HIV/AIDS PREVENTIVE BEHAVIOR AMONG MEDICAL UNIVERSITY STUDENTS IN YANGON CITY, MYANMAR

THIT MIN SWE

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF PRIMARY HEALTH CARE MANAGEMENT FACULTY OF GRADUATE STUDIES MAHIDOL UNIVERSITY 2011

COPYRIGHT OF MAHIDOL UNIVERSITY

Copyright by Mahidol University

Thesis
entitled

HIV/AIDS PREVENTIVE BEHAVIOR AMONG MEDICAL UNIVERSITY STUDENTS IN YANGON CITY, MYANMAR

.....
Mr. Thit Min Swe
Candidate

.....
Assoc. Prof. Boonyong Keiwkarnka, Dr.P.H.
Major advisor

.....
Assoc. Prof. Jirapon Chompikul, Ph.D.
Co-advisor

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

.....
Lect. Supattra Srivanichakorn, M.D., M.P.H. (Health Development), Dip.Thai Board of Preventive Medicine (Epidemiology)
Program Director
Master of Primary Health Care Management
ASEAN Institute for Health Development
Mahidol University

Copyright by Mahidol University

Thesis
entitled

HIV/AIDS PREVENTIVE BEHAVIOR AMONG MEDICAL UNIVERSITY STUDENTS IN YANGON CITY, MYANMAR

was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Primary Health Care Management
on
June 3, 2011

.....
Mr. Thit Min Swe
Candidate

.....
Assoc. Prof. Nittaya Pensirinapa,
Dr.P.H.
Chair

.....
Assoc. Prof. Jirapon Chompikul,
Ph.D.
Member

.....
Assoc. Prof. Boonyong Keiwkarnka,
Dr.P.H.
Member

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

.....
Lect. Supattra Srivanichakorn,
M.D., M.P.H. (Health Development),
Dip.Thai Board of Preventive Medicine
(Epidemiology)
Director
ASEAN Institute for Health Development
Mahidol University

Copyright by Mahidol University

ACKNOWLEDGEMENTS

This thesis would not have been possible without the help and support of many people.

I express my deep gratitude to Assoc. Prof. Boonyong Keiwkarnka, my major advisor, for his guidance, invaluable advice, supervision, and encouragement throughout this study. I would like to also express my deep appreciation and gratitude to Assoc. Prof. Jirapon Champikul, my co-advisor for her constant guidance and valuable suggestions throughout the writing of this thesis.

I would like to express my very grateful appreciation to my academic advisor, Dr. Jutatip Sillabutra, for her kind advice and suggestions. I would like to extend my sincere of gratitude to Aj Cherrawit Rattanapan.

I would like to express my sincere gratitude to Professor and Head of Department of Preventive and Social Medicine, Dr. U Myo Oo, and Professor and Head of Department of Preventive and Social Medicine, Dr. New New Oo, for their recommendation and for providing me with this opportunity to attend this course. My special thanks go also to my senior student Ma Thu Zar Win who was always supportive and helpful, and provided guidance whenever I needed it.

I would also like to thank all of my colleagues, who always encouraged me in my work, especially Dr.Vera from Indonesia.

I will never forget the enthusiasm and kindness of all the professors, lecturers, and staff of the MPHM office, Library, Computer section and ASEAN House.

I would like to thank Mr. Perry Whalley for his suggestions and comments in academic writing.

I am indebted to my parents who always support me in all possible ways as much as they can and especially for whom I am today.

Finally, this thesis is my special gift to my dear father, who is my hero ever.

Thit Min Swe

Copyright by Mahidol University

HIV/AIDS PREVENTIVE BEHAVIOR AMONG MEDICAL UNIVERSITY STUDENTS IN YANGON CITY, MYANMAR

THIT MIN SWE 5338136 ADPM/M

M.P.H.M.

THESIS ADVISORY COMMITTEE: BOONYONGKEIWKARNKA, Dr.P.H.

ABSTRACT

A cross-sectional descriptive study design, using a two-stage cluster sampling method, was used to obtain samples from 272 medical students in Yangon, Myanmar. Descriptive statistics and chi-square tests were used to determine the significant factors and their association.

The result showed that 53.3 percent of the students had high preventive behavior regarding HIV/AIDS. Most of the students (83.3%) replied that they avoided sexual intercourse. Only a few (16.2%) were engaged in sex and among them, 75.6 percent had been having sex with only one sexual partner. But only 40 percent had ever used condom whenever they had sex. 76.1 percent of the students had ever read sexual education magazines/journals/books and 79.4 percent replied that they had listened to HIV/AIDS preventive education programs on television/radio. But only 98.2 percent of the respondents answered that they had never shared injection needles and 98.1 percent answered they didn't have tattoos. Most of the students had good knowledge about HIVAIDS transmission (99.3%) and prevention (92.6%) and they had a good perception of HIV/AIDS. Most specifically, factors associated with HIV/AIDS preventive behavior were gender, knowledge and information from media sources. Male students were more likely to have about twice the preventive behaviors than females (OR=1.9). The samples with a high level of knowledge were more likely to have about twice the preventive behaviors than those with low level of knowledge (OR=2.15). The respondents who had good information from media sources were more likely to have about twice high preventive behaviors than those who had poor information (OR=2.05).

Condom usage among sexually active medical students was 40 percent and so health and sex education in this aspect should be promoted in the most conducive settings preferred by the target group. There is a need to cooperate more with NGOs and peer-educators. Also the promotion of health education via the mass media is needed.

KEY WORDS : MEDICAL STUDENTS / HIV/AIDS PREVENTIVE BEHAVIOR

75 pages

Copyright by Mahidol University

CONTENTS

	Page
ACKNOWLEDGEMENTS	**iii**
ABSTRACT	**iv**
LIST OF TABLES	**viii**
LIST OF FIGURES	**x**
LIST OF ABBREVIATIONS	**xi**
CHAPTER I INTRODUCTION	
1.1 Rationale and Justification	1
1.2 Research Questions	3
1.3 Research Objective	4
1.4 Conceptual framework	5
1.5 Operational definition	6
1.6 Outcomes/Expectation of the study	7
1.7 Limitation of the study	8
CHAPTER II LITERATURE REVIEW	
2.1 HIV/AIDS pandemic	
2.1.1 Global Situation	9
2.1.2 Regional Situation	10
2.1.3 Local Situation	10
2.2 Etiology of HIV/AIDS	11
2.3 HIV transmission and prevention	12
2.4 Adolescent, Youths and HIV	13
2.5 Medical students in Yangon city, Myanmar	14
2.6 Theoretical models	15
2.7 Related studies	21

Copyright by Mahidol University

CONTENTS (cont.)

Page

CHAPTER III RESEARCH METHODOLOGY

3.1 Study design 25
3.2 Study Area and Population 25
3.3 Sample Size determination and sampling procedure 25
3.4 Research instruments for data collection 26
3.5 Pre test 29
3.6 Pre collection procedure 30
3.7 Data analysis 30

CHAPTER IV RESEARCH RESULTS 31

CHAPTER V DISCUSSION 50

CHAPTER VI CONCLUSION AND RECOMMENDATION

6.1 Conclusion 57
6.2 Recommendation 59

REFERENCES 60

APPENDIX 66

BIOGRAPHY 75

Copyright by Mahidol University

LIST OF TABLES

Table		Page
2.1	HBM Construct Chart	20
4.1	Frequency and percentage of respondents by socio-demographic characteristics	33
4.2	Frequency and percentage of the respondents by level of knowledge about HIV/AIDS preventive behavior	34
4.3	Frequency and percentage of the respondents by items of knowledge towards HIV/ AIDS preventive behavior	35
4.4	Frequency and percentage of the respondents by level of perception about HIV/AIDS preventive behavior	36
4.5	Frequency and percentage of the respondents by the items of perception towards HIV/ AIDS preventive behavior	37
4.6	Frequency and percentage of the respondents by level of HIV/AIDS information from person.	39
4.7	Frequency and percentage of the respondents by level of HIV/AIDS information from mass media.	40
4.8	Frequency and percentage of students by the items of source of information about HIV/AIDS preventive behavior	41
4.9	Frequency and percentage of the respondent by social support about HIV/AIDS preventive behavior	42
4.10	Frequency and percentage of students by the social support regarding HIV/AIDS preventive behavior	43
4.11	Frequency and percentage of the respondents by level of HIV/AIDS preventive behavior	44
4.12	Frequency and percentage of the respondents by each HIV/AIDS preventive behavior	45

Copyright by Mahidol University

LIST OF TABLES (cont.)

