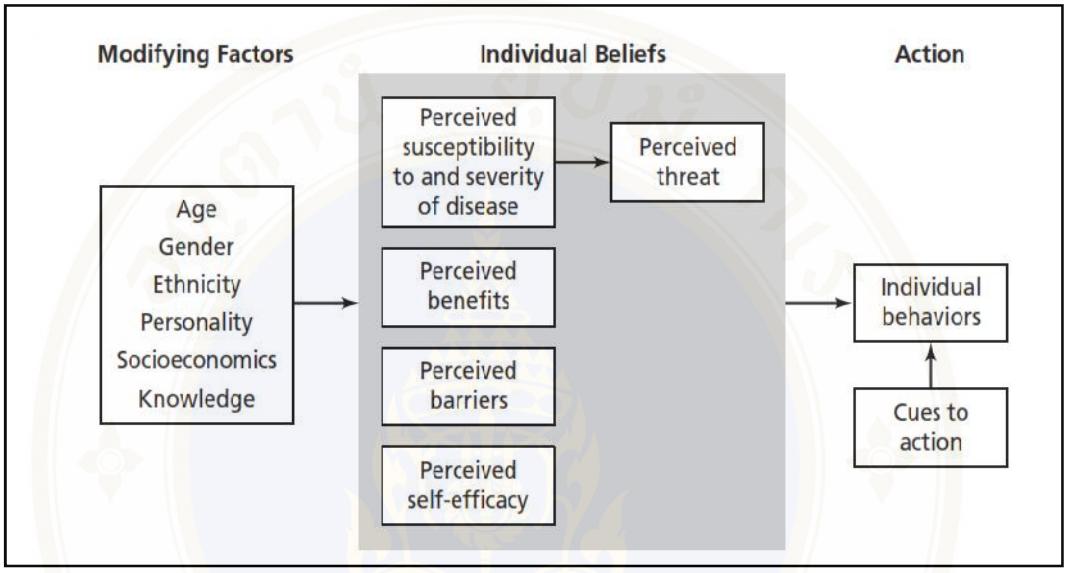

Figure 2.1: Health Belief Model components and linkage

HBM includes three main components namely modifying factors, individual beliefs and action. In modifying factors, age, gender, ethnicity, personality and mainly socioeconomics and knowledge are included influencing the health perceptions. Individual beliefs are:

(1) Perceived Susceptibility: it refers to beliefs about the likelihood of getting a disease or condition.

(2) Perceived Severity: Feelings about the seriousness of contracting an illness or of leaving it untreated include evaluations of both medical and clinical consequences (for example, death, disability, and pain) and possible social consequences (such as effects of the conditions on work, family life, and social relations).

The combination of susceptibility and severity has been labeled as perceived threat.

(3) Perceived Benefits: Even if a person perceives personal susceptibility to a serious health condition (perceived threat), whether this perception

leads to behavior change will be influenced by the person's beliefs regarding perceived benefits of the various available actions for reducing the disease threat.

(4) Perceived Barriers: The potential negative aspects of a particular health action—perceived barriers—may act as impediments to undertaking recommended behaviors.

Thus, by the HBM, combination of perceived susceptibility and severity to HIV provide the energy or force to act and the perceived benefits (minus barriers) provide preventive behavior to HIV/AIDS[13].

2.2.3 Association between knowledge, perception and preventive behavior

To understand and perform a preventive behavior, knowledge and perception play an important role and, correct knowledge and perception will encourage doing the practice or behavior. Either knowledge or perception alone will not lead to behavior. Together with other stimulating factors, individual will have the cues of intention to practice. Moreover, knowledge, perception and behavior have various forms of relationship both directly and indirectly.

2.3 Source of information on HIV/AIDS

Accessibility to HIV/AIDS related source of information from peers, mass media, training, internet, family, clinics and health professions has a positive effect on increasing knowledge, attitude and preventive behavior. These sources are now playing an important role in increasing awareness about HIV/AIDS. Therefore, youth should know where to get HIV related information and how accessible the information is.

In 2004, Family and Youth Survey was conducted by the Ministry of Health, the Department of Medical Research and Department of Population with the support from UNFPA. Regarding the sources of information on HIV/AIDS, electronic media are the most popular media (89%) for obtaining information about HIV/AIDS followed by friends and relatives (87%) and health workers (77%). Men were more

likely to mention printed media (newspaper-55%, magazine, journals, article, and pamphlets- 61%) than women (46% and 52% respectively). Moreover, 90% and 52% of male youth mentioned 'friends/relatives' and 'talks' as sources of knowledge compared to 85% and 41% of females.

A study done by AIDS Information Center also showed that those aged 12 – 24 years cited relatives and friends (34.4%) as the major source of information followed by radio (23.6%). Similarly those aged 25 – 35 years indicated relatives and friends as their main source of information (31.4%) and radio was mentioned by 23.9%. For those who were over 36 years cited friends/relatives and radios as the most popular source.

In terms of the effectiveness of source across age groups those aged 12 – 24 years were more likely to receive information from church and pastor (48.1%), their partner (46.6%), music dance and drama (41.9%), outreaches (37.9%) than any other age group. Those aged 25– 35 were likely to receive information from TV (54.9%), newspaper (53.1%), health units/workers (41.3%), radio (38.9%), relatives and friends (38.0%), VCT Clients (34.8%), Community Based Organizations (CBO) (39.6%), and Sign Posts (39.4%)[14].

In 2007, Wei Chen Tung and his colleague conducted a study in Taiwanese college students. It showed that the main source of information for HIV/AIDS was through mass media with (80% female vs. 73.1% male), followed by the Internet (66.3% female vs. 67.3% male). Newspapers and magazines were used by 47% of both women and men. More women, about fifty three percent cited schoolteachers as a source of information than male students[15].

2.4 Peer Education

Peer education is a popular concept that implies an approach, a communication channel, a methodology, a philosophy, and a strategy. It typically involves the use of members of a given group to bring about change among other members of the same group by attempting to modify a person's knowledge, attitudes, beliefs, or behaviors[16].

Peer education has been used in many areas of public health, including nutrition education; family planning, substance use, and violence prevention. Because of its acceptance and popularity, global efforts to further understand and improve the process and impact of peer education in the area of HIV/AIDS prevention, care, and support have also increased. Peer programs are being adopted for adolescent reproductive health and HIV/AIDS prevention because peer education program aer being considered as the specific socio-cultural environment and recognized that young people's perception of their friends' sexual behavior is an influential predictor of adolescent sexual behavior. There is mounting evidence that peer educators can be effective health promoters[17].

Peer education of youth on HIV/AIDS has been found to be an effective method to improve their knowledge and positive health behaviors. In addition, it shows significant results in changing youths' HIV/AIDS knowledge, risk behavior intentions and confidence to engage in safe sex[18].

In many countries over two thirds of youth (15–24 years of age) of both sexes, have had sexual intercourse. They accounted for a disproportionate share of the increase in reported cases of STIs and HIV worldwide. Youths are vulnerable through peer pressure to conform, and they often lack coping skills in the face of fear and trauma. Out-of-school youths are particularly vulnerable as they have little access to information and are often isolated. The younger elements of youths having the lowest incidence of HIV form a 'window of hope', and it is vital to reach them at an early stage. Gatekeepers and peer educators are now becoming the important source of information to communities and influential for behavior formation/modification[19].

In Myanmar, the Youth Development Program (YDP), jointly organized by the Myanmar Medical Association (MMA) and the United Nation Population Funds (UNFPA), was established in 2003. The YDP is the main leading youth development program in Myanmar where youth development approach is employed. The vision of the youth development program is to become the leading program for laying the foundation for development of the Myanmar youth physically, mentally and intellectually in 2015 in order to contribute to future National Development. The mission of the YDP is to establish, maintain and expand youth-friendly atmosphere

valued by youth where youth can promote their knowledge, build their capacity, enhance their skills and find their ways for career development.

The main objectives of Youth Development Program are to disseminate basic health knowledge among the youth and motivate them to adopt healthy behaviors, to equip the youth with leadership skills to enhance youth participation in youth program and other youth development activities, and to establish youth-friendly atmosphere for future development. Finally, they become able citizens who will contribute their effort in national development.

To achieve these objectives and goals, the program has undertaken many activities such as HIV and other awareness raising events, peer education, HIV Free Blood Pool, sports, youth library and edutainment activities etc. Among these activities, peer education also plays an important role and is being expanded to many catchment areas in Yangon.

A peer educator has to disseminate correct messages about HIV/AIDS to peers from respective townships in Yangon every month. The target group is youth who are between 15 and 24 years of age, including male and female. The activity is undertaken by 25 peer educators who have completed all the training courses from YDP and who have actively participated in the Youth Development Program activities.

2.5 HIV/AIDS preventive behavior

Since youth are vulnerable to HIV infection because of their engagement in new life experiences and risky behavior, they are at the centre of attention for seedling preventive behavior for the infection. Preventive behavior in this study includes abstinence, correct condom use; refrain from multiple sex partners and CSWs, avoidance of alcohol, tattooing and drug abuse.

2.5.1 Abstinence

Behavior change is a necessity for HIV prevention. USAID recommends the “ABC” model, which stands for abstinence (including delayed sexual initiation among youth), being faithful and correct and consistent condom use. This approach

can be adapted depending on a particular country context or target population. Abstinence and delaying sexual debut to reduce transmission of HIV are especially meant for younger teens, especially those aged 10 to 14. For older youth, especially those aged 15 to 24, a comprehensive approach is recommended by USAID. This approach include primary abstinence (delaying the age of sexual initiation) and secondary abstinence (abstinence after having experienced sexual initiation), mutual fidelity and avoidance of casual sexual partners, and correct and consistent condom use[20].

Teaching sexual abstinence to American teens is strongly and widely supported. Over ninety percent of parents, at a minimum, support teaching teens to abstain from sexual activity until they have at least finished high school. Teens, themselves are also in favour of abstinence education with over ninety percent agree that teens should be taught to abstain from sex until they have at least finished high school. As evidence by the social science data, teens who abstain from sex do substantially better on a wide range of outcomes. For instance, teens who abstain from sex are less likely to be depressed and to attempt suicide; to experience STDs; to have children out-of-wedlock; and to live in poverty and welfare dependence as adults. Moreover, teens who delay sexual activity are more likely to have stable and enduring marriages in their adult life.

Abstaining teens performed significantly better academically, compared to sexually active teens from identical socio-economic backgrounds. The linkage between academic achievement and teen abstinence can be explained in two ways. First, teens will be exposed to less emotional turmoil and fewer psychological distractions; enabling them to better focus on schoolwork. Second, abstinence and academic achievement are associated common underlying character traits. Teens who abstain are likely to express greater future orientation, greater impulse control, greater perseverance, greater resistance to peer pressure, and more respect for parental and societal values. These traits are likely to contribute to higher academic achievement[21].

2.5.2 Condom usage

The most certain way of avoiding STIs is not having sex altogether (abstinence). Another way is to limiting sex to one partner who also limits his or her sex in the same way (monogamy). Condoms are not 100% safe, but if used properly, will reduce the risk of sexually transmitted diseases, including AIDS. As the disease is fatal and has no cure, protecting oneself against the AIDS virus is of paramount importance. About two-thirds of the people with AIDS in the United States contracted the disease during sexual intercourse with an infected partner. Condom use could have prevented many of these infections according to expert opinion[(22)].

Condom should always be used by persons engaging in risky sexual behavior should always use a condom. The highest risk is associated with penetrative intercourse -- vaginal, anal, or oral -- with a person who has a sexually transmitted disease. If one has sex with an infected person, he is taking an enormous risk. If he knows his partner is infected, the best rule is to avoid intercourse (including oral sex). If he does decide to have sex with an infected partner, he should always make sure that a condom is used from start to finish and at every sexual encounter[(23)].

2.5.3 Drug abuse, alcohol and HIV/AIDS

Ever since the start of the pandemic, drug abuse and addiction have invariably been associated with HIV/AIDS. HIV transmission can occur by sharing needles and other injection paraphernalia. In fact, injecting drug use contributed to about one-fourth of AIDS cases in the United States. In addition, any drug and alcohol use can interfere with judgment leading to risky behavior and putting people at risk for HIV.

According to combined data from 2005 to 2009, 64 percent of those living with HIV/AIDS had used an illicit drug, but not intravenously. Among them only 19 percent had never used an illicit drug. One in four of those living with HIV in 2009 were found to have used alcohol or drugs at a level that warranted treatment. Drug abuse and addiction can also accelerate the progression of HIV and its consequences, especially in the brain. As proven by, animal studies have shown that stimulants can increase HIV viral replication, and in a human study, HIV caused greater neuronal injury and cognitive impairment in drug users than in nondrug users [(24)].

Alcohol impair one's judgment and one might forget to use a condom or not stick with a plan to protect oneself while having sex or one may not perceive the risk involved in a situation. Some people use alcohol and drugs to increase their sexual enjoyment thus exposing themselves to a very high risk. [25].

2.5.4 Skin piercing and tattoo practice

Sharing needles or syringes with someone who is HIV infected can transmit HIV infection. Laboratory studies show that infectious HIV can survive in used syringes for a month or more. That's why people who inject drugs should never reuse or share syringes, water, or drug preparation equipment. This includes needles or syringes used to inject illegal drugs such as heroin, as well as steroids. Other types of needles, such as those used for body piercing and tattoos, can also carry HIV[26].

2.6 Related research

2.6.1 Knowledge of youth on HIV/AIDS

Nowadays, HIV/AIDS epidemic is seriously threatening the health of the people all over the world with peaks infection at the 15-24 age groups. It is important to protect these age groups and knowledge is the basic to preventing HIV infection. It is impossible for youth to have correct attitude, skills and behaviors without proper knowledge. Youth should be well informed about HIV/AIDS, how it is transmitted from one another and how to prevent from HIV infection. If they lack basic knowledge about HIV/AIDS, they are at risk of HIV infection.