Table		Page
4.13	Association between socio-demographic factors and HIV/AIDS preventive behavior	46
4.14	Association between knowledge about HIV/AIDS and HIV/AIDS preventive behavior	47
4.15	Association between perception about HIV/AIDS and HIV/AIDS preventive behavior	47
4.16	Association between HIV/AIDS information from person and HIV/AIDS preventive behavior	48
4.17	Association between HIV/AIDS information from mass media and HIV/AIDS preventive behavior	48
4.18	Association between social support about HIV/AIDS and HIV/AIDS preventive behavior	49

Copyright by Mahidol University

LIST OF FIGURES

Figure **Page**

1.1 The study Conceptual Framework … …….. . 5

2.1 Health Belief Model, Sheeran & Abraham, 1995……20

.

Copyright by Mahidol University

LIST OF ABBREVIATIONS

AIDS	Acquired Immuno-deficiency Syndrome
AIHD	Asean Institute for Health Development
HIV	Human Immuno-deficiency Virus
STD	Sexually Transmitted Disease
HBM	Health Belief Model
IDU	Injection Drug User
OR	Odd ratio
BSE	Breast Self-Examination
NGO	Non-Governmental Organization
WHO	World Health Organization
UNICEF	United Nations International Children's Emergency Fund
UNAIDS	United Nations Programme on AIDS

Copyright by Mahidol University

CHAPTER I
INTRODUCTION

1.1 Rationale and Justification

AIDS is the most severe consequence of the infection with Human Immune Deficiency Virus (HIV). HIV/AIDS are invariably fatal disease with no curative drug or vaccine available as yet to treat it and have infected millions of people around the world. Twenty two year after the first clinical evidence of AIDS was reported, it has become the most devastating disease humankind has ever faced. Since the epidemic began, more than 60 million people have been infected with the virus. Globally, HIV/AIDS is the 4th biggest killer.

In many parts of the developing world, the majority of new infection occurs in young adults. About one-third of them currently living with HIV/AIDS were 15-24 years of age. Most of them do not know they carry the virus and many millions more know nothing or too little about HIV to protect themselves against it.

According to the WHO data base, 33.4 million (31.1-35.8 million) of people worldwide were living with HIV in 2008 where 31.3 million in adult age and 2.1 million in children under 15 year. There was an increasing trend of both prevalence and incidence of this global pandemic and the highest risk group for HIV/AIDS is young people. It was estimated that about 6,000 people aged between 15 and 24 get infected with HIV every day (1).

HIV/AIDS was now recognized as a serious threat to the well being of the population all over the world where Myanmar was of no exception. More than 25% of commercial sex workers in Myanmar were infected. That creates a problem when many youth go to sex workers because of Myanmar's conservative sexual environment, often becoming infected.

The very first case of HIV/AIDS in Myanmar was detected in Yangon City and then Myanmar began addressing the HIV/AIDS epidemic in 1991. In order to

Copyright by Mahidol University

response to the threat, Myanmar had initiated widespread HIV/AIDS awareness campaigns using various media.

Regarding providers' responses, HIV/AIDS had been ranked as first among nationally prioritized disease in Myanmar. Furthermore establishments of AIDS/STD control teams in nearly all states and divisions, conducting behavior sentinel surveillance in selected townships, training of health workers and peer educators, testing of all donated blood, and distribution of over 1.5 millions free condoms had been conducted in Myanmar(2).

The prevention of HIV transmission has became one of the most important elements in the works of the World Health Organization (WHO) and many United Nations Organizations such as UNAIDS, UNDP, UNDCP, UNFPA and UNICEF. As no medical cure will be available for AIDS in the foreseeable future and as no vaccine was available to prevent HIV transmission, the UN organizations were responding HIV/AIDS with seven priority program areas such as target condom use and reproductive health; behavioral development and change communication; compassion care and support for people living with HIV/AIDS (PLWHA); reducing the harmful consequences of injecting drug use; expansion of blood supply programs to cover remote areas and rural communities; improved multi-sectoral coordination and enhancement of national NGO capacity and surveillance and research works(3) where the health education program has become a focus of concern.

In 2002, a strategic shift was made in Myanmar by UNICEFT response to HIV/AIDS in order to reduce HIV transmission among young people: prevent mother to child transmission: and reduce the impact of HIV/AIDS on people infected and affected, with special priority accorded to children, young people and mothers(4).

In many countries, universities are a common focus of educational activities. A large number of adolescent people throughout the world attend universities or are in contact with those who do. Adolescence is a crucial phase of life, not only for health education and promotion but also for HIV/AIDS prevention and education. Young men and women in this age group are faced with various development tasks both biologically and psychologically including sexuality. Medical students are also in the age of risk group and they have chances to get HIV infection.

Copyright by Mahidol University

Medical students in every country are the future leaders in health for their countries. There are four medical universities in Myanmar. Of them, two medical universities (university of medicine 1 and 2) are located in Yangon City, which is the largest city and second capital city of Myanmar. Myanmar medical students play an important role in country disease prevention/control and health education programs. It is widely believed that they will improve the health status of Myanmar in the future.

This study aimed to identify HIV/AIDS preventive behavior among one of the high risk groups: university medical students in Yangon City, Myanmar. Knowing the preventive behaviors among university medical students would be very helpful in accessing not only the health status of our country but also in effectiveness of health education activities regarding HIV/AIDS.

1.2 Research Questions

This study has two main research questions as follows:

1. What is the situation of HIV/AIDS preventive behavior among medical university students in Yangon city, Myanmar?
2. What factors are related to their HIV/AIDS preventive behavior?

Copyright by Mahidol University

1.3 Objectives

General Objectives

To study the HIV/AIDS preventive behavior among medical university students in Yangon city, Myanmar.

Specific Objectives

(1) To describe HIV/AIDS preventive behavior among medical university students in Yangon city, Myanmar.

(2) To describe the socio-demographic factors, knowledge about HIV/AIDS, perception of HIV/AIDS and cues to action influencing HIV/AIDS preventive behavior among medical university students.

(3) To indentify the association between these socio-demographic factors, knowledge about HIV/AIDS, perception of HIV/AIDS, cues to action and HIV/AIDS preventive behavior among medical university students.

Copyright by Mahidol University

1.4 Conceptual Framework

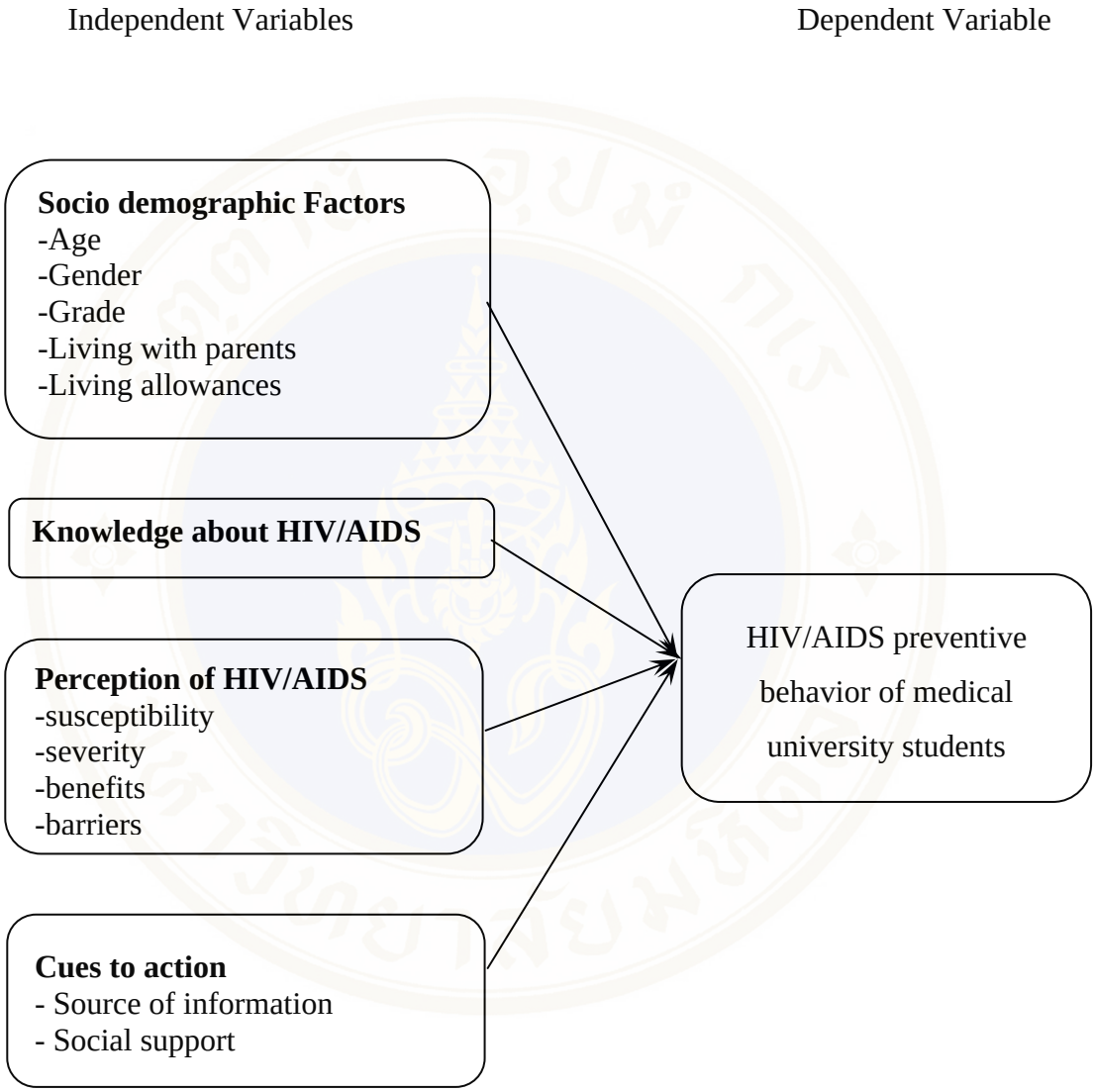

Figure 1.1 The study Conceptual Framework

Copyright by Mahidol University

1.5 Operational definitions

1.5.1 Socio-demographic Factors

Age

In this study, Age refers to current age in completed years of the respondents.