In 2004, Family and Youth Survey (FAYS) was conducted in Myanmar by the Department of Population with UNFPA's support, and the data on knowledge of HIV/AIDS was obtained by asking whether the youths had heard about HIV/AIDS. Regardless of sex, ever heard of HIV/AIDS was universal among youth (96% for males and 94% for females). Youths who lived in urban areas had higher knowledge than youth who lived in rural areas to some extent.

A study on public high schools in Rome, Italy in 2005 evaluated the effectiveness of the peer education compared to teacher-led curricula in AIDS prevention programs. Eighteen high schools were randomly assigned to one of two

prevention programs: one led by teachers and the other by peer leaders. Afterwards, changes in knowledge, prevention skills, risk perception, and attitudes total scale scores (post-test scores minus pre-test scores) were then compared between the two groups. The peer-led group showed about seven percent (95% C.I. 1.9 –11.5) improvement in knowledge, compared to the teacher-led group[27].

In 2006, Terry PE, *et al* made a study among Zimbabwean university students to examine knowledge, attitudes and practices with an objective to compare the SHAPE program participants and non participants. A more responsible sexual decision making was observed among programme participants as more non-SHAPE respondents (85%) than SHAPE members (79%) reported that they had ‘‘ever had sex,’’ a difference that is statistically significant ($p < 0.05$). In terms of attitudes toward sexuality and equal rights, SHAPE members and non-SHAPE respondents again differ significantly ($p < 0.001$) in their reporting of who normally initiates condom use with more SHAPE members (57%) than non-SHAPE respondents (47%) indicate the proper initiation of the male partner. Knowledge and behavior in sexual decision-making of SHAPE members and non-SHAPE respondents also significantly differ. Many more SHAPE members (86%) had seen the female condoms than non-SHAPE respondents (69%)($p < 0.0001$). Knowledge of only one HIV prevention risk factor was statistically different between groups with SHAPE members more likely (85%) to name abstinence as a prevention practice than non-SHAPE respondents (76%) [28].

A few completed surveys on HIV knowledge in Taiwan indicated that 37% of male college students did not know HIV transmission could be prevented by the use of condoms while 58% were unaware that HIV could be spread through infected semen. It is noteworthy to find that approximately 25% of college students indicated that HIV could be transmitted through mosquito bites, swimming pools, and the sharing of cigarettes. These data reflect low levels of knowledge about the effectiveness of condoms and misconceptions about the transmission of HIV might put Taiwanese college students at increased risk for HIV infection. The efficacy of current HIV education programs in Taiwan is hampered by these misconceptions and inadequate knowledge[15].

In 2009, M. Mizanur Rahman MK and his colleague reported that more than one tenth (13.9%) of the respondents were unaware of the mode of transmission of AIDS. Half of the respondents reportedly mentioned that AIDS might be transmitted through sexual intercourse by sexual partners who habitually have multiple sexual partners followed by no protective measure taken during sexual intercourse in case of sex with risky partners (38.9%), sexual intercourse with infected persons (36.9%), through infected persons (30.5%) and through infected blood (14.3%). About one fifth (16.8%) did not know about the preventive measure against AIDS. But, two thirds (65.3%) of them mentioned not to have sexual intercourse with multiple sexual partners (65.3%), not to have sexual intercourse with risky persons (33.2%), screening of blood before transfusion (19.6%), avoid used syringe (13.8%) and one fourth (25.5%) mentioned hygienic use of clothes, toilets, soaps etc[29].

2.6.2 Perception of youth on HIV/AIDS

Between January and December 2003, AI Omoigberale PA, *et al* carried out a cross sectional study of knowledge and attitude of youth on HIV/AIDS at the University of Benin Teaching Hospital, Benin City, Nigeria. Only 36210 (38%) believe HIV/AIDS is real and a killer disease frightened by it and were already changing their sexual behaviors; 1900 youths (20%) believed it was a western propaganda to enslave the developing world. Three thousand nine hundred and ninety respondents (42%) would agree to routine HIV screening while 5510 (58%) would not. The reasons cited for rejecting routine HIV screening included psychological trauma, not necessarily high cost of and lack of anti-retroviral drugs, infringement on fundamental human rights, fear of living with positive screening, stigmatization and victimization at place of work if positive[30].

According to research and program on youth of Indonesia done by Situmorang A in 2003, adolescents were found to have limited knowledge on these contagious diseases. Despite the awareness of the possibility of getting STDs from having sex with prostitutes, some young men, especially those who worked on the street, did not feel a need to use a condom. They falsely believed that STDs and AIDS could be prevented by maintaining their physical stamina (eating nutritious food) or taking antibiotics before having sex with a prostitute. When infected with a STD, they

prefered to resort to self medication. Some did not feel the need to go to a medical doctor because they believed they could cure the disease themselves[31].

Results from the focused group discussion of South-African street youths which was done by Swart-Kruger, *et al* in 1997, showed that no boy had heard of HIV (or adequately understood the concepts involved in *infection),* nor was any boy able to specify that the media for transmission were sperm, vaginal fluids and blood. Consequently, AIDS was generally perceived as a moral issue, "something you get", fairly mysteriously, from "bad" behavior with "bad" people. Secondly, they thought that AIDS was inappropriately associated with appearance. For example, 68% of the samples respondents were certain that one could not get AIDS from a person who looked healthy. A third of the boys (35%) claimed that one could tell presence or absence of HIV from observation. And, a large number of misunderstandings were expressed such as air, saliva and skin were media for transmission[32].

In 2011, the findings of C.L. Johnston BDLM and his colleagues showed that the majority of respondents (80.2%) considered themselves to be at lower risk for acquiring HIV compared with their peers, while 15.2% through they carried the same risk, and only 4.6% perceived themselves to be at higher risk[33].

Mohammad Hossein Baghianimoghaddam aHF, *et al* conducted a cross-sectional study among 180 female students from three high schools in Yazd, Iran in 2009. Results showed that the mean score of perceived susceptibility was 21.19 (out of 32) and it was 12.47 (out of 24) for perceived severity. The mean scores of perceived benefits and barriers were 9.05 and 9.45 (out of 12 and 16, respectively). The respondents acquired 46.61% of total knowledge score, 66.21% of perceived susceptibility, 51.95% of perceived severity, 75.41% of perceived benefits and 59.06% of perceived barriers. A positive association was found between knowledge and perceived susceptibility. Therefore, the result indicates that low level of perceived susceptibility to and severity of HIV/AIDS among high school female students may favor risky behavior[34].

2.6.3 HIV/AIDS preventive behavior among youths

In 2004, the Department of Population conducted a Family and Youth Survey which was also supported by UNFPA. In the survey, male youth who had ever

had sexual intercourse were asked about the use of anything to prevent HIV/AIDS when they had the last sexual intercourse. Twenty six percent of the older youth and thirty percent of younger youth reported using something to prevent HIV/AIDS. Regarding urban and rural differential, a greater proportion of urban males used something to prevent HIV/AIDS than their rural counterparts. According to the marital status, one third of the never married and one third of the divorced use something for prevention of HIV. It was found that the more educated, the more they take prevention. Only 7.7% of illiterate, 15.5% of the primary school level, 24.2% of middle school level, 43.4% of high school level and 55.7% of university level used something to prevent HIV. In general, the respondents, who were never married and divorced, living in urban areas and better educated were more likely to use something to prevent HIV.

The survey also sought information from male youth who have ever had sex outside wedlock whether they use condom. Among the sample, only 280 male youth ever had sex outside wedlock and is only four percent. Among them, 8 out of 10 respondents use condom. The older male respondents are more likely to use condom than the younger male youth (86% and 73% respectively). The proportion is higher for the never married youth than for the married youth (84% against 79%).

One study in Taiwan students showed that all male (n=52) and 96.3%of female participants (n=77) identified themselves as heterosexual. Only 39 participants (29.5%) in the sample of 132 reported ever having sex. Of those who reported never engaging in sexual activities (n=93), 73.1% (n=68) were female and 26.9% (n=25) were male. Among those who had ever had sex, 33.3% of females and 14.8% of males had had only one sexual partner; the remainder had had two or more partners. Condom use during each sexual encounter was reported by 8.3% of women and 18.5%of men. A majority of participants used condoms sometimes; 58.3% of women and 55.6% of men, respectively[15].

In 2006, Pimsurang Taechaboonsermsak and her colleagues conducted a cross sectional study on HIV/AIDS preventive behavior of high school student in Dongda District, Hanoi, Vietnam. A total 398 of students were selected using a systemic random sampling technique. Data obtained through a self - administered questionnaire. With regard to preventive behavior, 50.8 percent of the students had

practised inappropriate HIV/AIDS preventive behavior. Only 4 cases of 398 high school students had sex experiences and two of them did not use condom when they were having sex. A statistically significant association was found between age, grades and HIV/AIDS preventive behavior (p-value = 0.01, p value = 0.03)[35]

CHAPTER III
MATERIALS AND METHODS

3.1 Research design

This study was a cross-sectional study and the purpose of this study was to assess the HIV/AIDS preventive behaviors among youths in the urban setting of Yangon.

3.2 Site of the study

This study was carried out in the three urban areas in which peer education activities of the Myanmar Medical Association were conducted. Those three urban areas were Mingalar Taungnyut, Kyauktada and Kamaryut. Those areas were selected because the number of youth population in that area was larger than the other places in Yangon.

3.3 Study population

The reference population was all the youths in Yangon. The target populations were all the youths (13-24 completed years), living in that three urban areas. According to the information obtained from the Myanmar Medical Association, the total young people living in those areas were round about 60,000. (19,851 in Mingalar Taungnyut, 21,638 in Kyauktada and 18,511 in Kamaryut respectively). Those areas were selected because youths in these areas had low level of comprehensive HIV/AIDS knowledge – 60%, 56% and 49% respectively.

3.4 Sample size and sampling procedure

3.4.1 Sample size estimation

Sample size was calculated to get the minimum requirement for this study by using the following formula;

$$n = \frac{z^2_{\alpha/2} P(1-P)}{d^2}$$

n = estimated sample size

$Z_{\alpha/2}$ = value from normal distribution associated with 5% significance level=1.96

d =limited error for the study = 6%

P = population proportion of sexual experienced youths

The population proportion was estimated from the proportion of youth who had sexual experienced in Laos - 30.9% (Ratsamy Vongkhamsao. Adolescent Sexual Risk Behavior in Vientiane Capital City. Lao P.D.R. Bangkok: Mahidol University,2010). Limited error for the study set at 6% and level of significance was 5%.

$$n = \frac{1.96^2 \text{x} 0.309(1-0.309)x^2}{0.06^2} = 227 \sim 250$$

3.4.2 Sampling procedure

The estimated sample size was 250 and the accidental sampling method was used because researcher did not have the list of the members in each household and youths were very difficult to access in a certain area. The researcher went to youth gathering places such as football fields, teashops, internet café, snack bars and private tuitions which are situated in the target areas. When the researcher reached the youth gathering places, collected the data from the youths who were willing to participate in this study. After finishing data collection in one community, the researcher went to nearby target area and continued data collection. Then, the youths who had previously participated one time in this study were not letting to participate again. Finally, the researcher collected about 100 samples from each study areas and

got 312 of total sample which was more than the estimated sample. To avoid the errors or incomplete data, the researcher collected more samples than previously estimated sample size.

3.4.3 Inclusion criteria

- Youths (13-24 years of age) who were residing in the selected township areas.
- Both males and females
- Youths who were under 18 year and getting informed consent from their parents
- Young people including school students, out of school youths, college and university students and young people in the workforce.
- Youths who were willing to participate in the study

3.4.4 Exclusion criteria

- Youths who were not willing to participate in the study
- Those who were seriously ill or mentally ill.
- Youths who could not read and write
- Youths who moved out from the area

3.5 Research instrument

The instrument for this research was a structured questionnaire and it was first prepared in English language and after that, translated into Myanmar language. The questionnaire was divided into four parts:

- Part A: Knowledge related to HIV/AIDS
- Part B: Perception on HIV/AIDS
- Part C: Source of information
- Part D: General characteristics and HIV/AIDS preventive behavior

Part A: Knowledge related to HIV/AIDS

To measure the knowledge related to HIV/AIDS, the respondents were asked 11 questions, from which each "correct" answer were given '1' score and "incorrect" and "not sure/don't know" answer were given '0' score. The possible scores ranged from 0 to 11. The criteria of knowledge level were made based on percentage of knowledge according to Benjamin Bloom's Taxonomy.

- High level of knowledge: ≥80% of total scores (9-11 score)
- Moderate or fair level of knowledge: 60-79% of total score (6 - 8 score)
- Poor level of knowledge: <60% of total score (0-5 score)

Part B: Perception on HIV/AIDS

Perception was measured by using Likert type scale. There were 18 questions for perception. Four questions for susceptibility, six questions for severity, four questions for barriers and four questions for benefits were included in the perception section. The answers for perception statements were structured into three categories such as: agree, uncertain and disagree. Positive questions were given 3, 2 and 1 scores and negative questions were given 1, 2 and 3 scores respectively. Concerning the perception susceptibility, the total score was "12" as four questions were included in that section and then, three levels for perceived susceptibility was divided based on its total scoring and according to Benjamin Bloom's theory.

- More than 80% of total score in perceived susceptibility was regarded as "High perception".
- For those who could answer 60-79% of total score were assumed as "Moderate perception" and
- Those who answered correctly <60% of total score were assumed as "Low perception".

The same principle was applied in perceived severity, perceived benefits and perceived barrier.

Part C: Source of information on HIV/AIDS

This section composed of 10 items including radio, television, video, journals, magazine, newspaper, health professional, peer education program, friends, health talks and family members. Multiple responses were allowed in that part. The selected items were described in the number and percentage. Then, regarding the peer education program, the duration of receiving the peer education session such as received peer education within one month, within 3 to 6 months, within 6 to 12 months and more than one year were included. And, information relating to the recognition to the information given by a peer educator was also added by closed question. All the results would be displayed by number and percent.