Gender

In this study, Gender means sex of the respondents, either male or female.

Grade

In this study, Grade refers to the level of academic achievement of the students.

Living with parents

In this study, Living with parents refers to where the respondents are current living with parents or not.

Living allowance

In this study, Allowance means among of money received monthly from caretakers of the respondents to spend on living.

1.5.2 Knowledge about HIV/AIDS

In this study it means assessment of overall knowledge, it included causal agent, the mode of transmission, how to diagnose HIV/AIDS, high risk groups, high risk behavior, prevention behavior, safe sex practice and symptoms suspected as case of AIDS regarding respondents knowledge on HIV/AIDS.

1.5.3 Perception of HIV/AIDS

1.5.3.1 Perception of susceptibility

In this study, it is a student's perception of the likelihood of contracting HIV/AIDS.

1.5.3.2 Perception of severity

In this study, it is a student's perception of the serious of the consequences of contracting HIV/AIDS.

Copyright by Mahidol University

1.5.3.3 Perception of benefits

In this study, it is a student's perception of all gains and cost benefits of actually engaging HIV/AIDS the preventive behavior.

1.5.3.4 Perception of barriers

In this study, it means a student's perception of burden and difficulty in engaging HIV/AIDS preventive behavior. Such as not using condom during sexual intercourse, not carrying condom and multiple inconsistent sex partner.

1.5.4 Cues to action

1.5.4.1 Source of information

In this study, it refers to person and mass media which provide HIV/AIDS information for the respondents.

1.5.4.2 Social support

In this study, it refers to the advices that the students get from Teacher, Friends, Relative and Parents.

1.5.5 HIV/AIDS preventive behaviors

In this study, it refers to Respondents' behaviors towards HIV prevention including avoiding sexual intercourse as to prevent HIV/AIDS, condom usage, number of sex partners, interest in HIV/AIDS preventive behavior programs, sharing needles and having tattoo or not.

1.6 Outcomes/Expectation of the study

1.6.1 This study would provide some helpful information for further studies and in making intervention to reduce the risk of transmitting HIV/AIDS in adolescent age.

1.6.2 The results of this study would give the policymaker and University Administration in analyzing the current situation and update the health education about prevention of HIV/AIDS.

Copyright by Mahidol University

1.7 Limitation of the study

1.7.1 The data will be collected by the self administrated questionnaire and so this may cause recall bias.

1.7.2 The study design was cross-sectional descriptive study, therefore, it is not able to describe the true causality between study factors and HIV/AIDS preventive behavior.

Copyright by Mahidol University

CHAPTER II
LITERATURE REVIEW

This chapter covers the literature relating to theoretical approach to preventive behavior and focuses on various variables related to HIV/AIDS preventive behavior used in previous studies.

2.1 HIV/AIDS pandemic
2.1.1 Global situation
2.1.2 Regional Situation
2.1.3 Local situation
2.2 Etiology of HIV/AIDS
2.3 HIV transmission and prevention
2.4 Medical students in Yangon City, Myanmar
2.5 Adolescents, Youths and HIV
2.6 Theoretical models
2.7 Related studies

2.1 HIV/AIDS pandemic

2.1.1 Global Situation

Since the first case of acquired immunodeficiency syndrome (AIDS) were reported in 1981, infection with human immunodeficiency virus (HIV) has grown to pandemic proportions, resulting in an estimated 65 million infections and 25 million deaths. During 2005 alone, an estimated 2.8 million persons died from AIDS, 4.1 million were newly infected with HIV, and 38.6 million were living with HIV. HIV continues to disproportionately affect certain geographic regions (e.g., sub-Saharan Africa and the Caribbean) and subpopulations (e.g., women in sub-Saharan Africa, men who have sex with men (MSM), injection-drug users (IDUs), and sex

Copyright by Mahidol University

workers).An estimated 370,000(330,000-410,000)children younger than 15 years became infected with HIV in 2007.Globally, the number of children younger than 15 years living with HIV increased from 1.6 million (1.4 million-2.1 million) in 2001 to 2.0 million (1.9 million-2.3 million) in 2007. Effective prevention and treatment of HIV infection with antiretroviral therapy (ART are now available, even in countries with limited resources (5). Nonetheless, comprehensive programs are needed to reach all persons who require treatment and to prevent transmission of new infections.

2.1.2 Regional Situation

In Asia, an estimated 5.0 million [4.1 million-6.2 million] people were living with HIV in 2007, including the 380 000[200 000-650 000] people who were newly infected that year. Approximately 380 000 [270 000-490 000] died from AIDS-related illnesses. National HIV infection levels are highest in South-East, where there are disparate epidemic trends (6).The epidemics in Cambodia, Myanmar and Thailand all show declines in HIV prevalence, with national HIV prevalence in Cambodia falling from 2% in 1998 to an estimated 0.9% in 2006(7).However, epidemics in Indonesia (especially in its Papua province), Pakistan, and Vietnam are growing rapidly. In Vietnam, the estimated number of people living with HIV more than doubled between 2000 and 2005(8). New HIV infections are also increasing steadily, although at a much slower pace, in populous countries such as Bangladesh and China.

2.1.3 Local situation

Myanmar is a developing country in the South-East Asia region with the population of 55 millions. The HIV/AIDS epidemic in Myanmar is one of the most deleterious in the South-East Asia region. HIV spread was started in Myanmar by the injection drug users and now it is increasing among commercial sex workers and sexually transmitted disease patients. The cumulative number of all reported HIV positive case indicates that the 25-29 year age group is most affected. It is predicated that AIDS will constitute a major cause of death in young adults during the decade in Myanmar. According to the studies in India and Myanmar indicate that HIV infection rates are higher in younger age groups of at-risk population than older age groups.

Copyright by Mahidol University

Active surveillance for HIV and AIDS started in Myanmar since 1985 and first AIDS case was reported in 1991, an injection drug user. Approximately populations of 55 millions of people live in Myanmar and the national adult prevalence of HIV infection is between 1% to 42%.Myanmar is thus characterized as having a "generalized" epidemic. According to an HIV/AIDS Projection and Demographic Impact Analysis Workshop in September 2007, Myanmar had 240,000 people, including children, living with HIV/AIDS (9). However, the spread of the HIV infection across the country is varying widely by geographical location and by population sub-group (10). The spread of HIV infection in Myanmar continues to increase. Among military recruits tested in Yangon and Mandalay, the prevalence of HIV infection has increased from 0.5% in 1992 to 1.4% in 2000, to 2.09% in 2003. Among blood donors, HIV prevalence has consistently increased from 0.3% in1992, to 1% in 2000, to 1.23% in 2003. The prevalence among ANC women was 2% and 0.5% in Yangon and Mandalay, respectively in 2003 and has remained somewhat constant over the past five years in these major urban areas. Outside major urban areas, the median HIV prevalence in 2003 was 1%. Among IDUs, the median HIV prevalence in six sentinel sites in 2003 was ranging from 23% to 77%. Among commercial sex workers the HIV prevalence in Yangon and Mandalay was 33% and 53.6% respectively in 2003. Among male and female STD patients, median HIV prevalence in the same year was 6% and 12.55%, respectively (11).

2.2 Etiology of HIV/AIDS

Scientists believe a virus similar to HIV first occurred in some populations of chimps and monkeys in Africa, where they’re hunted for food. Contact with an infected monkey’s blood during butchering or cooking may have allowed the virus to cross into humans and become HIV.

How does HIV become AIDS?

HIV destroys CD4 cells (a specific type of white blood cell that plays a large role in helping our body fight disease). Our immune system weakens as more CD4 cells are killed. We can have an HIV infection for years before it progress to AIDS.

Copyright by Mahidol University

To be diagnosed with AIDS, CD4 cells under 200 or experience an AIDS defining complication (12).

2.3 HIV transmission and prevention

There are four modes of HIV/AIDS transmission. They are transmission from sexual intercourse, through HIV contaminated instruments, blood transfusion, and prenatal transmission from mother to fetus.