Part D: General characteristics and HIV/AIDS preventive behavior

For the general characteristics of the respondents closed ended questions were used such as age, sex, ethnic, religion, marital status, educational level and occupation. For the ethnic group, it was an opened question and regarding the religion, four main religious groups such as Buddhists, Christian, Hindu, Islam and others were included. Under the educational level, the youths could select one answer from 6 questions such as “Can read and write”, “Primary school level”, “Middle school level”, “High school level”, “University level” and others.

“Student”, “Unemployed”, “Staff”, “Odd job holder”, “Vendor” and “others” were included under the occupational setting. The last question in general characteristics was marital status and four criteria such as “Single”, “Married”, “Divorced” and “Others” could be answered in that question.

For the preventive behaviors, there were 6 questions under that section. Scores “1”, “2” and “3” were set accordingly to the respondents who were engaging in each risky behavior. And “0” score was given for those who could practice the proper preventive behavior.

- Question regarding the tattooing, whoever engaged in tattooing was got score “2” and avoided in tattooing habits was got score “0”.
- Concerning of visiting to CSWs, youths who didn’t go to CSWs were got score “0”. For those who visited to CSWs had two criteria, one was “Always used condom” and another was “Did not

use condom". Youths who had used condom were got score "1" and who had not used condom were got score "3".

- Relating to addictive substance, youths who had used these drugs were given score "2" and those who hadn't used were given score "0".
- For the needle sharing behavior, youths who had shared needles with the others were given score "2" and who avoided that risky behavior were given score "0".

Regarding the sexual behavior the researcher divided into two groups; "Having sex with regular partner" and "Having sex with irregular partner".

- Youths who hadn't regular sex partner were given sore "0". However, youths who had regular sex partner had to choose two criteria; "Always used condom" and "Did not use condom". For those who had used condom were got score "1" and those who had not used condom were got score "3".
- Then, "0" scoring was given to youths who had not irregular sex partners. And youths who had irregular partners were given score "1" and "3" similarly as above, depending on the usage of condom when they had sex with their partners.

After that the scores were classified into two levels by assigning those who avoid all risky behaviors were assumed to possess good preventive behavior and those who failing to avoid risky behaviors were assumed to have poor preventive behavior. Therefore, the score of youths who had better preventive behavior would be "0" and those who had poor preventive behavior would be ranged from "1" to "18".

3.6 Quality of instrument

Questionnaire was developed after consultation with the experienced persons; major adviser and co-adviser. Then, it also had clear operational definition for all the variables and categorized into groups which ensure the validity of the study.

The final questionnaire was translated into Myanmar language with the same format and meaning.

3.7 Data collection

Data was collected by self administered questionnaire. Before starting, the researcher explained about the questionnaire and purpose of the study. Then, information sheet and informed consent were distributed to each of the respondents. Let them read the sheet until they clearly understood about the study. After that, asked them to sign in the informed consent form if they were willing to participate in the study. During answering the questionnaire, they were free to ask any questions that were not clear. All the answers were kept confidential and stored in the locked cabinet. Codes were used to identify the data collection form. No one could access to the form apart from the researcher. After all the collected data were entered into the data base, all the answer sheets were destroyed.

Duration of data collection was from 22nd February to 14th March 2012.

3.8 Data analysis

The data were entered and analyzed by using Epi data 3.1 and SPSS that help on controlling error during data entry and analysis. Data analysis was performed in two ways such as descriptive and analytical analysis.

- In descriptive analysis frequency, mean, percentage, standard deviation and percentage were used.
- In analytical analysis, chi square test was used to describe the association between independent variable and dependent variable. Then, the independent sample t-test was used to compare the mean knowledge level of peer education recipients and non recipients. The level of significance was set to 0.05.

3.9 Ethical consideration

Before data collection, ethical review committee for Human Research of Mahidol Universtiy had ethically approved this study with certificate of approval number (MUPH 2012-027) on 6th February 2012. During data collection, researcher explained the objective of the study and obtained consent from the respondents. For those youths who were under the age of 18, we asked the informed consent not only from them but also from their guardians. The participants were noticed to ask question at any time if they didn't understand or were confused about the questions. Respondents' name were not mentioned in the questionnaire. In case of any inconvenience during answering the questions, respondents could discontinue the process. All the answers of the respondents were kept confidential and coding method was used to identify the data collection form. All the questions were kept at the proper place. After finishing the data entry, all the data were destroyed and, in publishing the report, any information that identifies the respondents would not be included.

CHAPTER IV
RESULTS

This was a cross sectional study to assess the HIV/AIDS preventive behavior of youths in urban setting of Yangon. Participants of the study population were youths who were age between 13-24 years. They were recruited from three urban setting of Yangon by accidental sampling method. The self administered questionnaire was used to collect the data. The results of this study were presented by using descriptive statistics (frequency, percent, mean, standard deviation) and inferential statistics (chi-square and independent sample t test). This chapter included the results of this study and it was presented by dividing into 8 parts.

4.1 General characteristics of youth
4.2 Knowledge on HIV/AIDS
4.3 Perception on HIV/AIDS
4.4 Source of information for HIV/AIDS
4.5 Peer education
4.6 Preventive behavior to HIV/AIDS
4.7 Factors associated to preventive behavior
4.8 Comparison of knowledge between youths who had attended peer education program and those who hadn't attended

4.1 General characteristics of youth

Table (1) showed the characteristics of the respondents including age, sex, ethnicity, religion, educational level, occupation and marital status. A total of 312 youth were collected who were aged between 13 to 24 years. Then, youths were divided into two groups: adolescents (13-19 years) and young adults (20-24 years). The adolescent group constituted 44.9% of respondents and the remaining 55.1 % belonged to the young adult group. Sex ratio of respondents was almost the same with

49.7% male and 50.3% female. The study involved 7 ethnic groups. Most of them are Myanmar (91.7%) and the remaining are 1.6% Chin, 3.2% Karin, 1.9% Mon, 1.6% Rakhine, 0.6% Shan and 0.3% Wa. As for religion, majority (90.1%) of youths in the study are Buddhist, followed by 3.8% Christian, 1.3% Hindu and 4.8%Islam.

Regarding the educational level, 62.5% had attained the university level with 31.7% and 3.5% reaching the high school and middle school level respectively. Only 1.6% and 0.6% of youths reported as able to read and write and to be of primary school level.

About half of the youths were students (52.2%), 34.9% were working as private company staff, 4.2% and 4.8% of youths were daily workers and vendors, and only 3.8% are unemployed. And the marital status showed that 94.6% are single and 5.4% are married.

Table 4.1: General characteristics of 312 youths

General characteristics	Number	Percent
Age group (years)		
13-19	140	44.9
20-24	172	55.1
Sex		
Male	155	49.7
Female	15	50.3
Ethnicity		
Myanmar	286	91.7
Karin	7	2.2
Mon	6	1.9
Chin	5	1.6
Rakhine	5	1.6
Shan	2	0.6
Wa	1	0.3

General characteristics	Number	Percent
Religion		
Buddhist	281	90.1
Islam	15	4.8
Christian	12	3.8
Hindu	4	1.3
Educational level		
Able to read and write	5	1.6
Primary school level	2	0.6
Middle school level	11	3.5
High school level	99	31.7
University level	195	62.5
Occupation		
Student	163	52.2
Staff	109	34.9
Vendor	15	4.8
Odd job holder	13	4.2
Unemployed	12	3.8
Marital status		
Single	295	94.6
Married	17	5.4

4.2 Knowledge on HIV/AIDS

Knowledge essentially is the recall recognition of specific and universal elements in a subject area. In the context of HIV/AIDS, having knowledge implies ability to recall facts concerning causes, transmission, and prevention and testing of HIV/AIDS. Table 2 provides the information on the correct knowledge of 312 respondents on HIV/AIDS. Most of the questions were answered correctly as the percentage of correct answer which is below 80% was found only in three questions.

According to the study results, almost all of the respondents (98.1%) knew that sharing needles poses a risk of getting HIV. Comparatively, only 91% of them could answer correctly that tattooing can transmit HIV although they had knowledge related to needle sharing. 94.2% of respondents understood that HIV cannot be transmitted by having meal together with an infected person. There were some knowledge questions regarding to HIV vaccine and HIV test which were answered correctly by the lowest percentage in the study. For the knowledge related to the HIV vaccine and testing, only 60.9% and 72.8% of youths knew that there is no vaccine to prevent HIV and testing of HIV can't be done within a few days after the risky behavior.

Table 4.2: Number and percent of correct answer to each item of knowledge on HIV/AIDS by 312 youths

Knowledge on HIV/AIDS	Answer correctly	
	Number	Percent
- HIV can be transmitted by sharing needles with HIV infected patient.	306	98.1
- HIV cannot be transmitted by having meal with HIV infected patient.	294	94.2
- Using condom properly can prevent HIV by sexual route.	285	91.3
- Tattooing can transmit HIV.	284	91.0
- HIV/AIDS cannot be cured.	275	88.1
- Sharing towels is not included in the way of transmission of HIV.	270	86.5
- We can prevent HIV by abstinence from sex properly.	267	85.6
- Mosquitoes bite cannot get HIV.	253	81.1
- A nice looking person cannot be assumed as free from HIV.	247	79.2
- Testing for HIV cannot be possible within a few days after having sex with CSWs.	227	72.8
- There is no vaccine to prevent HIV	190	60.9

The results for the overall knowledge on HIV/AIDS showed that only 7.4% of the respondents had poor level of knowledge and the remaining moderate and high level of knowledge was 15.7% and 76.9% respectively.

Table 4.3: Overall level of knowledge on HIV/AIDS by 312 youths

Level of knowledge on HIV/AIDS	Number	Percent
Poor	23	7.4
Moderate	49	15.7
High	240	76.9

4.3 Perception on HIV/AIDS

There are 18 items of perception, out of which 11 were positive and the rest were negative statements. The results of 312 youths' perception were shown by dividing into 4 groups such as perceived susceptibility, perceived severity, perceived barriers and perceived benefits.

4.3.1 Perceived susceptibility

There were 4 questions in the perceived susceptibility. Three of the questions were negative statements and only one question was a positive statement. Majority of the youths (79.5%) agreed on the positive statement, having multiple sex partners could get HIV infection. 66.3% of the youths also knew that tattooing could transmit HIV, so they disagreed in the negative statement regarding the tattooing. Only 58.3% perceived that having sex with nice looking person without using condom could transmit HIV. About half of the youths (48.7%) believed that drinking alcohol before having sex with CSWs is risky to get HIV and the remaining half uncertain or agreed on that negative statement.

Table 4.4: Number and percent to each item of perceived susceptibility on HIV/AIDS by 312 youths

Statements on perception	Agree		Uncertain		Disagree	
	Number	Percent	Number	Percent	Number	Percent
- Having multiple partners are risky to HIV/AIDS	248	79.5	52	16.7	12	3.8
- Tattooing cannot transmit HIV infection*	37	11.9	68	21.8	207	66.3
- Sex with a nice looking person without using condom cannot get HIV*	22	7.1	108	34.6	182	58.3
- Drinking alcohol before having sex with CSWs doesn't increase the risk of getting HIV*	59	18.9	101	32.4	152	48.7

*Negative statements

4.3.2 Perceived severity

Table 4.5 showed that more than 70% of the youths could answer the questions relating to the severity of HIV/AIDS very well. In question related to opportunistic infection, 97.8% of youths accepted its severity and then, 87.8% agreed that HIV can cause serious psychological and social problems in the family. Only 77.2% and 72.4% of youths believed that HIV is a fatal disease and a person with HIV can face discrimination from the environment.

Table 4.5: Number and percent to each item of perceived severity on HIV/AIDS by 312 youths

Statements on perception	Agree		Uncertain		Disagree	
	Number	Percent	Number	Percent	Number	Percent
- HIV cause many infections to enter the body and finally, lead to death due to these infections	305	97.8	4	1.3	3	1
- Getting HIV infection can cause psychological and social problems in the family	274	87.8	21	6.7	17	5.4
- Getting HIV will shorter the life expectancy of young people	251	80.4	35	11.2	26	8.3
- HIV is a fatal disease.	241	77.2	46	14.7	25	8
- Once a person gets HIV, he will face much discrimination from the environment.	226	72.4	58	18.6	28	9

4.3.3 Perceived barrier

All of the questions in the perceived barrier were negative statements. Majority (70.5%) of youths disagreed that buying condom before having sex is a shameful thing. Then, 57.1% also disagreed with drinking of alcohol before having sex with CSWs. Regarding the tattooing, 45.2% of youths believed that they could overcome that barrier and 25.6% perceived that it is a hard barrier for them. In the statement of using condoms and decrease sexual pleasure, 27.6% disagreed with decrease in sexual pleasure but 26% believed that using condom can decrease the sexual pleasure.

Table 4.6: Number and percent to each item of perceived barrier on HIV/AIDS preventive behavior by 312 youths

Statements on perception	Agree		Uncertain		Disagree	
	Number	Percent	Number	Percent	Number	Percent
- It is a shame to buy and carry condom before having sex*	60	19.2	32	10.3	220	70.5
- It is just social to drink alcohol before having sex with CSWs*	40	12.8	94	30.1	178	57.1
- It is hard to avoid having a tattoo*	80	25.6	91	29.2	141	45.2
- Using condom decrease sexual pleasure*	81	26	145	46.5	86	27.6

*Negative statements

4.3.4 Perceived benefits

Majority of youths could answer very well in the questions relating to benefits of being faithful to one partner; abstain from sex and using condom during sexual intercourse by 97.1%, 84.6% and 84.3% respectively. However, only 69.6% agreed with benefits of avoid tattooing behavior.

Table 4.7: Number and percent to each item of perceived benefit on HIV/AIDS preventive behavior by 312 youths

Statements on perception	Agree		Uncertain		Disagree	
	Number	Percent	Number	Percent	Number	Percent
· Being faithful to one partner can prevent HIV and create a happy family	303	97.1	9	2.9	0	0
· Abstinence from sex can prevent HIV by sexual route.	264	84.6	19	6.1	29	9.3

Statements on perception	Agree		Uncertain		Disagree	
	Number	Percent	Number	Percent	Number	Percent
· Using condom properly can prevent HIV	263	84.3	40	12.8	9	2.9
· Avoid tattooing can prevent HIV	217	69.6	52	16.7	43	13.8

4.3.5 Level of perception of youths on HIV/AIDS

In overall level of perception among 312 respondents, it was found that perceived benefits stood as the highest one 89.1%. Perceived severity followed as the second with 77.2%. And perceived susceptibility and perceived barrier were 67.9% and 46.2%. And high level of perceived barrier in this study meant that youths had high potential to overcome the barriers for practicing the preventive behavior to HIV/AIDS. In the low level of perception, perceived susceptibility was found with 17.6%, perceived severity with 7.4% and perceived benefits with 6.1% respectively. Regarding the moderate level of perception, two third of the perception were more than 10% and only perceived benefits was 4.8%.

Table 4.8: Level of perception on HIV/AIDS among 312 youths

	Level of perception					
	Low		Moderate		High	
	Number	Percent	Number	Percent	Number	Percent
Perceived susceptibility	55	17.6	45	14.4	212	67.9
Perceived severity	23	7.4	48	15.4	241	77.2
Perceived barrier	99	31.7	69	22.1	144	46.2
Perceived benefits	19	6.1	15	4.8	278	89.1

4.4 Source of information for HIV/AIDS

In the sources of information, youths could answer more than one answer. Among the sources, health talks were the highest source from which participants received HIV/AIDS related information. The second highest was the information obtained from health professionals 55.8%,and television , journals and magazine stood at third place with 58.3%. The lowest rankings in source of information were radio and family members with 21.5% and 20.8% respectively.

Table 4.9: Source of information to HIV/AIDS by 312 youths

Source of information*	Received information	
	Number	Percent
Health talks	206	66.0
Television	182	58.3
Journals/ Magazine	182	58.3
Health professional	174	55.8
Peer education program	147	47.1
Video	114	36.5
Friends	94	30.1
Newspaper	78	25.0
Radio	67	21.5
Family members Family:	65	20.8

*Multiple responses

4.5 Peer Education

In the study, 51.3% of youths were found to have received peer education session while 48.7% of youths have not. Within the group who received peer education, 26.3% received peer education session more than one year ago followed by 11.5% who received within one month, 9.3% within last 6 to 12 months and 4.2%

within last 3 to 6 months. Among those who received peer education, 99.4% of respondents were satisfied with their peer education session and 0.6% was not.

Table 4.10: Number and percentage of 312 youths who received peer education program

	Number	Percent
Ever received a peer education session		
No	152	48.7
Yes	160	51.3
Within last month	36	11.5
Last 3 to 6 months	13	4.2
Last 6 to 12 months	29	9.3
More than 1 year	82	26.3
*Satisfied to a peer educator**	159	99.4

* Among those ever participated in the peer education program

4.6 Preventive behavior to HIV/AIDS

Preventive behavior in this study was determined by avoiding the risky behaviors such as tattooing, having sex with CSWs, sharing needles, using addictive substances, having the regular and irregular partners and usage of condoms whenever they have sex.

Poorest preventive behavior in this study was having sex with CSWs within 6 months which was 5.8%. Among the youths who had ever visited for CSWs, 4.2% always used condom and 1.6% sometimes or never used condom. The reasons for using condom with CSWs were to protect HIV and not using condom is due to alcohol and decreased sexual pleasure.

For tattooing, 4.8% of youths had received tattooing. In addition, 2.9% and 1.6% respectively had tried addictive substances and shared needles with the others.

With regard to having regular sexual partner, 6.1% had their regular partners. Among those having regular partners, 4.2% of youths never used condom, 1.3% used sometimes and only 0.6% use always. Within condom using group, the

main reason for using condom was to prevent pregnancy and among non users, they didn't want to use because using condom decreased sexual pleasure and their regular partner was their wives.

In addition, 2.2% of youths had irregular partners. 1% never used condom, another 1% always used condom and 0.3% used condom sometimes. Main reason for using condom was to protect HIV and not using condom was due to decreased sexual pleasure.

Table 4.11: Preventive behavior to HIV/AIDS of 312 youths

	Number	Percent
- Tattooing		
No	297	95.2
Yes	15	4.8
- Ever gone for CSWs in the last 6 months		
No	294	94.2
Yes	18	5.8
Always use condom with CSWs	13	4.1
Not always use condom with CSWs	5	1.7
- Ever tried any addictive substance		
No	303	97.1
Yes	9	2.9
- Ever shared needles		
No	307	98.4
Yes	5	1.6
- Having regular partner		
No	293	93.9
Yes	19	6.1
Yes always use condom with regular partner	2	0.6
Yes sometime use condom with regular partner	4	1.3
No never use condom with regular partner	13	4.2

	Number	Percent
- Have irregular partners		
No	305	97.8
Yes	7	2.2
Yes always use condom with irregular partner	3	1.0
Yes sometimes use condom with irregular partner	1	0.3
No never use condom with irregular partner	3	1.0

An overall preventive behavior among youths was calculated by combining the scoring of each risky behavior and it was divided into two groups; less risky and risky. Percentage of better preventive behavior of youth in this study was 84% and poor preventive behavior was about 16%.

Table 4.12: Level of HIV/AIDS preventive behavior by 312 youths

HIV/AIDS preventive behavior	Number	Percent
Better preventive behavior	262	84.0
Poor preventive behavior	50	16.0

4.7 Factors related to HIV/AIDS preventive behavior

In this part, we analyzed the association between the general characteristics, the knowledge and perception of youths on HIV/AIDS, sources of information to HIV/AIDS and the preventive behavior of youths to HIV/AIDS by using chi-square analysis.

4.7.1 General characteristics and preventive behavior

The association between preventive behavior and general characteristics of youth including age group, sex, ethnic, religion, educational level, occupation and marital status were analyzed by using Chi-square test. From the analysis, age group, sex, religion, educational and occupation showed significance association with the preventive behavior of youths.

Youths were grouped into two groups, 13 to 19 year (adolescent) and 20 to 24 year (young adult). In the study, it was found that young adults had a poorer preventive behavior than adolescent with p value of 0.003. Those young adults had poor preventive behavior of 21.5% while adolescent had only 9.3%. Therefore, it was found that the higher the age, the poorer the preventive behavior they had.

Sex also showed association with the preventive behavior to HIV/AIDS (p-value<0.001). Although both male and female had poor preventive behavior, male engaged more in poor preventive behavior (43%) than female (7%). Then, female were found to have better preventive behavior (95.5%) than male (72.3%).

For the ethnicity of participated youths, we grouped into two groups such as Myanmar and other ethnic groups as majority of the youths in this study were Myanmar. When running the chi-square analysis, ethnic and marital status had shown no association with preventive behavior to HIV/AIDS. In religion, we categorized into two groups which were Buddhist and the others, including Christian, Hindu and Islam. Significant association was found between religion and preventive behavior of youths. Youths whose religion was Buddhist had better preventive behavior than the other groups.

For the education, we also regrouped the levels of education into below university level and university level. It was also found that youths with higher

education level had better preventive behavior than lower education levels and significant value was p value of 0.021.

Regarding to occupation, two groups was also reorganized into unemployed and employed. At the significant level with p value of less than 0.001, unemployed youths had better preventive behavior than employed group.

Table 4.13: General characteristics and preventive behaviors

General characteristic	Total samples	Level of preventive behavior				p-value
		Better		Poor		
		Number	Percent	Number	Percent	
Total	312	262	84	50	16	
Age group (years)						0.003
13-19	140	127	90.7	13	9.3	
20-24	172	135	78.5	37	21.5	
Sex						<0.001
Male	155	112	72.3	43	27.7	
Female	157	150	95.5	7	4.5	
Ethnic						0.926
Myanmar	286	240	83.9	46	16.1	
Others	26	22	84.6	4	15.4	
Religion						0.038
Buddhist	281	240	85.4	41	14.6	
Others	31	22	71	9	29	
Educational level						0.021
Below university	117	91	77.8	26	22.2	
University level	195	171	87.7	24	12.3	

General characteristic	Total samples	Level of preventive behavior				p-value
		Better		Poor		
		Number	Percent	Number	Percent	
Occupation						<0.001
Unemployed	175	160	91.4	15	8.6	
Employed	137	102	74.5	35	25.5	
Marital status						NA
Single	295	259	87.8	36	12.2	
Married	17	3	17.6	14	82.4	

*NA means not applicable for Chi-square test.

4.7.2 Knowledge on HIV/AIDS and preventive behavior

Analysis of knowledge of youths on HIV/AIDS and their preventive behavior, the significance association revealed with p-value of 0.018. Youths with poor knowledge level on HIV/AIDS had only 65.2% of better preventive behavior, those with medium levels of knowledge had 79.6% of better preventive behavior and those who with high level of knowledge had 86.7% of better preventive behavior. Therefore, it could be stated that higher level of knowledge may reduce the risky behavior to HIV/AIDS and lead to be better in preventive behavior to HIV/AIDS.

Table 4.14: Knowledge on HIV/AIDS and preventive behaviors

Knowledge level	Total samples	Level of preventive behavior				p-value
		Better		Poor		
		Number	Percent	Number	Percent	
						.018
Poor	23	15	65.2	8	34.8	
Moderate	49	39	79.6	10	20.4	
High	240	208	86.7	32	13.3	

4.7.3 Perception on HIV/AIDS and preventive behavior

When considering the perception on HIV/AIDS, the association between perceived susceptibility, perceived severity, perceived barriers, perceived benefits and HIV/AIDS preventive behavior were analyzed and no significant associations were found between these variables. However, youths who had high level of perception on susceptibility, severity, barrier and benefits were possessing better preventive behavior in which their level of preventive behavior was more than 80% in all four perceptions.

Table 4.15: Perception on HIV/AIDS and preventive behaviors

Level of perceptions	Total samples	Level of preventive behavior				p-value
		Better		Poor		
		Number	Percent	Number	Percent	
Perceived susceptibility						0.247
Poor	55	44	80.0	11	20.0	
Moderate	45	35	77.8	10	22.2	
High	212	183	86.3	29	13.7	
Perceived severity						0.416
Poor	23	21	91.3	2	8.7	
Moderate	48	38	79.2	10	20.8	
High	241	203	84.2	38	15.8	
Perceived barrier						0.384
Poor	99	87	87.9	12	12.1	
Moderate	69	58	84.1	11	15.9	
High	144	117	81.3	27	18.8	
Perceived benefits						NA
Poor	19	18	94.7	1	5.3	
Moderate	15	10	66.7	5	33.3	
High	278	234	84.2	44	15.8	

*NA means not applicable for Chi-square test.

4.7.4 Source of information and preventive behavior

As for the source of information for HIV/AIDS and preventive behavior, the study showed no significance association. However, those receiving information from radio, television, health professional, video and family members had higher percentage in better preventive behavior than those who didn't have accessed from that source.

Table 4.16: Source of information to HIV/AIDS and preventive behaviors

Source of information to HIV/AIDS	Total samples	Preventive behavior				p-value
		Better		Poor		
		Number	Percent	Number	Percent	
Radio						0.514
No	245	204	83.3	41	16.7	
Yes	67	58	86.6	9	13.4	
Television						0.958
No	130	109	83.8	21	16.2	
Yes	182	153	84.1	29	15.9	
Health professional						0.355
No	137	112	81.8	25	18.2	
Yes	174	149	85.6	25	14.4	
Video						0.467
No	198	164	82.8	34	17.2	
Yes	114	98	86.0	16	14.0	
Journals/ Magazine						0.715
No	130	108	83.1	22	16.9	
Yes	182	154	84.6	28	15.4	
Peer education						0.656
No	165	140	84.8	25	15.2	
Yes	147	122	83.0	25	17.0	

Source of information to HIV/AIDS	Total samples	Preventive behavior				p-value
		Better		Poor		
		Number	Percent	Number	Percent	
Newspaper						0.212
No	234	200	85.5	34	14.5	
Yes	78	62	79.5	16	20.5	
Friends						0.186
No	218	187	85.8	31	14.2	
Yes	94	75	79.8	19	20.2	
Family members						0.590
No	247	206	83.4	41	16.6	
Yes	65	56	86.2	9	13.8	
Health talks						0.748
No	106	90	84.9	16	15.1	
Yes	206	172	83.5	34	16.5	

4.8 Comparison of knowledge between peer education respondents and non respondents

The results of the comparison of mean score analysis showed that the mean knowledge score of youths who had received peer education session were higher than those who hadn't received it yet. And it is statistically significant at p-value < 0.05.

Table 4.17: Comparison of mean score differences of knowledge on HIV/AIDS among peer education respondents and non respondents

Peer education	Total samples	Knowledge		p-value
		Mean	Std. Deviation	
No	152	9	1.8	.010
Yes	160	9.5	1.7	

4.9 Summarization of the results related to research hypotheses

The table 4.18 showed the summarization of the findings whether they support the hypotheses of the study or not. Regarding the association between independent and dependent variables; age group, sex, religion, education and occupation of youths from the general characteristics and knowledge of youths on HIV/AIDS were found association with the preventive behavior of youths to HIV/AIDS. Other variables such as perceptions of youths and sources of information to HIV/AIDS were found no association with the preventive behavior. Although they hadn't showed significant association, the study manifested some traces such as youths with high level of perceptions were having high percentage of better preventive behavior and youths who got information from certain sources had higher percentage of better preventive behavior than those who had not enough source of information for HIV/AIDS.