2.3.1 Sexual transmission

HIV can be transmitted from an infected person to person by sexual routes. Sexual transmission may occur from man to woman, from woman to man, from man to man and also from women to women. Having many sex partners can increase the risk of transmission.

2.3.2 Ways to prevent HIV sexual transmission

Avoid sexual intercourse (abstinence)

Having one sexual partner (uninfected partner), being faithful to each other.

Use condoms correctly throughout sexual penetration. “Throughout” mean from start to finish.

2.3.3 Transmission through contaminated instruments

HIV contaminated instruments are mainly needles, syringes or other skin piercing instruments (e.g. sharp pointed objects). Transmission through HIV contaminated needles and syringes can occur when these utensils are not properly sterilized before re-use. This is a common situation among injecting drug users (IDUs), and in poor countries where needles, syringes and sharp instruments are sharing or re-use without properly sterilized or decontaminated/disinfected in various purpose (e.g. dental surgery and blood infusion).

Copyright by Mahidol University

2.3.4 Transmission through blood

HIV/AIDS transmission through infected blood and blood products occurs during blood tans-fusion without pre testing of blood for HIV. It is common in poor and developing countries especially in rural area where blood banks are not available. In case of emergency, there is no time or no necessary instruments to screen HIV and there is also no pre-saving blood, they have to use urgent blood to save life. Some small risk exists due to technical error/“false negative” and during “window period” where screening show “negative”.

2.3.5 Mother to fetus transmission

This kind of transmission occurs before, during or shortly after delivery. Transmission is from HIV/AIDS infected mothers to their fetus, ART is available to reduce the infection load (13).

2.4 Adolescents, Youths and HIV

Knowing the importance of young people UNAIDS has chosen their 1998 campaign for young people and youth. Diclementi, (14) describes adolescence as follows:

“Adolescence is a time of growth and experimentation, a period marked by establishing autonomy and confronting new challenge. It’s also a period in which many adolescents will initiate sexual behavior that increases the possibility of HIV infection”.

According to WHO, young people are those aged 10-24 years. It is a period of human development and marked by numerous psychological and social together with behavior changes. Since they are still in a phase of decision making and experimenting they can adopt easier safer sex practice than adults. At the same time they are the most vulnerable to HIV infection and other transmitted diseases. In many countries, 60% of all new infections are among 15-24 years old. There are more than one billion adolescents in the world and the number will increase by 20 % over the next 15 years. Out of them an estimated 7000 adolescents acquire the virus each day.

Copyright by Mahidol University

To some extend these high infection rates reflect the preponderance of young people in the world. The global population is young and increasingly so. Between 1960 and 1990 when the world population grew by 75% the population of the young people increased by 99%. Of the world's young people, 85% live in developing countries and this is where over nine tenth of the epidemic now concentrates (15)

Acquired Immunodeficiency Syndrome (AIDS) became the sixth leading cause of death among 15 to 24 years of age in the United States(16).In 2007, it was estimated that more than 5.4 million young people between ages 15 and 24 were infected with HIV. Prevalence rates are highest in sub-Saharan Africa and higher among young women than young men in the region. A high level of HIV prevalence in a country suggests a greater probability that an individual will acquire HIV if he or she engages in risk behaviors than in a country with low prevalence. Regardless of how many people are living with HIV in a country, there are specific sub-populations, due to a number of factors, who will be most at risk to HIV infection. HIV prevention programs, therefore should focus on identifying these sub-populations, understanding the issues that make them "most-at-risk" or "vulnerable" and design interventions accordingly.

The probability that adolescents and young people will acquire HIV depends on many factors, including whether they engage in HIV risk behaviors such as unprotected sex with an infected partner or using non-sterile injecting equipment. Forced or violent sex without a condom also increases the probability of HIV transmission, as does the frequency of unprotected sex, the number of partners, especially concurrent partners, and any co-infection with a sexually transmitted infection (17).

2.5 Medical students in Yangon City, Myanmar

There are two medical universities in Yangon City, Myanmar. There are about 3000 undergraduate and 500 postgraduate students studying in each of the universities. According to our country education system, only the students who matriculated with very high score can join the medical university. There are 6th

Copyright by Mahidol University

academic years to get graduated in this university. In each year, they must passed both theory and practical exams to finish each year, they have to do not only studying but also have to participate in health education programs, doing community health, and distributing health knowledge to their nearest society. Almost all Myanmar people set them as their role models in health and believe that they are future leaders of country health.

2.6 Theoretical models of HIV/AIDS prevention programs

Every HIV prevention program is based on theories about why people change their behaviors. There are four most commonly cited theories in HIV prevention literature: The Health Belief Model (HBM), the AIDS Risk Reduction Model (ARRM), the Stages of Change (SC), and the Theory of Reasoned Action (TRA). These theories may not capture the elements necessary for behavior change in every culture or population. However, they do provide how the behavior change process is believed to occur.

2.6.1 Health Belief Model

The Health Belief Model is the most commonly used theory in health education and health promotion. It is a psychological model that attempts to explain and predict health behaviors in terms of individual decision-making, and proposes that the likelihood of a person adopting a given health-related behavior is a function of that individual's perception of a threat to their personal health, and their belief that the recommended behavior will reduce this threat.

The HBM was developed in the 1950s as part of an effort by social psychologists in the United States Public Health Service to explain the lack of public participation in health screening and prevention program (free and conveniently located tuberculosis screening project)(18).

The underlying concept of the original HBM is that health behavior is determined by personal beliefs or perceptions about a disease and the strategies available to decrease its occurrence. Personal perception is influenced by the whole range of intrapersonal factors affecting health behavior. Later, the HBM has been

Copyright by Mahidol University

adapted to explore a variety of long-and short-term health behaviors, including sexual risk behaviors and the transmission of HIV/AIDS.

2.6.1.1 Theoretical Constructs of HBM

Four perceptions serve as the main constructs of the model: perceived seriousness (perceived severity), perceived susceptibility, perceived benefits, *and perceived barriers*. More recently, other constructs have been added to the HBM; thus the model has been expanded to include cues to action, motivating factors (knowledge), and self-efficacy.

2.6.1.2 Knowledge about HIV/AIDS

According to David Ostrow, et al, knowledge about HIV/AIDS has been seen to play a role in motivating initial behavior change, particularly in person who see themselves as being at relatively low risk and are initially less informed about the disease and result of HIV transmission.

Knowledge alone, however, does not ensure long term sexual behavior change. A study of the self-reported behaviors of Chicago gay men, who were thought to be relatively well informed about HIV/AIDS, showed that level of knowledge was related to several behavioral outcomes when analyzed cross-sectionally. However a later longitudinal analysis of the same cohort failed to show any significant relationships. This study suggested that education that aims solely to increase knowledge would appear to be limited in its ability to induce and maintain modifications in sexual behavior.

2.6.1.3 Perceived Seriousness (Perceived Severity)

The construct of perceived seriousness speaks to an individual's belief about the seriousness or severity of a disease. While the perception of seriousness is often based on medical information or knowledge, it may also come from beliefs a person has about the difficulties a disease would create or the effects it would have on his or her life in general(19). Most of us view the flu as a relatively minor ailment. If we get it, stay home a few days, and get better. However, if you have asthma, contracting the flu could land you in the hospital. In this case, your perception of the flu might be that it is a serious disease. Or, if you are self-employed, having the

Copyright by Mahidol University

flu might mean a week or more of lost wages. Again, this would influence your perception of the seriousness of this illness.

2.6.1.4 Perceived Susceptibility

Personal risk or susceptibility is one of the more powerful perceptions in prompting people to adopt healthier behaviors. In general, it can be said that the greater the perceived risk, the greater the likelihood of engaging in behaviors to decrease the risk. This motivates people to be vaccinated for influenza, to use condoms in an effort to decrease susceptibility to HIV infection, to be vaccinated against hepatitis B, to use sunscreen to prevent skin cancer, and to floss their teeth to prevent gum disease and tooth loss (20)(21)(22).

It is only logical that when people believe they are at risk for a disease, they will be more likely to do something to prevent it from happening. Unfortunately, the opposite also occurs. When people believe they are not at risk or have a low risk of susceptibility, unhealthy behaviors tend to result. This is exactly what has been found with older adults and HIV prevention behavior. Because older adults generally do not perceive themselves to be at risk for HIV infection, many do not practice safer sex (23)(24). This same scenario was found with Asian American college students. They tended to view the HIV/AIDS epidemic as a non Asian problem; thus, their perception of susceptibility to HIV infection was low and not associated with practicing safer sex behaviors (25).

What we have seen so far is that a perception of increased susceptibility or risk is linked to healthier behaviors, and decreased susceptibility to unhealthy behaviors. However, this is not always the case. In college students, perception of susceptibility is rarely linked to the adoption of healthier behaviors (26) even when the perception of risk is high. For example, although college students consider themselves at risk for HIV because of their unsafe sex behaviors, they still do not practice safer sex (27) nor do they stop tanning even though they perceive themselves to be at increased risk for skin cancer (28). Therefore it can be concluded that perception of susceptibility explains behavior in some situation, but not all.