Table 4.18: Summarized table of the study finding

Hypotheses	**Study results**
There is an association between general characteristics of youth and their preventive behavior to HIV/AIDS	Supported
There is an association between level of knowledge of youth on HIV/AIDS and their preventive behavior.	Supported
There is an association between source of information for HIV/AIDS and youths' preventive behavior.	Not supported
There is an association between perception of youth to HIV/AIDS and their preventive behavior.	Not supported

CHAPTER V
DISCUSSION

The discussion in this study included the factors affecting the preventive behaviour of youths as follows:

5.1 General characteristics of youths
5.2 Knowledge of youths on HIV/AIDS
5.3 Perception of youths on HIV/AIDS
5.4 Source of information to HIV/AIDS
5.5 Peer education among youths
5.6 HIV/AIDS preventive behaviour of youths

5.1 General characteristics of youths

This study showed a significant association between the age group and preventive behavior to HIV/AIDS (p value = 0.03). The adolescent age group had better preventive behavior than young adults group. This was because young adults were more sexually active and they wanted to escape from the control of parents and caretakers. Moreover, they thought that they were mature and they could do whatever they wanted. Therefore, the older age group tended to have inappropriate preventive behavior than younger ones who were still under the control of the care takers. This result was consistent with another study which was also conducted on HIV/AIDS preventive behavior among Youth in Myanmar[36]. Another study in Hanoi, Vietnam, also found significant association between age and preventive behavior (p value = 0.01). The younger age group in that study also had better preventive behavior [35].

When statistical association was tested for gender and HIV/AIDS preventive behavior, a significance association was also found (pvalue < 0.001).95.5% of female had better preventive behavior while 72.3% of male had this behavior. Therefore, the proportion of female with better preventive behavior is higher than

male in this study. It was also similar with a study conducted in Pathein city of Myanmar[36]. The reason behind might be that Myanmar have stronger cultures and traditions relating to sexual activity initiation compared to Western and African countries. In addition, men have more freedom than women and are less reluctant to engage in risky behavior. Moreover, virginity is still an important value among Asian women.

For the ethnic group, no statistical association was found and majority of the participants were Myanmar. However, significant association was found between the religion and preventive behavior of youths. It also showed that Buddhists had better preventive behavior than other religions such as Christian, Hindu and Islam. This was because majority of the participants in this study were Buddhist and the existence of the strong prohibitions for sex abuse, drugs abuse and alcohol drinking are the major reinforcing factors to practice preventive behavior. Then, most of the youths in Myanmar were sent to monastery and meditation centers by their parents to practice and learn the peaceful art of living.

Regarding the educational level, statistical association was also found with p value of 0.021. The higher the education level, the better the preventive behavior of youths. This was because education has been widely heralded as social vaccine against AIDS and aside from cognitive benefits; it might improve understanding of prevention messages [37].

Concerning the occupation, there was also a significant association with p value of less than 0.001. Unemployed youths including students had better preventive behavior than the youths who had occupations with certain income. This results were also consistent with the previous studies of Phone Si Hein and Ei Ei Shwe [36, 38]. For the students, their daily activities were confined to by studying and attending to the class. Besides, they only had limited pocket money to spend for risky activities, For those youths with certain jobs since they had certain amount of income, they were more likely to get involved in risky behavior such as visiting CSWs and drinking alcohol. Due to these reasons, youths with certain type occupation were in the lower percentage group with better preventive behavior than students and unemployed (Table 4.13).

5.2 Knowledge of youths on HIV/AIDS

Knowledge is a fundamental key structure to lead proper perceptions and behaviors. Therefore, the need for correct knowledge is very important for having proper preventive behavior. Overall knowledge level in the study showed that only 7.4% of the respondents had poor level of knowledge and the remaining have moderate and high level of knowledge with 15.7% and 76.9% respectively. In this study, it was found that youths who had high level of knowledge had better preventive behavior. If a person had low level of knowledge, they would not have better preventive behavior because poor knowledge and misconception about HIV/AIDS were key factors in the lack of preventive effort. Therefore, it has been shown that the solid understanding on mode of transmission and prevention methods is needed for preventive behavior.

Findings related to ways of HIV transmission including sharing of needles, tattooing and having sex with a nice looking person were answered correctly by 98.1%, 91% and 79.2% of the respondents. A study in Northern Tanzania showed that 88.8% of male and 84.5% of female youths knew that sharing of needles can transmit HIV[37]. A study conducted in Pathein City, Ayeryarwaddy Division, Myanmar found that only 76% could answer correctly about tattooing. And then, 73.4% knew that a nice looking person cannot be assumed as free from HIV[36].

When compared to the results of this study, the knowledge regarding the modes of transmission of HIV/AIDS was much higher than the previous studies. It might be due to the peer education program in that area which was implemented by the Youth Development Program of the Myanmar Medical Association. Then, half of respondents in this study also had received the peer education sessions and they had higher level of knowledge than the others who hadn't received the peer education session.

For the misconception statements, more than 80% of youths could answer them correctly. However, a study done in Vietnam by Pimsurang Taechaboonsermask and her colleges showed that only 65.8% of youths answered correctly regarding the misconception statements of HIV/AIDS [35]. And, it was found that the finding in our study was also higher than the previous finding. The only difference found was that which did not have enough sex education and health education activities in their

community. Therefore, it can be said that proper community based or school based education programs are needed not only to increase the knowledge level of youths but also to correct their misunderstanding.

In the questions related to HIV/AIDS prevention, 85.6% knew that abstinence can prevent HIV/AIDS by sexual route and 91.3% could answer correctly that using condom properly can prevent HIV. And one study also reported that more than 75% of respondents answered correctly on abstinence and effective condom use[36]. However, regarding the HIV vaccine, only 60.9% knew that there is no vaccine to prevent HIV. The similar results were found in a study from Northern Tanzania [37]. It could be that most of health education programs are stressing on the modes of transmission, prevention and discrimination. They still have some weaknesses in education about other issues such as anti-retro viral treatment and availability of vaccine.

The study also found out that 76.9% of youths in the study area had high level in overall knowledge related to HIV/AIDS and only 7.4% had low level. According to findings from this study, we have to think of further interventions that will support youths to maintain their existing knowledge level and to have correct perception and better preventive behavior.

The results showed that youths with higher educational level were found to acquire higher level of knowledge. A study in Northern Tanzania also supported that higher level of education was associated with higher HIV/AIDS knowledge score.

When looking at the association between the knowledge and preventive behavior, significance association was found with p-value of less than 0.05. Therefore, we can say that higher knowledge level could lead to better preventive behavior. The result of this study was supported by a study in Malaysia which also had association between knowledge and preventive behavior[39]. Therefore, the key strategy is to increase the knowledge about mode of transmissions and method of preventions among the youths in Myanmar.

5.3 Perception of youths on HIV/AIDS

In this study, we found out that 67.9% of youths had high perceived susceptibility and 17.6% had low perceived susceptibility. Most of the people with higher level of knowledge on HIV/AIDS had higher perceived susceptibility. And they had better preventive behavior than the low perceived ones although the perceived susceptibility was not significantly associated with the preventive behavior. Similar results were found in a study from Iran and it also supported that low level of perceived susceptibility may lead to risky behavior[34].

Results also showed that there was a significant association between the sex and the perceived severity on HIV/AIDS. Females' perception on severity of HIV/AIDS was higher than male. By nature, males have more risk taking behavior than females and this is further aggravated by falsely perceived male role model. And another supportive finding was that the percentage of females who were having better preventive behavior were higher than male (Table 4.13).

Regarding the perceived barrier, there was no significant association between perceived barrier and preventive behavior. The results of the level of perceived barrier showed that only 46.2% had high perceived barrier, 22.1% had moderate level and 31.7% had low perceived barrier. In addition, about 26% of the respondents agreed that it was hard to avoid tattooing and using condom decreased sexual pleasure and about 20% though that it was a shameful to buy and carry condom before having sex. It could be that youths are aware of AIDS but they don't care much about it although they had enough knowledge. They also feel embarrassed to buy condom from sellers of different gender and also afraid that someone may see them buying condoms.

When analyzing between knowledge and perception, no significance association was found but respondents with higher level of knowledge was found to have high percentage in high level of perceived susceptibility, perceived benefits and perceived severity. Therefore, health education within the community might increase the level of knowledge and contributed to perceptions. However, the reason for still practicing risky behavior was that in spite of awareness on HIV/AIDS, people could not overcome the barriers in practicing the preventive behavior.

This study emphasized that high level of knowledge, perceived susceptibility, perceived severity, perceived benefits and perceived barriers are needed to practice preventive behaviors for HIV/AIDS and also to halt the prevalence of HIV infection in Myanmar.

5.4 Source of information

Source of information in this study included both formal and informal sources of information. Among these sources, health talks, information obtained from health profession, journals, magazines and televisions were the most common sources of information in this study. More than 55% of youths obtained HIV/AIDS related knowledge and information from the above sources. The least common sources of information were radios and family members constituting 20% of sources. In our study, no significant association was found between the sources of information for the HIV/AIDS and preventive behavior of youths.

A Family and youth survey in Myanmar also showed that electronic media, health workers and printed media were the most popular source of information. However, a study done by AIDS information center reported that family and friends were the major source of information for the HIV/AIDS. Therefore, the results from the AIDS information center which was done in Uganda were inconsistent with the finding in this study. The difference could be due to difference in study area, cultural context and pattern of information system in each country. Moreover, most of the communication between youths and their family were not very open and each of them were too shy to discuss the sex related disease and information. In addition, information technology and media in our country is still far behind that of the neighboring and other countries around the world. Therefore, there is a need to utilize these media in Myanmar as almost health education interventions are relying heavily on health talks, peer education and health volunteers to disseminate correct information to the community.

There was a significant association between sex and journals/magazine which is included in the source of information to HIV/AIDS. Lager percentage of female youths had more access to journals/magazines than male youths. This is

because most of the male youths in Myanmar are rather interested in playing football, games, going for teashop and using internet than reading journals and magazines. But contrary, most of the young girls are trying to pass their leisure time by watching movies and reading journals and magazines. And there are a lot of fashion magazines and journals for female audience in Myanmar, and most of the magazines include health related articles among others. However, for the other sources of information, no significant association was found and percentages of access to source of information by young male and female were not different.

Regarding to knowledge level and source of information, significant association was found with health professional, journals/magazines, peer education and health talks. In these above variables, most of the youths who had access to these four sources had high level of knowledge when compared to others who didn't have access to the information from those sources. It could be due to the fact that health professionals and peer educators could give correct information and clarify the misunderstanding to the youths as they were well trained and qualified in their respective fields. For the journals and magazines, most of the health related article writers were from medical field and they could convey correct messages to the community. Therefore, dissemination of information from these sources should be strengthened in the future.

5.5 Peer education among youths

Peer education of HIV/AIDS among the youths had been found to be an effective method to improve their knowledge and positive health behaviors. In addition, it showed significant results in changing youths' HIV/AIDS knowledge, preventive behavior and confidence to engage in safe sex.

In this study, 51.3% of youths had participated in the peer education session and 99.4% of the participants were satisfied with the peer educators. The results from the comparison of the mean knowledge score between peer education respondents and non respondents showed that knowledge level of peer education respondents was significantly higher than non respondents at the p-value of 0.01. This finding was also supported by a study among Turkish University students [41]. A study

conducted by Cartagena et al. (2006) also found that the HIV knowledge level of adolescents in peer education program was 2.4 times higher than that of adolescents who were not participating the peer education program[42]. Therefore, from these above findings, we could say that peer education program was effective in changing youths HIV/AIDS knowledge.

Concerning the perception and preventive behavior, no significance difference and association were found between the peer education recipients and non recipients. However, we found out that peer education recipients had better perception on HIV/AIDS than non recipients. Similar results were found in a study at United States by Ganga Mahat and his colleagues[18]. Therefore, peer education could only be effective in improving the knowledge of the recipients and, for perceptions and preventive behavior; it could be supportive but did not have significantly impact.

To conclude, peer education recipients in this study got significantly higher knowledge than the others because of the peer education program implemented by the Youth Development Program of the Myanmar Medical Association. This program was found to be effective in improving the knowledge level of youths in the project area but not effective enough to change the perception and behavior of youth in the study area.

5.6 HIV/AIDS preventive behavior of youths

In this study, major proportion of youths was found to have better preventive behavior (84%) and only 16% had poor preventive behavior (Table 4.12). The findings from this study were better than the study conducted at the Sarmalauk village tract in Myanmar[38]. In that study, it was found that 19% of youths were high risk group, having poor preventive behavior and 70% of them were low risk group, having better preventive behavior. There were some facts for the differences in results of two studies. The referred study was conducted in the rural area of Myanmar and there was less number of health promotion and education projects in that area. Although there were some community health volunteers who were discussing and disseminating adolescent reproductive health issues in the village, most of the village leaders and guardians did not accept that type of activities due to their traditional

cultural norms. They thought that it was shameful to discuss Adolescent Reproductive Health issues and those types of education were encouraging the young generation to actively participate in the sex related activities. In addition, health journals, health professionals, education projects, newspaper, health talks and electronic media were not easily accessible in rural areas. Due to these requirements and weakness, young people in rural area of Myanmar had lower HIV/AIDS related knowledge, poor perception and consequently poor preventive behavior.

Preventive behavior in this study was determined by the important factors such as tattooing, using drugs, sharing needles, visiting CSWs, having sex with regular partner before marriage and having irregular partners. Regarding to non sexual behavior, 4.8% of youths failed to abstain from tattooing, 2.9% of youths were unable to avoid using drugs and 1.6% had shared needles. It showed that there was some minor fraction of youths who were still having poor preventive behavior and that small percentage in the urban area of Yangon should not be underestimated. These types of risky behavior are potent contributors to HIV transmission and these behaviors can easily spread among youths. Another interesting finding related to tattooing was that one fourth of the youths in the study agreed that tattooing is a habit hard to get rid of. This was because art of tattooing seemed very famous, attractive and stylish among the youths in Myanmar.

Regarding the sexual behavior, 18 out of 312 (5.8%) visited CSWs. We also found out that 17 out of 18 were single and only one person was married. Among those who had ever visited CSWs (5.8%), 4.1% used condom always and 1.7% didn't use condom. The reasons for not using condom were that some of them were under the influence of alcohol and some believed that using condom could decrease sexual pleasure. From those findings, we could say that some of the youths still had misconception with condoms and some were unable to recognize the risky of drinking alcohol before having sex. The combination of alcohol and entertainment places such as in night clubs could be a driving force behind HIV transmission.

The findings also showed that 19 out of 312 had regular partners. And 4 out of 19 were single and remaining 16 were married. Among those who were single with regular partner, 0.3% used condoms always and sometimes but 0.7% never used condoms. The main reason for using condoms among those having regular partner was

to prevent pregnancy. The reason for not using condoms was due to decreased sexual pleasure.

Regarding respondents with irregular partners, 7 out of 312 youths (2.2%) had irregular partners and all those youths were single. Among those, 1% always used condom and 1% never used condom. The reason for using condom was to prevent HIV and not using was due to decrease sexual pleasure. From above reasons for not using condom, we could say that some of the youths had misunderstandings that lead to their poor preventive behavior.

CHAPTER VI
CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study was a cross-sectional study and the purpose of this study is to assess the HIV/AIDS preventive behaviors among youths in the urban setting of Yangon. This study was carried out in the three urban areas in which peer education activities of the Myanmar Medical Association were conducted. These three urban areas are Mingalar Taungnyunt, Kyauktada and Kamaryut Townships. Data was collected by introducing self administered questionnaires to respondents from 22nd February 2012 to 14th March 2012. Statistic used in this study were number, percentage, mean, standard deviation, range, chi-square and independent sample t-test at 5% significant level.

In this study, 312 youths from three urban areas of Yangon participated. Respondents were divided into two groups namely adolescents (aged 13-19 years) and young adults (aged 20-24 years). 44.9% being adolescents and 55.1% young adults. The proportion of males and females in this study was nearly equal (49.7% and 50.3%). The study involved 7 ethnic groups. Most of them are Myanmar (91.7%) and the remaining were other ethnic groups. Regarding religion, majority (90.1%) of youths in the study are Buddhist, followed by 4.8%Islam, 3.8% Christian and 1.3% Hindu.

Among the general characteristics of youths, age, sex, religion, educational level and occupation of the participants were found to have association with HIV/AIDS preventive behavior. Regarding age and preventive behavior, adolescent group had better preventive behavior than young adult age group. By sex, females had better preventive behavior than males. For educational level, it was found that youths who had reached university level education had better preventive behavior than those who had not reached the university level. In addition, youths holding certain jobs were found to have the poor preventive behavior whereas, students and unemployed

engaged in better preventive behavior. For the ethnic group and the marital status of youths, no association was found in this study.

When it comes to knowledge, 76.9% of youths had high level of knowledge, 15.7% had moderate level and 7.4% had low level of knowledge. Majority of youths in the study could answer the knowledge related questions correctly by more than 80% but correct answers relating to HV vaccine and testing were elicited in only 60.9% and 72.8% of respondents respectively. Significant association was found between the knowledge and preventive behavior of youths for HIV prevention (Table 4.14). Therefore, it can be concluded that high level knowledge in youths could lead to better preventive behavior.

According to the findings from perception, 89.1% of youths had high perception on the benefits of preventive behavior, 77.2% had high perceived severity of HIV and 67.9% had high perception on susceptibility of HIV/AIDS. Then, 46.2% of youths had the perception to overcome the barrier in practicing the preventive behavior and 31.7% was found to be failed to overcome the barriers. In this regard, we could tell that most of the participants had high knowledge and positive perception regarding to HIV/AIDS but some couldn't overcome the barrier in practicing the preventive behavior. No statistical association was found between perception and HIV/AIDS preventive behavior.

According to the findings on the source of information, the most common and highly recommended sources were health talks, television and health professional. And the least common sources were family members and radios. However, there was no statistical association between the source of information and HIV/AIDS preventive behavior.

As regard to peer education, 51.3% of youths had received peer education session and 48.7% of youths hadn't received it. Among the peer education recipients, 26.3% of youths received the peer education more than one year ago, 9.3% received within 6 to 12 months, 4.2% received within 3 to 6 months and 11.5% received within one month. Results of the comparison of the mean knowledge score between peer education recipients and non recipients showed that youths who had received peer education session had higher mean score than those who hadn't received it yet. And it is statistically significant at p-value < 0.05.

The study also found that 84% of youths had better preventive behavior while 16% had poor preventive behavior. Practicing preventive behavior in this study was measured by tattooing, visiting CSWs, sharing needles, using addictive substances, having regular and irregular partners and use of condoms whenever they had sex. 4.8% of youths in this study had ever gone for tattooing, and then 2.9% and 1.6% respectively had tried addictive substances and shared needles. The most common risky behavior was visiting CSWs within 6 months by 5.8%. Among the youths who ever visited CSWs, 4.1% always used condom and 1.7% sometimes or never used condom. 6.1% of youths had their regular partners and 2.2% had irregular partners.

For the condom use among youths exposed to sex, the percentage of condom use was still low and there was still room for improvement when it comes to promoting condom use among youths. The main reasons for using condom among users were to prevent HIV and as a contraception. Some of them failed to use condom because they were under the influence of alcohol and forgot to use it and some thought that condom decrease the sexual pleasure.

To sum up, this research attempted to capture the HIV/AIDS preventive behavior of youths in urban setting of Yangon, Myanmar. The research is important because more and more young adults in Myanmar are becoming sexually active and it is imperative that health promotion strategies adapt to tackle this trend and meet the needs of future generations. It also showed that peer education from the Youth Development Program of Myanmar Medical Association had found to be effective in improving the HIV/AIDS related knowledge. However, knowledge alone might not be sufficient in preventing HIV; youths must also have positive perception to practice better preventive behavior. Therefore, finding ways to educate and motivate the young to practice preventive behaviors has become a necessity as well as a challenge for public health professionals.

6.2 Recommendations

This study suggests that the knowledge, perception, source of information and peer education influenced the preventive behavior of young people in urban setting of Yangon, Myanmar. Based on the above findings, the following recommendations were made in order to improve and promote the preventive behavior of youths in Myanmar.

1. Although youths in this study had high level of knowledge, they still lacked knowledge on HIV testing, tattooing and anti-retroviral treatment. Therefore, health education programs should address more on the information regarding testing, tattooing, counseling and anti-retroviral treatment by using media, edutainment programs, and peer educators and with the help of general practitioners in each township.

2. Health talks, health professions and television were the major source of information in the study. Therefore, frequent health talks in the community, counseling and education service by health professions and increased dissemination of HIV/AIDS related information by using electronic media should be promoted. In addition, communication campaign for the caregivers/parents should be conducted to enhance the attitude and awareness of parents on how to bring up their children. And accurate sources of information are a first step in preventing the spread of HIV. Formal sources of information must be strengthened, and individuals who are powerful in the community (eg: teachers, celibrities and health care providers) must be involved in developing strategies for informing youths about HIV.

3. According to the results, youths were weak in improving or changing their existing knowledge to positive perception and preventive behavior. Therefore, more intensive interventions such as behavior change communication interventions utilizing different channels (interpersonal communications as well as mass media) should be undertaken for vulnerable youths. Then, life skills training strategy for youths are also necessary in HIV prevention. Therefore, life skills to avoid smoking, alcohol drinking and negative peer pressure should be included in youth's campaign and health educations.

4. Sex education and health education should be provided early rather than late beginning from primary school level in order to give simple human biology

concepts and for letting both boys and girls know their body and the opposite sex as well to avoid misunderstanding. This kind of type of education and knowledge would serve as a basic foundation for young people in order for them to practice better preventive behavior when they get older.

5. As evidence from comparison between peer education recipients and non recipients, knowledge related to HIV/AIDS was significantly different among them. Therefore, peer education project of the Youth Development Program should be strengthened in existing projects area and should also target to out of school youths as youths with lower educational level. In addition, other INGOs and NGOs which are focusing on the HIV and ARH should collaborate and complement each other's strategies and extend their activities up to the outreach areas.

6. As youths are sexually active age group by the virtue of the nature, promotion of condom use among them and high risk group like CSWs should be conducted. Some youths reported that condoms were not available and some were embarrassed to buy form shops. Therefore, easy availability and accessibility of condoms at any time should be ensured. (eg: placing of vending machine in toilets, distribution of condoms among risky people, free condom services at the health care centers). In addition, training or education sessions should be provided to condom sellers or pharmacy shops to create customer friendly atmosphere thereby reducing the stigma associated with condom buying.

Recommendations for the future research

This study is a cross-sectional, quantitative study and there were some weaknesses and limitations in this study. Therefore, following suggestions are made for future researches.

1. To gain more information, qualitative methods such as in depth interview and focus group discussion should be combined with quantitative methods.

2. As this study was conducted by using purposive sampling method, it could affect the validity of the study. Therefore, future study should use randomized sampling methods to ensure the validity of the study.

3. This study couldn't evaluate the effectiveness of the peer education program in that area. Therefore, future research should be a longitudinal study design including pre and post test to assess the effectiveness of the intervention. In addition, evaluative research should be performed not only on the community but also on the service providers to be more evaluative.

REFERENCES

1. World Health Organization, Regional Office for South-East Asia, HIV/AIDS in South East Asia Region, Progress Report2010.
2. UNAIDS, Report on the Global AIDS Epidemic, 2010.
3. Peerapatanapokin, Wiwat. Progress of HIV Epidemic in Myanmar. Presented at 8th international Congress on AIDS in Asia & the Pacific, Colombo, Sri Lanka, August2007.
4. National AIDS Program, Department Of Health, World Health Organization, Report of the HIV Sentinel Sero-Surveillance Survey,2009, Myanmar.
5. Zewdie.D, Vollmer.G, McGinnis.L , Beyer.J. Youth Development, HIV/AIDS prevention among youth ,World BankNovember 2006.
6. Myanmar: Vulnerability and HIV Knowledge [database on the Internet]2011. Available from: http://aidsdatahub.org/en/country- profiles/myanmar.
7. Situmorang A. Adolescent Reproductive Health in IndonesiaSeptember 2003.
8. Preventing HIV/AIDS in young people(Joint United Nation Programs on HIV/AIDS, United Nation Funds For Population Association, United Nations Children's Funds, World Health Organization)2006.
9. Moore HM. Youth Development Program training as a community developmentintervention on for healthy behavior change among the youth in Yangon,Myanmar. University of the Philippines LOS BAÑOS; 2011.
10. United Nations Children's Funds,Joint United Nation Programs on HIV/AIDS, World Health Organization,Young people and HIV/AIDS: Opportunity in Crisis: UNICEF,UNAIDS,WHO 2002.
11. Hunt DP. The concept of knowledge and how to measure it. 2003;Vol. 4 No. 1, :pp. 100-13.
12. Rao VSR. Factors Influencing Perception. April 23, 2008; Available from:http://www.citeman.com/2849-factors-influencing-perception.html. Date cited : 1/12/2011

13. Karen Glanz BKR, K. Viswanath, editor. Health Behavior and Health Education Theory, Research, and Practice. 4th ed,2008.
14. Robert Ntalaka and Fred Baruga AIDS Information Centre - Uganda Kampala U. Sources of information for clients seeking HIV Counseling and Testing Services at AIDS Information Centre (AIC) Uganda 2004 – 2008.
15. Tung W-C, Ding K, Farmer S. Knowledge, Attitudes, and Behaviors Related to HIV and AIDS Among College Students in Taiwan. Journal of the Association of Nurses in AIDS care.19(5):397-408, 2008.
16. Joint United Nation Programs on HIV/AIDS. Peer education and HIV/AIDS: Concepts, Uses and Challenges:,Horizons/Population Council, Family Heath International,Jamaican Ministry of Health,Population Service International /AIDSMark, Program for appropriate technology in Health,United Sate Agnecy For International Development,United Nations Children's Funds. 1999.
17. Wolf RC, Linda A. Tawfik and Katherine C. Bond. Peer Promotion Programs and Social Networks in Ghana2000.
18. Mahat G, Scoloveno MA, De Leon T, Frenkel J. Preliminary Evidence of an Adolescent HIV/AIDS Peer Education Program. Journal of Pediatric Nursing. 2008;23(5):358-63.
19. Armand H-dA. Evaluation of HIV/AIDS peer education projects in Zambia. Evaluation and Program Planning. 2002;25(4):397-407.
20. USAID. HIV Prevention Across the Youth Spectrum. Available from: http://www.usaid.gov/our_work/global_health/aids/TechAreas/prevention/youthfactsheet.html.
21. Robert Rector and Kirk Johnson PD. Teenage Sexual Abstinence and Academic Achievement October 27,2005.Available from: http://www.heritage.org/research/reports/2005/10/teenage - sexual – abstinence – and - academic achievement.
22. FDA. Condoms and Sexually Transmitted Diseases, Brochure. December 1990[updated07/22/2010];Available from: http://www.fda.gov/ ForConsumers/byAudience/ForPatientAdvocates/HIVandAIDSActivities/ucm126372.htm.

23. Mark Cichocki,RN. The Basics of STD and AIDS Prevention, AIDS Prevention and the Role of Condom Use. July 12, 2009. Available from : http://aids.about.com/od/hivprevention/a/hivprevent.htm

24. NIDA InfoFacts: Drug Abuse and the link to HIV/AIDS and Other Infectious Diseases.July,2011;Availablefrom: http://drugabuse.gov/infofacts/DrugAbuse.html.

25. New York State Department of Health. 2009; Available from: http://www.health.ny.gov/publications/9609.pdf.

26. Research amFAR (Foundations for AIDS research) . Basic Facts About HIV/AIDS.Available from: http://www.amfar.org/ abouthiv/ article. aspx?id=3352# How_is_HIV_transmitted

27. Borgia P, Marinacci C, Schifano P, Perucci CA. Is peer education the best approach for HIV prevention in schools? Findings from a randomized controlled trial. Journal of Adolescent Health. [doi:10.1016/ j.jadohealth.2004.03.005]. 2005;36(6):508-16.

28. Terry PE, Mhloyi M, Masvaure T, Adlis S. An examination of knowledge, attitudes and practices related to HIV/AIDS prevention in Zimbabwean university students: Comparing intervention program participants and non-participants. International Journal of Infectious Diseases. 2006;10(1):38-46.

29. M. Mizanur Rahman MK, M. Shahidullah. Adolescent knoledge and awareness about AIDS/HIV and factors affecting them in Bangladesh, 2009.