Copyright by Mahidol University

2.6.1.5 Perceived Benefits

The construct of perceived benefits is a person's opinion of the value or usefulness of a new behavior in decreasing the risk of developing a disease. People tend to adopt healthier behaviors when they believe the new behavior will decrease their chances of developing a disease. Would people strive to eat five servings of fruits and vegetables a day if they didn't believe it was beneficial? Would people quit smoking if they didn't believe it was better for their health? Would people use sunscreen if they didn't believe it worked? Probably not.

Perceived benefits play an important role in the adoption of secondary prevention behaviors, such as screenings. A good example of this is screening for colon cancer. One of the screening tests for colon cancer is a colonoscopy. It requires a few days of preparation prior to the procedure to completely cleanse the colon: a diet restricted to clear liquids followed by cathartics. The procedure involves the insertion of a very long, flexible tube instrument with a camera on the end into the rectum to view the length of the colon. The procedure itself is done under anesthesia, so it is not uncomfortable, but it does take time afterward to recover, and the preparation is time consuming. Regardless of the inconvenience, this is presently the best method for early detection of colon cancer, the third leading cause of cancer deaths in the United States. When colon cancer is found early, it has a 90 per cent cure rate. However, only 36% of people over age 50 (who are most at risk) have this screening done(29).What makes some people undergo screening and others not? Among women, those who perceive a benefit from colonoscopy are more likely to undergo screening than those who do not see the screening as having a benefit (30).

Regarding breast cancer, we know that the earlier breast cancer is found, the greater the chance of survival. We also know that a breast self examination (BSE), when done regularly, can be an effective means of early detection. But not all women do BSE regularly. They have to believe there is a benefit in adopting this behavior, which is exactly what was found to be true among black women: those who believed BSE were beneficial did them more frequently (31).

Copyright by Mahidol University

2.6.1.6 Perceived Barriers

Since change is not something that comes easily to most people, the last construct of the HBM addresses the issue of perceived barriers to change. This is an individual's own evaluation of the obstacles in the way of him or her adopting a new behavior. Of all the constructs, perceived barriers are the most significant in determining behavior change (32).

In order for a new behavior to be adopted, a person needs to believe the benefits of the new behavior outweigh the consequences of continuing the old behavior. This enables barriers to be overcome and the new behavior to be adopted.

In trying to increase BSE practices in women, it would seem obvious that the threat of breast cancer would motivate adoption of this early detection practice. Certainly breast cancer is a very seriously disease, one for which women are at risk and for which the perception of threat is high. Even with all of this, the barriers to performing BSE exert a greater influence over the behavior than does the threat of cancer itself (33).

Some of these barriers include difficulty with starting a new behavior or developing a new habit, fear of not being able to perform BSE correctly, having to give up things in order to do BSE, and embarrassment (34).

Barriers also stand in the way of Hispanic women seeking Pap tests, even though they perceive cervical cancer as being serious and believe there are benefits to having a Pap test. The barriers- fear that the test is painful and not knowing where to go for testing- are not outweighed by the benefits of the test or minimized by the seriousness of the disease (35). Among college women, fear of pain and embarrassment are the barriers to Pap tests. It is interesting that these barrier beliefs are greatest among women who have never had a Pap test (36).

2.6.1.7 Cues to Action

In addition to the four perceptions, the HBM suggests that behavior is also influenced by cues to action. Cues to action are events (information), people, or things that move people to change their behaviors: (Factors which cause you to change, or want to change) such as illness of a family member, media reports,

Copyright by Mahidol University

mass media campaigns, advice from others, remainder postcards from a health care provider or health warning labels on a product.

Knowing a fellow church member with prostate cancer is a significant cue to action for African American men to attend prostate cancer education programs(37) Hearing TV or radio news stories about food-borne illnesses and reading the safe handling instructions on packages of raw meat and poultry are cues to action associated with safer food-handling behaviors(38). Having displays on college campus of cars involved in fatal crashes from drunk driving is an example of a cue to action: don't drink and drive.

Table 2.1 HBM Construct Chart

Perceived Susceptibility	An individual's assessment of his or her chances of getting a disease
Perceived Seriousness	An individual's judgment as to the severity of disease
Perceived Benefits	An individual's conclusion as to whether the new behavior is better than what he or she is already doing
Perceived Barriers	An individual's opinion as to what will stop him or her from adopting the new behavior
Cues to action	Those factors that will start a person on the way to changing behavior

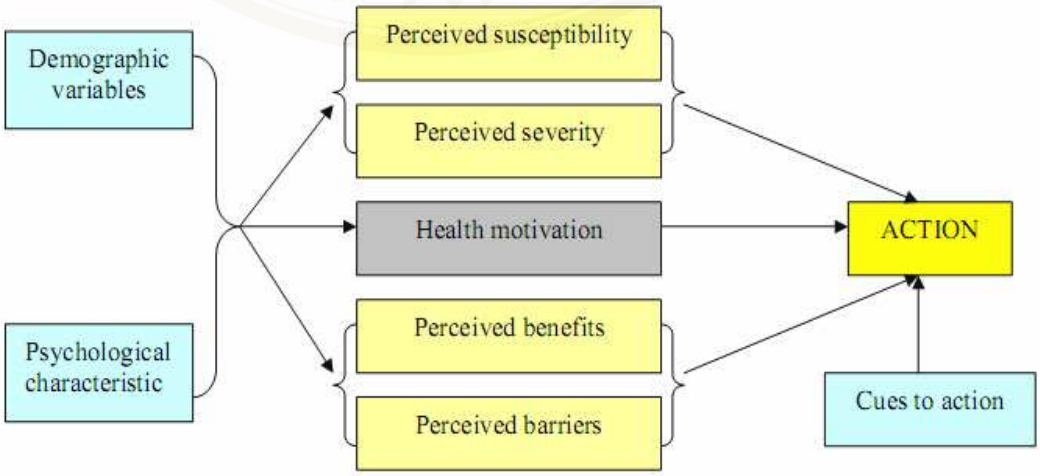

Figure 2.1 Health Belief Model, Sheeran & Abraham, 1995(39)

Copyright by Mahidol University

Since there are many factors that may influence HIV/AIDS preventive behavior. But in this study, according to Health believe model, the perceived susceptibility, perceived severity, perceived benefits, perceived barriers and expanded factors cues to action and knowledge (motivating factor/reinforcing factor) were applied in the conceptual framework, as it was deemed appropriate to study the association of the independent variables to the dependent variable which was the HIV/AIDS preventive behavior.

2.6.1.8 Limitations of Health Belief Model

General limitations of the HBM include: (a) most HBM-based research to date has incorporated only selected components of the HBM, thereby not testing the usefulness of the model as a whole; (b) as a psychological model it does not take into consideration other factors, such as environmental or economic factors, that may influence health behaviors; and (c) the model does not incorporate the influence of social norms and peer influences on people's decisions regarding their health behaviors (a point to consider especially when working with adolescents on HIV/AIDS issues)(40).

2.7 Related studies

2.7.1 Preventive behavior on HIV/AIDS

Previous study among final year medical students in Singapore "Attitude to AIDS and sexual behavior among a cohort study of medical students in Singapore (1999)" (41) which found that most respondents had a good knowledge about AIDS and its route of transmission. Among the 13.7 percent of respondents that were sexually active, it was noted that 35 percent had used the condom before and that only 20 percent had used it in the most recent occasion of sexual intercourse. It was noted that only 40% of them were having sexual intercourse with causal partner. Despite having a high knowledge of AIDS, medical students at the National university of Singapore have a low use of condoms.

Gopali study (42) "HIV/AIDS preventive behavior among vocational student in Nongkeam district, Thailand found that 38.72 percent not to have sex to

Copyright by Mahidol University

avoid HIV/AIDS in terms of being abstinent, 36.84 percent answered that they do not want to have sexual intercourse before they got married. 54.51 percent answered that, they had only one sex partner.

2.7.2 Socio demographic factors

Human are born with biological differences between sexes, either male or female. Their role, responsibilities and feelings are controlled by environment, culture or the society they live. Many literature authors have documented that there is male-female differential in health behavior. According to Mehta (1999) the male-female differential in sexual activities may be explained by the existence of double standards regarding sexual relations in most developing countries. Based on the literature review of existing research literature, it could be summary that gender was likely to be associated with their sexual behavior. Male were more pron to high risk behavior than females. Occupation and education of parents an indicator their financial status which affects their ways of life. Result study of Haohan (1996) indicated that monthly allowance was statically significant correlated with sexual behavior (43) explored risk behavior is high among those with high allowance. Review of existing literature has conclusion that monthly allowance was correlated with behavior among students or adolescents. This showed that students with high monthly allowance have more spending power to visit entertaining places or freedom of spending money for their enjoyment.

Many studies showed that students who lived by themselves or dormitory were free from rules imposed by their family, living atmosphere and environment easily leads to sexual behavior. Haohan found that students who used to stay in dormitory had more sexual relationship than those who lived with parents. Based on the review of existing research literature, student’s parent address was likely to be associated with their behavior.

The result of the study by Aung KK (44) showed that there was association between age and risk behavior on HIV/AIDS. The study showed the older the age, the more risky behavior on HIV/AIDS. The study showed the older the age, the more risky behaviors they have. According to Homenouhak K (45), this study reported that the younger age group had good safe sex intension than the elder age

Copyright by Mahidol University

group. Some adolescent living with their family did not have chance for sexual activities and so there was a statically significant association between safe sex intension towards HIV/AIDS prevention and their living place. Previous Gopali study (42), also found that there was an association between sex and HIV/AIDS preventive behavior.

2.7.3 Knowledge and perception

Different studies showed that although a person has a good knowledge and attitude, also peoples are aware of the basic facts about AIDs but more complex issues are often misunderstood or misinterpreted. The AIDS in the world survey states that misconceptions and misinterpretations are common in AIDS information's programs and become barriers to adapting preventive attitude and behavior. However, there was evidence that even with complete and accurate information, adoption of preventive was far from assured. It was also a well-known fact proved in different studied that the majority of population knew about routes of transmission and prevention, but misunderstanding and false belief are common, as other people believed that by living with HIV/AIDS patient will infect them of these disease. (Tammara, dated not specified).

Zolaiha conducted a cross-sectional study of HIV/AIDS preventive behavior among adolescents (15-18 year of age) in High school of Jakarta, Indonesia (2005).This study showed that the students possess a high level of knowledge about HIV/AIDS. This indicates there was statistically significant association between knowledge and HIV/AIDS prevention behavior of abstinent but did not have association with be faithful, and condom use.

In term of perception, the perception of the students were larger majority high on severity, majority moderate on susceptibility, more than an half moderate in benefit and barrier, and on association with HIV/AIDS prevention behavior of abstinent. There was a significant association between total perception and HIV/AIDS prevention behavior of be faithful, and there was not association between perception and HIV/AIDS prevention behavior of condom use (13). Perception is also the expression of knowledge and understanding which may be the specific thought,

Copyright by Mahidol University

concept or impression. It is the expression that the ability of the brain can interrupt the meaning or understanding about various objects. Perception is also a fundamental learning.

2.7.4 Cues to action

People have a right to get information about diseases and skills and knowledge to protect them-selves. If they do not know about the facts regarding HIV/AIDS, they cannot prevent themselves from diseases. Young people must get the information and social support from their close environment. They must have adequate knowledge before they become sexually active, and the social support need to be regularly reinforced and built on, both in the classroom and beyond.

Studies in Samut Sakhon Province, Thailand have found that the most common source of HIV/AIDS information was through TV, followed radio and newspaper, and the health workers, and lastly by friends and family members. On the other hand studies in Nigeria have shown that the primary information sources of HIV were radio, newspaper followed by friends and health personal. Concerning specifically young people, research has shown that the mass media especially TV, is a powerful source of information but insufficient for change in actual preventive behavior .This study done by Cho Cho Aung (46) found that information from all mass media was not enough to persuade the people to change behavior.

Studies in Thailand and Japan (47) have found that most common source of HIV/AIDS information was through TV, followed by radio and newspaper, and then health workers, and lastly by friends and family members. On the other hand, a study in (48) showed that the primary information sources were radio and newspapers followed by friends and health personals.

Copyright by Mahidol University

CHAPTER III
RESEARCH METHODOLOGY

3.1 Study design

This research was a cross-sectional descriptive study by using self-administered questionnaire, and aims to describe the preventive behavior of medical students regarding HIV/AIDS, as well as to determine socio-demographic characteristics, knowledge, perception and cues to action on HIV/AIDS in the prevention of HIV/AIDS.

3.2 Study Area and Population

The study area was University of medicine (1), Yangon city, Myanmar. The study population comprised of medical university students who were studying in this university. There are about 3,000 medical students studying in this university (49). Participants were excluded if they were not willing to participate in this study.

3.3 Sampling size determination and sampling procedure

The following formula was used for sample size determination.

$$n = \frac{z^2 Np(1-p)}{z^2 p(1-p) + (N-1)d^2}$$

n = sample size

Z = standard normal score at 95% of confidence interval = 1.96

d = allowance for error = 0.06

N = population size = 3,000

p = proportion of preventive behavior = 0.5

Copyright by Mahidol University

$$n = \frac{1.96^2(3000)(0.5)(0.5)}{1.96^2(0.5)(0.5) + 2999(0.06)^2}$$

$$n = 246$$

As two medical universities are similar, two-stage cluster sampling method was used to select one medical university out of two. Then, students in the selected clusters were taken. University of medicine (1) was selected to be the area of my study. The sample size required for this study was 246. To prevent the information loss from incomplete data and withdrawal of participants from this study, the sample size was increased by 10%. Therefore, my study sample size was 272.

3.4 Research instruments for data collection

Data collection was done by using self-administered questionnaires. The questionnaires were prepared in English first and then translated into Myanmar language. The structured questionnaire was composed of 6 main parts as follows:

Part I. Socio-demographic factors

Part II. Knowledge

Part III. Perception

Part IV. Source of information

Part V. Social support

Part VI. Preventive behavior regarding HIV/AIDS

Copyright by Mahidol University

Part I. Socio-demographic variables

This part consisted of 5 questions about age, gender, grades, live with parent, living-allowance.

Part II. Knowledge

This part consisted of 9 questions about Knowledge and a score of 1 given for the correct answer and 0 for the incorrect response. A total of 9 score was given. The level of knowledge was categorized using median score.

High knowledge = 9
Low knowledge = 0-8

Part III. Perception

This part consisted of 21 questions which contained positive and negative statement in perception of susceptibility, severity, benefits and barriers towards HIV/AIDS. The respondents were asked to agree, not sure and disagree about the perception of HIV/AIDS. The score was given 3, 2 and 1 according to the statements as follows.

For positive perception question,

Agree = 3 score
Not sure = 2 score
Disagree = 1 score

For negative perception question,

Agree = 1 score
Not sure = 2 score
Disagree = 3 score

The total maximum score was 63 and minimum score was 21 for 21 questions. Using median score as a cut-off point, the total score of perception was classified to two levels as follows;

High level of perception : the score is from 57 to 63
Low level of perception : the score is from 21to 56

Copyright by Mahidol University

Part IV. Source of information

This part consisted of 8 questions. Five questions regarding HIV/AIDS information were from person source and 3 questions from media source. Applying a four-item index, score were given as follow;

A lot = 3 score
Moderate = 2 score
A few = 1 score
Never = 0 score

The total maximum score from person source was 15 and from mass media source was 9. Minimum was 0 in both. Using median score as a cut-off point, the total score about source of information was classified as follows;

From person source
Much of information = 10 to 15 score
Few of information = 0 to 9 score

From mass media source
Much of information support = 6 to 9 score
Few of information support = 0 to 5 score

Part V. Social support

This part consisted of 4questions and score were given as follow;

A lot = 3 score
Moderate = 2 score
A few = 1 score
Never = 0 score

The total maximum score was 12 and minimum was 0. Using the third quartile as a cut-off point to make more understanding to expression of association between study factor and HIV/AIDS preventive behavior. Because this study used crude odd ratio to show the strength of association and 95% confident interval of odd ratio to show the significant of association. It was classified into two levels as follows;

Copyright by Mahidol University

Good social support	=	9 to 12 score
Poor social support	=	0 to 8 score

Part VI. Preventive Behaviors regarding HIV/AIDS

This part consisted of 7 questions and a score of 1 was given for the correct answer and o for the incorrect response. Total maximum score was 7 for who answer all questions and 5 for who answer “yes” in first preventive behavior question. Minimum was 0 for all students. Then calculated mean of each score and sum all to get total mean score. After that calculated median of the total mean score. Using median of the total means score as a cut-off point, the levels were classified into as follows;

High level of preventive behavior	>	median of total mean score
Low level of preventive behavior	<	median of total mean score

3.5 Pre test

Before data collection, a pre-test was done by the self administered questionnaire using 30 randomly selected students from the university of medicine (2) from Yangon. These questionnaires were enabled any such flaws to be rectified to ensure the validity and reliability of the questionnaire before it was distributed to the target respondents. Reliability of the questionnaire was tested by the using Kuder-Richardson formula 20 (KR20) and Cronbach’s Alpha for the knowledge and perception, respectively. Pretest was done twice because KR 20 and Cronbach’s alpha were very low for the first pretest. Therefore, some questions were revised to make the respondents more understandable. The final pretest results were as follow; KR20=0.56 (for knowledge regarding HIV/AIDS) and Cronbach’s alpha= 0. 78 (for perception regarding HIV/AIDS).