30. AI Omoigberale PA, AA Famodu. Knowledge and attitude of youth (ages 15- 25 years) to HIV/AIDS and to routine HIV screening, 2006. Availablefrom: http://www.njcponline.com/article.asp?issn=11193077;year=2006;volume=9;issue=1;spage=11;epage=13;aulast=Omoigberale;type=0.

31. Situmorang A. Adolescent Reproductive Health in Indonesia,Consultancy reportSeptember 2003.

32. Swart-Kruger J, Richter LM. AIDS-related knowledge, attitudes and behaviour among South African street youth: Reflections on power, sexuality and the autonomous self. Social Science & Medicine. 1997;45(6):957-66.

33. C.L. Johnston BDLM, J.Qi, C.J. Zonneveld, J.S.G. Montaner, E. Wood, T. Kerr. HIV knowledge and perceptions of risk in a young, urban,drug-using population. 11 October 2011.

34. Baghianimoghaddam,M., Zolghadr, R.,Rahaii,Z., and Khani,P., Health Belief Model and HIV/AIDS among high school female students in Yazd, Iran. January 12, 2010.; Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3082808/

35. Taechaboonsermsak,P., Apinuntavech.S. Factors Associated with HIV/AIDS Preventive Behavior among High School Students in Dongda District, Hanoi, Vietnam. Journal of Public Health, May-August 2008-2006;Vol. 38 No. 2:174-85.

36. Hein PS. Knowledge, Attitude, Accessibility and Life Skills Towards HIV Preventive Behaviors Amon Youths in Pathein, Myanmar [MPH Thesis]: Mahidol University, Bangkok, Thailand; 2011.

37. Bastien S. Socio-demographic characteristics, AIDS knowledge and risk perception among young people in Northern Tanzania. International Journal of Educational Development 2008:393-404.

38. Pacheun O, Swe Ei Ei, Powwatta A, Risk Behavior for HIV/AIDS among Youth in Rural Area of Myanmar. Asia Pacific Journal of Public Health,2008, 20 (Sep): 215-19

39. Janhanfar SH SLM, L.R. Sexual Behavior, Knowledge and Attitude of Non Medical University Students Towards HIV/AIDS in Malaysia. Shiraze-Medical Journal. 2010;11.

40. Bulduk S, Erdogan S. The Effects of Peer Education on Reduction of the HIV/Sexually Transmitted Infection Risk Behaviors Among Turkish University Students. Journal of the Association of Nurses in AIDS care. [doi: 10.1016/j.jana.2011.02.003]. (0).

41. Cartagena RG, Veugelers,P.J., KIPP, W.,Magigave K., & Laing,L.M. Effectiveness of an HIV Preventiion Program for Secondary School Students in Mongolia. Journal of Adolescent Health. 2006;39:9-16.

APPENDICES

APPENDIX A

QUESTIONNAIRE (ENGLISH)

ID No ……..

A STUDY ON HIV/AIDS PREVENTIVE BEHAVIOR AMONG YOUTHS IN URBAN SETTING OF YANGON

All of your answers will be kept confidential and data will be used for research purpose only. Your participation is much appreciated.

Instruction: Please tick (√) in the answer box where appropriate.

Township: Mingalar Taungnyut ❒ Kyautdatar ❒ Kamayut ❒

Date of conducting survey ……./……/…….

Part A: Knowledge on HIV/AIDS

1. HIV can be transmitted by tattooing.
   ❒ True ❒ False ❒ Not sure
2. HIV can be transmitted by mosquito bite.
   ❒ True ❒ False ❒ Not sure
3. HIV can be transmitted by having meal with HIV infected patient.
   ❒ True ❒ False ❒ Not sure
4. HIV can be transmitted by sharing needles with HIV infected patients.
   ❒ True ❒ False ❒ Not sure
5. HIV can be transmitted by sharing towels with an infected one.
   ❒ True ❒ False ❒ Not sure
6. HIV can be prevented by abstinence from sex properly.
   ❒ True ❒ False ❒ Not sure
7. HIV can be prevented by using condom properly whenever have sexual intercourse.
   ❒ True ❒ False ❒ Not sure
8. A nice looking person is free from HIV.
   ❒ True ❒ False ❒ Not sure
9. HIV can be detected within a few days after having sex with CSWs.
   ❒ True ❒ False ❒ Not sure
10. HIV/AIDS can be cured.
    ❒ True ❒ False ❒ Not sure

11. There is a vaccine to prevent HIV.
    ❒ True ❒ False ❒ Not sure

Part B: Perception on HIV/AIDS

Perceived susceptibility

1. Having multiple partners are risky to HIV/AIDS.
   ❒ Agree ❒ Uncertain ❒ Disagree
2. Drinking alcohol before having sex with CSWs doesn't increase the risk of getting HIV infection.
   ❒ Agree ❒ Uncertain ❒ Disagree
3. Sex with a nice looking person without using condom cannot get HIV.
   ❒ Agree ❒ Uncertain ❒ Disagree
4. Tattooing cannot transmit HIV infection
   ❒ Agree ❒ Uncertain ❒ Disagree

Perceived severity

1. Getting HIV infection can cause psychological and social problems in the family.
   ❒ Agree ❒ Uncertain ❒ Disagree
2. Getting HIV will shorter the life expectancy of young people.
   ❒ Agree ❒ Uncertain ❒ Disagree
3. HIV can lead to problems in friendship.
   ❒ Agree ❒ Uncertain ❒ Disagree
4. HIV cause many infections to enter the body and finally, lead to death due to these infections.
   ❒ Agree ❒ Uncertain ❒ Disagree
5. Once a person gets HIV, he will face much discrimination from the environment and can even lead to suicide.
   ❒ Agree ❒ Uncertain ❒ Disagree
6. HIV is a fatal disease.
   ❒ Agree ❒ Uncertain ❒ Disagree

Perceived barriers

1. It is a shame to buy and carry condom before having sex.
   ❒ Agree ❒ Uncertain ❒ Disagree
2. Using condom decrease sexual pleasure.
   ❒ Agree ❒ Uncertain ❒ Disagree
3. It is hard to avoid having a tattoo.
   ❒ Agree ❒ Uncertain ❒ Disagree
4. It is just social to drink alcohol before having sex with CSWs.
   ❒ Agree ❒ Uncertain ❒ Disagree

Perceived benefits

1. Being faithful to one partner can prevent HIV and create a happy family life.
   ❒ Agree ❒ Uncertain ❒ Disagree

2. Avoid tattooing can prevent HIV.
   ❒ Agree ❒ Uncertain ❒ Disagree
3. Using condom properly can prevent HIV.
   ❒ Agree ❒ Uncertain ❒ Disagree
4. Abstinence from sex can prevent HIV by sexual route.
   ❒ Agree ❒ Uncertain ❒ Disagree

Part C: Source of information

1. What are the sources of HIV/AIDS related information that you received?
   (More than one answer is possible)
   1. ❒ Radio 2. ❒ Television
   3. ❒ Health professional 4. ❒ Video
   5. ❒ Journals/ Magazine 6. ❒ Peer education program
   7. ❒ Newspaper 8. ❒ Friends
   9. ❒ Family members 10. ❒ Health talks
   11. Other…….

2. Have you ever received a peer education session?
   1. ❒ No
   2. ❒ Yes➢➢ If yes, when did you receive that session?
      1. ❒ within last month
      2. ❒ last 3 to 6 months
      3. ❒ last 6 to 12 months
      4. ❒ more than 1 year

   ➢➢If yes, is it easy to understand the information given by a peer educator?
      1. ❒ No 2. ❒ Yes

Part D: General characteristics & HV/AIDS preventive behaviors

General characteristics

1. Age (completed year) ……
2. Sex (1) ❒ Male (2) ❒ Female
3. Ethnicity ……
4. Religion (1) ❒ Buddhist (2) ❒ Christian
   (3) ❒ Hindu (4) ❒ Islam
   (5) Other.....
5. Educational level (1) ❒ Illiterate (2) ❒ Primary
   (3) ❒ Middle (4) ❒ High school
   (5) ❒ University (6) Other……..

6. Occupation (1) ❒ Student (2) ❒ Unemployed
(3) ❒ Staff (4) ❒ Odd job holder
(5) ❒ Vendor (6) Other…….
7. Marital status (1) ❒ Single (2) ❒ Married
(3) ❒ Divorced (4) Other …….

HIV/AIDS preventive behaviors

8. Have you ever gone for tattooing?
1. ❒ No 2. ❒ Yes
9. Have you ever gone for CSWs in the last 6 months?
1. ❒ No
❒ Yes ➢➢ If yes, do you always use condom whenever having sex with CSWs?
1. ❒ No
2. ❒ Yes ➲➲ If Yes, what are the reasons.
……
10. Have you ever tried any addictive substance?
1. ❒ No 2. ❒ Yes
11. Have you ever shared needles?
1. ❒ No 2. ❒ Yes
12. Do you have regular partner?
1. ❒ No 2. ❒ Yes➢➢ If yes, do you use condom with your regular partner?
1.❒ Yes , always. Give reason……..
2. ❒ Yes, sometimes. Give reason……
3. ❒No, Never. Give reason……
13. Do you have irregular partners?
1. ❒ No
2. ❒ Yes➢➢If yes, do you use condoms whenever having sexual intercourse with your irregular partners?
1.❒ Yes , always. Give reason……
2. ❒ Yes, sometimes. Give reason……
3. ❒No, Never. Give reason……

APPENDIX B

QUESTIONNARE (MYANMAR)

ဆန်းစစ်လွှာအမှတ်.....

ရန်ကုန်မြို့ရှိ လူငယ်ထုအတွင်း အိပ်ချ်အိုင်ဗွီ ၊အေအိုင်ဒီအက်စ် ကာကွယ်နည်းဆိုင်ရာ အမူအကျင့် ဆန်းစစ်လွှာ

မေးခွန်းလွှာသည်စာတမ်းပြုစုရန်အတွက် သုံးခြင်းသာဖြစ်ပြီး ပါဝင်သောအချက်အလက်များအား လျို့ဝှက်ထား ပေးမည်ဖြစ်ပါသည်။ အချိန်ပေး၍ လာရောက်ဖြေဆိုပေးသူများအားလုံးကို ကျေးဇူးအထူး တင်ရှိပါသည်။

အောက်ပါမေးခွန်းများကို အမှန် (√) သို့မဟုတ် သင့်လျော်သလိုဖြည့်ပါ။

လေ့လာဆန်းစစ်သည့်နေ့စွဲ ...../...../.....

မြို့နယ်။ မင်္ဂလာတောင်ညွန့် ❒ ကျောက်တံတား ❒ကမာရွတ် ❒

အပိုင်း(က) အိပ်ချ်အိုင်ဗွီ၊ အေအိုင်ဒီအက်စ် အသိပညာပိုင်းဆိုင်ရာမေးခွန်းများ

၁။ ဆေးမင်ကြောင်ထိုးခြင်းအားဖြင့် အိပ်ချ်အိုင်ဗွီရောဂါပိုး ကူးစက်နိုင်သည်။
❒ မှန် ❒ မှား ❒ မသိပါ

၂။ ခြင်ကိုက်ခြင်းကြောင့် အိပ်ချ်အိုင်ဗွီရောဂါပိုးကူးစက် ခံရနိုင်သည်။
❒ မှန် ❒ မှား ❒ မသိပါ

၃။ အိပ်ချ်အိုင်ဗွီရောဂါပိုးရှိသူ နှင့် ထမင်းအတူတူစားပါက ရောဂါကူးစက်ခံရနိုင်သည်။
❒ မှန် ❒ မှား ❒ မသိပါ

၄။ အိပ်ချ်အိုင်ဗွီရောဂါပိုးရှိသူ အသုံးပြုပြီးသော အပ်ကို ထိုးသွင်း အသုံးပြုပါက ရောဂါကူးစက်နိုင်သည်။
❒ မှန် ❒ မှား ❒ မသိပါ

၅။ အိပ်ချ်အိုင်ဗွီရောဂါပိုးရှိသူ နှင့် မျက်နှာသုတ်ပဝါ မျှဝေအသုံးပြုပါက ရောဂါကူးစက်နိုင်သည်။
❒ မှန် ❒ မှား ❒ မသိပါ

၆။ လိင်ဆက်ဆံခြင်းကို ရှောင်ကြဉ်ခြင်းသည် လိင်မှတစ်ဆင့် အိပ်ချ်အိုင်ဗွီရောဂါပိုး ကူးစက်ခြင်းကို ကာကွယ်ရန် အထိရောက်ဆုံးနည်းလမ်းဖြစ်သည်။
❒ မှန် ❒ မှား ❒ မသိပါ

၇။ လိင်မှတဆင့် အိပ်ချ်အိုင်ဗွီရောဂါပိုးကူးစက်ခြင်းသည် ကွန်ဒုံးကို စနစ်တကျ အသုံးပြုခြင်းအားဖြင့် ကာကွယ်နိုင်သည်။

❒ မှန် ❒ မှား ❒ မသိပါ

၈။ အမြင်အားဖြင့် ကျန်းမာနေသူတစ်ဦးတွင် အိပ်ချိအိုင်ဗွီရောဂါပိုး မရှိနိုင်ပါ။

❒ မှန် ❒ မှား ❒ မသိပါ

၉။ အိပ်ချိအိုင်ဗွီရောဂါပိုးသည် ပြည့်တန်ဆာနှင့် လိင်ဆက်ဆံပြီး ရက်အနည်းငယ်အကြာတွင် သွေးထဲ၌စစ်ဆေး တွေ့ရှိနိုင်သည်။