Copyright by Mahidol University

3.6 Data Collection Procedure

After approved from Ethical Committee Board of Mahidol University, data collection was done by using self-administered questionnaires. For protection of human subjects, the investigator carefully explained the purpose of the study, how to answer the questionnaire and told the respondents that the data of their answers would be kept in secret and their right to refuse or withdraw anytime and could return the questionnaire back without giving answer if they felt reluctant to respond some of the questions. The questionnaire was distributed if the respondent was willing to participate in this study and was collected by investigator after finished.

3.7 Data analysis

The data was analyzed by using MINITAB software for descriptive statistical analysis using frequency, percentage and mean, standard deviation was calculated to describe the general characteristics of the respondents. Chi-square test and simple logistic regression were used to test the association between general characteristics, knowledge and perception of HIV prevention and HIV/AIDS preventive behavior. Crude odds ratio was presented to show the strength of the association, and a 95% confidence interval of odds ratio to show the significance of association.

Copyright by Mahidol University

CHAPTER IV
RESEARCH RESULTS

This cross-sectional study was conducted to determine the HIV/AIDS preventive behavior of medical university students in Yangon City, Myanmar. The study population was medical students who are studying in University of Medicine (1) Yangon, aged between 16 and 28 years. The researcher collected data by using self-administered structured questionnaire. Two hundred and seventy two medical students were participated in this study after the purpose of the study had been explained to them and after they signed an informed consent form.

The findings initially described both dependent and independent variables characteristics of the sample and presented in terms of frequency and percentage. The relationships between the different independent variables and preventive behavior of medical students were statistically determined by using Chi-square test and simple logistic regression analysis. Some questions were skipped in socio-demographic factors as the respondents had right to not answer. The results of this study are presented in 7 parts as follows:

Part I. Socio-demographic factors
Part II. Knowledge
Part III. Perception
Part IV. Source of information
Part V. Social support
Part VI. Preventive Behaviors regarding HIV/AIDS
Part VII. Association between study factors and independent variable

Copyright by Mahidol University

Part I: Socio-demographic characteristics

Table 4.1 shows that the socio-demographic characteristics of the students. Majority of the respondents (74.2%) aged 16 to 22 years and 25.8 percent aged 23 to 28 years. Mean age of the respondent was 20.75 years old. Nearly two-third of the respondent (62.9%) was female, while 37.1 percent was male.

With regard to academic education levels, 6.9 percent of the respondents were from 1st; 13.6 percent were from 2nd; 14.7 percent were from 3rd; 15.4 percent were from 4th (Final part 1), 11.4 percent were from 5th (Final part 2) and 37.9 percent were from Final (House surgeon) academic year.

In relation to live with parent, a large majority of the respondents (87.5%) answered “Yes”, only a small percent (12.5%) responded “No”.

In reference to monthly allowance, 57.1 percent of the sample were found to have a low allowance group (rang from 10 USD to 80 USD), while 42.9 percent had high allowance (more than 80 USD).

Copyright by Mahidol University

Table 4.1 Frequency and percentage of respondents by socio-demographic characteristics

Socio-Demographic Characteristics	Frequency n=272	Percent
Age group (year)(n=271)		
16-22	201	74.2
23-28	70	25.8
Median= 21 Max= 28 Min=16		
Gender		
Male	101	37.13
Female	171	62.87
Level of grade		
1st Year	19	6.99
2nd Year	37	13.6
3rd Year	40	14.71
Final part 1	42	15.44
Final part 2	31	11.40
HS	103	37.87
Live with parents		
Yes	238	87.5
No	34	12.5
Allowance per month (USD/ month)(n=240)		
High allowance(>80)	103	42.92
Low allowance(10-80)	137	57.08
Median=80		
Max= 1000 USD Mini=10		

USD= US dollar

Copyright by Mahidol University

Part II: Knowledge about HIV/AIDS Preventive Behavior

The respondents were asked nine questions in order to assess their overall knowledge regarding HIV/AIDS preventive behavior. These were classified into two groups; “High knowledge” and “Low knowledge” according to their total score. The criteria for theses two classifications were based upon whether or not the total score of the respondents were equal to, or less than, the median score, or greater than the median score. Table 4.2 illustrates that 52.6 percent of the respondents had High level of knowledge and 47.4 percent had Low level of knowledge about HIV/AIDS preventive behavior.

Table 4.2 Frequency and percentage of the respondents by level of knowledge about HIV/AIDS preventive behavior

Level of Knowledge	Frequency n	Percentage %
High knowledge	143	52.57
Low knowledge	129	47.43

Score: High knowledge ≥Median, Low knowledge < Median score, Median score = 9

The item analysis showed that almost all of the respondents (99.3%) had good knowledge about transmission of HIV; 92.6 percent knew the best way to prevent HIV infection; 92.3 percent also knew the high risk behavior for HIV infection. However, third-fourth of the respondents (75%) knew the longest time that take people to become full-blown AIDS patients from the time of first infection. More details of the items analysis concerning knowledge about HIV/AIDS preventive behaviors are presented in Table 4.3.

Copyright by Mahidol University

Table 4.3 Frequency and percentage of the respondents by items of knowledge towards HIV/ AIDS preventive behavior

Knowledge Questions n=272	Correct Answer	
	Frequency n	Percent
1. What is the causal agent of HIV/AIDS?	247	90.8
2. Which one is correct about the transmission of HIV?	270	99.3
3. Which kind of test is the best test that we can know whether people get infected with HIV or not?	239	87.9
4. Which one of the following is the best way to prevent HIV infection?	252	92.6
5. Which one of the following groups is at high risk for contracting HIV?	250	91.9
6. Which one of the following is the highest risk behavior for HIV infection?	251	92.3
7. What is the longest time that takes people to become full-brown AIDS patient from time firstly infected with HIV?	204	75
8. What does safe sex practice mean?	245	90.1
9. Which one of the following is the symptom suspected as case of AIDS?	248	91.2

Copyright by Mahidol University

Part III: Perceptions of HIV/AIDS Preventive Behavior

The students were asked 21 questions in order to assess the perception towards HIV/AIDS Preventive Behavior. These perceptions were classified into two groups “Positive perception” and “Negative perception”. For positive perception question, 3 score was given for “Agree”, 2 for “Not Sure” and 1 for “Disagree”. For negative perception question, 3 score for “Disagree”, 2 for “Not Sure” and 1 for “Agree”. Using median as a cut-off point, the scoring system was based upon whether or not the total score of the respondents were equal to, or less than, the Median score, or greater than the Median score. Table 4.4 illustrates that 47.1 percent of the medical students had high perception regarding HIV/AIDS preventive behavior and 52.9 percent had low perception.

Table 4.4 Frequency and percentage of the respondents by level of perception about HIV/AIDS preventive behavior

Level of Perception	Frequency n	Percent
High level of Perception	128	47.1
Low level of Perception	144	52.9

Score: High perception > Median score, Low perception≤ Median score, Median score=56

The items analysis shows that most of the respondents (95.6%) did not agreed that condom usage is a waste of money; 93 percent agreed that multiple sex partners can increase the risk of HIV infection; 92.6 percent also knew that contact with HIV infected body fluids through injuries and wounds can result in HIV infection; 91.1 percent already agreed that AIDS patient can get some opportunistic diseases than other people. However, 50 percent of the respondents accepted refraining from multiple sexual partners can save from HIV infection. More details of the items analysis concerning perception about HIV/AIDS preventive behavior are presented in Table 4.5.

Copyright by Mahidol University

Table 4.5 Frequency and percentage of the respondents by the items of perception towards HIV/ AIDS preventive behavior

Statement/Item n=272	A		NS		D		Mean	SD
	n	%	n	%	n	%		
1. AIDS is a disease that can happen to all people.	216	79.4	11	4	45	16.5	2.63	0.75
2. Contact with HIV infected body fluids with injuries and wounds can get HIV infection.	252	92.6	17	6.3	3	1.1	2.92	0.32
3. Using the sharp instruments and syringes stained with other's blood can get a chance of HIV infection.	232	85.3	36	13.2	4	1.5	2.84	0.41
4. Having sex with someone doesn't know properly without the use of condom can get HIV infection.	244	89.7	27	9.9	1	0.4	2.89	0.32
5. A person with only one unsafe sex practice may not cause HIV infection.	11	4	47	17.3	214	78.7	2.75	0.52
6. Multiple sex partners cannot increase the risk of HIV infection.	12	4.4	7	2.6	253	93	2.88	0.43
7. AIDS is a deadly disease	201	73.9	43	15.8	28	10.3	2.64	0.66
8. AIDS patients will not die before full life-span	23	8.5	71	26.1	178	65.4	2.57	0.64
9. AIDS patient can get some opportunistic diseases more than normal person.	248	91.1	17	6.3	7	2.6	2.88	0.39
10. Even a person is infected with HIV, he/she can work like a normal person.	240	88.2	23	8.5	9	3.3	2.85	0.44

Copyright by Mahidol University

Table 4.5 Frequency and percentage of the respondents by the items of perception towards HIV/ AIDS preventive behavior (cont.)