❒ မှန် ❒ မှား ❒ မသိပါ

၁၀။ အေအိုင်ဒီအက်စ်ရောဂါသည် ကုသပျောက်ကင်းနိုင်သည်။

❒ မှန် ❒ မှား ❒ မသိပါ

၁၁။ အေအိုင်ဒီအက်စ်ရောဂါအားကာကွယ်ရန် ဆေးရှိသည်။

❒ မှန် ❒ မှား ❒ မသိပါ

အပိုင်း(ခ) အိပ်ချိအိုင်ဗွီ၊ အေအိုင်ဒီအက်စ် ခံယူချက်ဆိုင်ရာမေးခွန်းများ

၁။ လိင်ဆက်ဆံဖက်များစွာရှိခြင်းသည် အိပ်ချိအိုင်ဗွီရောဂါကူးစက်ခံရနိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၂။ ပြည့်တန်ဆာနှင့် လိင်မဆက်ဆံခင် အရက်သောက်ခြင်းသည် အိပ်ချိအိုင်ဗွီရောဂါ ကူးစက်ရန်အခွင့် အလမ်းကို မမြင့်တက်စေပါ။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၃။ အမြင်အားဖြင့် ကျန်းမာနေသူတစ်ဦးနှင့် လိင်ဆက်ဆံခြင်းအားဖြင့် အိပ်ချိအိုင်ဗွီရောဂါမကူးစက်နိုင်ပါ။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၄။ ဆေးမင်ကြောင်ထိုးခြင်းအားဖြင့် အိပ်ချိအိုင်ဗွီရောဂါ ကူးစက်နိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၅။ အိပ်ချိအိုင်ဗွီရောဂါပိုးကူးစက်ခံရပါက မိသားစုဝင်များပါ လူမှုစိတ်ဒုက္ခခံစား ရနိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၆။ အိပ်ချိအိုင်ဗွီရောဂါပိုးကူးစက်ခံရပါက သက်တမ်းစေ့မနေရနိုင်ပါ။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၇။ အိပ်ချိအိုင်ဗွီရောဂါပိုးကူးစက်ခံရပါက သူငယ်ချင်းအသိုင်းအဝိုင်း နှင့် လူမှုပတ်ဝန်းကျင်မှာ ပြဿနာများကြုံတွေ့နိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၈။ အိပ်ချိအိုင်ဗွီရောဂါပိုးသည် လူတို့၏ခုခံအားကို ကျဆင်းစေကာ၊ ပြင်ပမှ ရောဂါပိုးများကို ခန္ဓာကိုယ်ထဲသို့ ဝင်စေပြီး နောက်ဆုံးတွင် ထိုရောဂါပိုးများကြောင့် အသက်ကို ဆုံးရှုံးစေသည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၉။ လူငယ်တစ်ဦး အေအိုင်ဒီအက်စ်ရောဂါ ကူးစက်ခံရပါက ပတ်ဝန်းကျင်မှ ပြစ်ပယ်ခြင်းကို ခံစားရမည့်အပြင်၊ ထိုသို့ ပြစ်ပယ်ခံရခြင်းကြောင့် မိမိကိုယ်ကို အဆုံးစီရင်သည်အထိ ဖြစ်ပွားနိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၀။ အေအိုင်ဒီအက်စ်ရောဂါသည် အသက်ကို ဆုံးရှုံးစေနိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၁။ ကွန်ဒုံးဝယ်ယူအသုံးပြုခြင်း၊ အိတ်ကပ်ထဲတွင် ဆောင်ထားခြင်းသည် အရှက်ရဖွယ်ကိစ္စ တစ်ခုဖြစ်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၂။ ကွန်ဒုံးအသုံးပြုခြင်းသည် လိင်စိတ်ခံစားမှုကို လျော့ကျစေနိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၃။ ဆေးမင်ကြောင်ထိုးခြင်းအကျင့်၊ဝါသနာကို ရှောင်လွဲရန်မှာ ခက်ခဲပါသည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၄။ ကွန်ဒုံးကို အသုံးပြုခြင်းအားဖြင့် အိပ်ချိအိုင်ဒိုရောဂါပိုးကို ကာကွယ်နိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၅။ ပြည့်တန်ဆာ နှင့် လိင်မဆက်ဆံခင်တွင် အရက်သောက်သုံးခြင်းသည် အပျော်သဘောမျှသာဖြစ်၍ ရောဂါကူးစက်ရန် အန္တရာယ်မရှိနိုင်ပါ။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၆။ အိမ်ထောင်တစ်ခုတွင် တစ်ဦးပေါ်တစ်ဦး သစ္စာရှိခြင်းဖြင့် အေအိုင်ဒီအက်စ်ရောဂါဆိုးကို ကာကွယ်နိုင်သည့်အပြင် သာယာလှပသော မိသားစုဘဝကို ပါတည်ဆောက်နိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၇။ ဆေးမင်ကြောင်ထိုးခြင်းကို ရှောင်ကြဉ်ခြင်းဖြင့် အိပ်ချိအိုင်ဒိုရောဂါပိုးကူးစက်ခြင်းကို ကာကွယ်နိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၈။ လိင်ဆက်ဆံရာတွင်ကွန်ဒုံးကို စနစ်တကျအသုံးပြုခြင်းအားဖြင့် အိပ်ချိအိုင်ဒိုရောဂါပိုး ကူးစက်ခြင်းကို ကာကွယ်နိုင်သည်။

❒ သဘောတူပါသည်။ ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

၁၉။ လိင်ဆက်ဆံခြင်းကို ရှောင်ကျဉ်ခြင်းသည် လိင်မှတစ်ဆင့်အိပ်ချိအိုင်ဒိုရောဂါပိုး ကူးဆက်ခြင်းကို ကာကွယ်ပေးနိုင်သည်။

❒ သဘောတူပါသည် ❒ မသေချာပါ။ ❒ သဘောမတူပါ။

အပိုင်း(၈) အိပ်ချိအိုင်ဒို၊ အေအိုင်ဒီအက်စ် သတင်းအချက်အလက်ဆိုင်ရာမေးခွန်းများ

၁။ သင်သည် အိပ်ချိအိုင်ဒို၊ အေအိုင်ဒီအက်စ် နှင့်သက်ဆိုင်သော သတင်းအချက်အလက်

များကို မည်သည့်နေရာ (သို့) မည်သူ့ဆီမှ ရရှိသနည်း။

(တစ်ခုထက်ပို၍ဖြေဆိုနိုင်ပါသည်)

၁။ ❒ ရေဒီယို ၂။ ❒ တီဗွီ

၃။ ❒ အင်တာနက် ၄။ ❒ ရုပ်ရှင်

၅။ ❒ ဂျာနယ်/ မဂ္ဂဇင်း ၆။ ❒ ပညာပေးလက်ကမ်းစာဆောင်

၇။ ❒ သတင်းစာ ၈။ ❒သက်ရွယ်ဆင့်တူပညာပေးခြင်း

၉။ ❒ သူငယ်ချင်း ၁၀။ ❒ မိသားစုဝင်

၁၁။ ❒ကျန်းမာရေးဟောပြောပွဲ ၁၂။ အခြား.....

၃။ သင်သည် သက်ရွယ်ဆင့်တူပညာပေးခြင်းကို ခံယူဘူးပါသလား။

၁။ ❒ မခံယူဘူးပါ။

၂။ ❒ ခံယူဘူးပါသည်။ ➢➢သက်ရွယ်ဆင့်တူပညာပေးခြင်းကို ခံယူဘူးပါက လွန်ခဲ့သော အချိန်မည်မျှက ခံယူဘူးခဲ့ခြင်း ဖြစ်သနည်း။

၁။ ❒ လွန်ခဲ့သောတစ်လခန့်

၂။ ❒ လွန်ခဲ့သော ၃လ-၆လ

၃။ ❒ လွန်ခဲ့သော ၆လ-၁၂လ

၄။ ❒လွန်ခဲ့သော တစ်နှစ်ကျော်ခန့်

သက်ရွယ်ဆင့်တူပညာပေးခြင်းကို ခံယူဘူးပါက သက်ရွယ်ဆင့်တူပညာပေးသူ ပြောကြားခဲ့သော ဗဟုသုတများကို သင်နားလည်ပါသလား။

၁။ ❒ နားမလည်ပါ။ ၂။ ❒ နားလည်ပါသည်။

အပိုင်း (၄) ပါဝင်ဖြေဆိုသူ၏ အခြေခံအချက်အလက်များ နှင့် အိပ်ရိုးအိုင်ဒို၊ အေအိုင်ဒီအက်စ် ကာကွယ်ခြင်းအတွက် အမူအကျင့်ဆိုင်ရာ မေးခွန်းများ

၁။ အသက်(ပြည့်ပြီးအသက်) .....

၂။ ကျား/မ ၁။ ❒ ကျား ၂။ ❒ မ

၃။ လူမျိုး .....

၄။ ကိုးကွယ်သည့်ဘာသာ ၁။ ❒ ဗုဒ္ဓ ၂။ ❒ ခရစ်ယာန်

၃။ ❒ ဟိန္ဒူ ၄။ ❒ အစ္စလာန်

၅။ အခြား.....

၅။ ပညာအရည်အချင်း ၁။ ❒ ရေး/ဖတ်တတ် ၂။ ❒ မူလတန်း

၃။ ❒ အလယ်တန်း ၄။ ❒ အထက်တန်း

၅။ ❒ တက္ကသိုလ်၆။ အခြား.....

၆။ အလုပ်အကိုင် ၁။ ❒ ကျောင်းသား ၂။ ❒ အလုပ်မရှိ

၃။ ❒ ဝန်ထမ်း ၄။ ❒ ကိုယ်ပိုင်လုပ်ငန်း

၅။ ❒ စျေးရောင်း ၆။ အခြား.....

၇။ အိမ်ထောင်ရေး ၁။ ❒ ရှိ ၂။ ❒ မရှိ
၃။ ❒ အိမ်ထောင်ကွဲ ၄။ အခြား.....

၈။ သင်သည် ဆေးမင်ကြောင်ထိုးဖူးပါသလား။
၁။ မထိုးဘူးပါ။ ၂။ ထိုးဘူးပါသည်။

၉။ သင်သည် လွန်ခဲ့သော ၆လ အတွင်း ပြည့်တန်ဆာများဆီသွားရောက်ခဲ့ဖူးပါသလား။
၁။ မသွားခဲ့ပါ။
၂။ သွားရောက်ခဲ့ပါသည်။➢➢ သင်သည် သွားရောက်သည့်အခါတိုင်း ကွန်ဒုံးကို အစဉ်အမြဲအသုံးပြုး ခဲ့ပါသလား။
၁။ မသုံးခဲ့ပါ။
၂။ သုံးခဲ့ပါသည်။ အကြောင်းအရင်း.....

၁၀။ လွန်ခဲ့သော ၆လအတွင်း မူးယစ်ဆေးဝါးသုံးစွဲခဲ့ဘူးပါသလား။
၁။ မသုံးစွဲခဲ့ဘူးပါ။ ၂။ သုံးစွဲခဲ့ဘူးပါသည်။

၁၁။ သင် ဆေးထိုးအပ်ကို မျှဝေသုံးစွဲခဲ့ ဘူးပါသလား။
၁။ မသုံးစွဲခဲ့ဘူးပါ။ ၂။ သုံးစွဲခဲ့ဘူးပါသည်။

၁၂။ သင့် တွင် ပုံမှန်လိင်ဆက်ဆံဘက်ရှိပါသလား။
၁။ မရှိပါ။
၂။ ရှိပါသည်။➢➢ သင်၏ အဖော်နှင့် အမြဲ ကွန်ဒုံးကို အသုံးပြုပါသလား။
၁။ အမြဲသုံးပါသည်။ အကြောင်းအရင်း.....
၂။ တစ်ခါတစ်လေသုံးပါသည်။ အကြောင်းအရင်း.....
၃။ လုံးဝမသုံးပါ။ အကြောင်းအရင်း.....

၁၃။ သင့် တွင် ပုံမှန်မဟုတ်သော တစ်ခါတစ်ရံ မှသာ အတူနေသော လိင်ဆက်ဆံဘက် ရှိပါသလား။
၁။ မရှိပါ။
၂။ ရှိပါသည်။➢➢ သင်၏ အဖော်နှင့် အမြဲ ကွန်ဒုံးကို အသုံးပြုပါသလား။
၁။ အမြဲသုံးပါသည်။ အကြောင်းအရင်း.....
၂။ တစ်ခါတစ်လေသုံးပါသည်။ အကြောင်းအရင်း.....
၃။ လုံးဝမသုံးပါ။ အကြောင်းအရင်း.....

Certificate of Approval
Ethical Review Committee for Human Research
Faculty of Public Health, Mahidol University

COA. No. MUPH 2012-027

Protocol Title :	HIV/AIDS PREVENTIVE BEHAVIORS AMONG YOUTHS IN URBAN SETTING OF YANGON
Protocol No. :	7/2555
Principal Investigator :	Dr. Kyaw Thet
Affiliation :	Master of Public Health (International Program) Faculty of Public Health, Mahidol University
Approval Includes :	1. Project proposal 2. Information sheet 3. Informed consent form 4. Data collection form/Program or Activity plan
Date of Approval :	6 February 2012
Date of Expiration :	5 February 2013

The aforementioned project have been reviewed and approved according to the Declaration of Helsinki by Ethical Review Committee for Human Research, Faculty of Public Health, Mahidol University.

S. Nanthamongkolchai

(Assoc. Prof. Sutham Nanthamongkolchai)
Chairman of Ethical Review Committee for Human Research

(Assoc. Prof. Phitaya Charupoonphol)
Dean of Faculty of Public Health

420/1 Rajvithi Road, Bangkok, Thailand 10400.
Tel. (662) 3548543-9 ext. 1127, 7404 Fax. (662) 6409854

BIOGRAPHY

NAME	Kyaw Thet
DATE OF BIRTH	29 September1986
PLACE OF BIRTH	Yagon, Myanmar.
INSTITUTIONS ATTENDED	University of Medicine (1) [2004 to 2008] M.B.,B.S (Ygn)
RESEARCH GRANTS	Received research grant from " Thabyay Education Netwrok" for the Thematic paper of MPH degree
HOME ADDRESS	No. (1), Sayar Tun Street, Sanchaung Township, Yangon, Myanmar.
EMPLOYMENT ADDRESS	249, Theinbyu Road, Yangon, Myanmar. MYANMAR MEDICAL ASSOCIATION (YANGON).