Statement/Item n=272	A		NS		D		Mean	SD
	n	%	n	%	n	%		
11. AIDS is a curable disease.	15	5.5	39	14.3	218	80.1	2.75	0.55
12. AIDS person can die easily because of opportunistic diseases (eg. TB).	227	83.5	36	13.2	9	3.3	2.8	0.47
13. A person should use condom while having sex with regular partner?	163	59.9	69	25.4	40	14.7	2.45	0.74
14. Consistent condom use can prevent HIV infection.	185	68	74	27.2	13	4.8	2.63	0.57
15. Refraining from multiple sexual partners can save from HIV infection.	136	50	107	39.3	29	10.7	2.39	0.67
16. Refraining from CSW can prevent from HIV infection.	141	51.9	99	36.4	32	11.8	2.40	0.69
17. People feel uncomfortable while using condom with their sexual partners.	81	29.8	141	51.8	50	18.3	1.88	0.68
18. Using condom during sexual relationship is difficult	23	8.5	96	35.3	153	56.2	2.47	0.65
19. Condom usage is wastage of money.	1	0.4	11	4	260	95.6	2.95	0.23
20. Carrying condom when going outside is shameful.	29	10.7	46	16.9	197	72.4	2.61	0.67
21. Buying condom at the shop is shameful.	42	15.4	44	16.2	186	68.4	2.53	0.71

A = Agree, NS = Not sure, D = Disagree

Copyright by Mahidol University

Part IV: Source of information support about HIV/AIDS Preventive Behavior

The respondents were asked eight questions in order to assess the source of information support about HIV/AIDS Preventive Behavior. It was classified into two groups “information from individuals” and “information from mass media”. There are five questions regarding HIV/AIDS information from individuals and there are three questions regarding HIV/AIDS information from mass media. It was sub-divided into 2 groups “much of information” and “few of information”. The criteria for these classifications were based upon the total score of the respondents regarding whether or not the respondent’s answer scores were equal to, or greater than, the total median score, or less than the median score. Table 4.6 shows the frequency and percentage of the respondents by source of information support from individuals and table 4.7 is for media sources.

Table 4.6 Frequency and percentage of the respondents by level of HIV/AIDS information from individuals

Level of HIV/AIDS information from individuals	Frequency n	Percent
Much of information	144	52.9
Few of information	128	47.1

Score: Much ≥ Median, Few< Median, Median score=2, n (total) = 272

Copyright by Mahidol University

Table 4.7 Frequency and percentage of the respondents by level of HIV/AIDS information from mass media

Level of HIV/AIDS information from mass media sources	Frequency n	Percent
Much of information	189	69.5
Few of information	83	30.5

Score: Much≥ Median, Few< Median, Median score=2, n (total) = 272

The items analysis shows that most of the respondents (45.2%) got a lot about HIV/AIDS related information from teachers. Teachers were the main sources for their HIV/AIDS related information according to the results; 42.6 percent of the respondents also got a lot about HIV/AIDS related information from newspapers and booklets; 41.5 percent of the respondents answered they got a lot about HIV/AIDS related information from health personal from health center, community hospital or so on. However, they got least HIV/AIDS related information from their family. Table 4.8 expresses more details of item analysis concerning source of information about HIV/AIDS preventive behavior.

Copyright by Mahidol University

Table 4.8 Frequency and percentage of students by the items of source of information about HIV/AIDS preventive behavior

Statement/Item n=272	A lot %	Moderate %	A few %	Never %	Mean	SD
1. Have you ever gotten HIV/AIDS related information from Teacher?	45.2	42.3	11.8	0.7	2.32	0.71
2. Have you ever gotten HIV/AIDS related information from health personnel from health center, community hospital or so on?	41.5	42.6	14.7	1.1	2.25	0.74
3. Have you ever gotten HIV/AIDS related information from NGOs?	21.7	40.1	21.3	17.9	1.66	0.99
4. Have you ever gotten HIV/AIDS related information from other peer educators	12.9	37.5	40.8	8.8	1.54	0.83
5. Have you ever gotten HIV/AIDS related information from your family?	9.9	37.5	38.2	14.3	1.43	0.86
6. Have you ever gotten HIV/AIDS related information from Newspaper and booklet?	42.6	44.8	12.7	0.4	2.3	0.69
7. Have you ever gotten any HIV/AIDS related information from Television?	37.1	48.1	14.7	0	2.22	0.68
8. Have you ever gotten any HIV/AIDS related information from Radio?	19.1	40.8	29.8	10.3	1.69	0.89

Copyright by Mahidol University

Part V: Social support regarding HIV/AIDS Preventive Behavior

The respondents were asked four questions in order to assess the Soc ial support toward HIV/AIDS preventive behavior. These social supports were classified into two groups: “Good support” and “poor support”. The criteria for these classifications were based upon the total score of the students regarding whether or not the student’s answer scores were equal to, or less than, the third quartile (Q3), or greater than the third quartile. Table 4.9 illustrates that 16.9 percent of the medial student got good information support and 83.1 percent had poor information support.

Table 4.9 Frequency and percentage of the respondent by social support about HIV/AIDS preventive behavior

Level of Social support	Frequency n	Percent
Good social support	46	16.9
Poor social support	226	83.1

Score: High support > Q3, Low support ≤ Q3, Third quartile=6, n(total) = 272

The item analysis shows that just over quartile of the respondents (29.1%) have ever gotten a lot of advices about HIV/AIDS prevention from their teachers; 12.1 percent answered that they have ever gotten a lot of advices about HIV/AIDS prevention from their family and from their friends; only 5.2 percent of the respondents answered they have ever gotten a lot of advices regarding HIV/AIDS prevention from their relative. More details for the social support about HIV/AIDS preventive behavior are shown in Table 4.10.

Copyright by Mahidol University

Table 4.10 Frequency and percentage of students by the social support regarding HIV/AIDS preventive behavior

Statement/Item n=246	A lot %	Moderate %	A few %	Never %	Mean	SD
1. Have you ever gotten any advice about HIV/AIDS prevention from Teacher?	29.1	48.9	15.1	6.9	2	0.85
2. Have you ever gotten any advice about HIV/AIDS prevention from your family?	12.1	40.1	32.7	15.1	1.5	0.89
3. Have you ever gotten any advice about HIV/AIDS prevention from your friends?	12.1	49.3	32.7	5.9	1.7	0.76
4. Have you ever gotten any advice about HIV/AIDS prevention from relative?	5.2	29.8	40.4	24.6	1.2	0.85

Copyright by Mahidol University

Part VI: HIV/AIDS Preventive Behavior

The respondents were asked seven questions in order to access their HIV/AIDS preventive behavior. But the students who answered "Yes" in the 1st question had skipped 2nd and 3rd question, and so five questions to measure their Preventive Behavior. Of the 272 students, 227 students (83.8%) avoid sexual intercourse as a kind of prevention from HIV/AIDS. But 45 students were engaged to sexual intercourse and it was 16.2 percent of the whole. Of the medical university students who claimed sexual experiences, 75.6 percent of the students had only one sexual partner. But 60 percent of those students haven't ever used condoms whenever they had sex. Only 40 percent answered "yes" in term of condom usage whenever they had sexual intercourse.

Even though, more than three quarter of the respondents (76.1%) have ever read sexual education magazine/journal/book and 79.4 have ever listened health education programs to prevent HIV/AIDS on television/radio. Nearly all of the respondents (98.2%) never shared needle injection and 98.1 percent of the respondents don't have tattoo as to prevent HIV/AIDS from injection route.

Table 4.11 Frequency and percentage of the respondents by level of HIV/AIDS preventive behavior

HIV/AIDS preventive behavior	**Frequency n**	**Percent**
Good preventive behavior	**145**	**53.3**
Poor preventive behavior	**127**	**46.7**

Score; Good preventive behavior > median score, Poor preventive behavior < median score,

Copyright by Mahidol University

Table 4.12 Frequency and percentage of the respondents by each HIV/AIDS preventive behavior

Total number of respondents = 272

HIV/AIDS preventive Behavior	Yes		No	
	n	%	n	%
1. Do you avoid having sexual intercourse? If Yes, please skip to question 52.	227	83.8	45	16.2
2. Have you ever had sexual intercourse with only one sexual partner?	34	75.6	11	24.4
3. Have you ever used condom whenever you have sex?	18	40.0	27	60.0
4. Have you ever read sexual education magazine/journal/book?	207	76.1	65	23.9
5. Have you ever listened Health Education programs to prevent HIV on television/radio?	216	79.4	56	20.6
6. Have you ever shared needle injection?	5	1.8	267	98.2
7. Do you have a tattoo?	5	1.8	267	98.1

Part VII: Association between study factors and HIV/AIDS preventive Behavior

Chi-square tests and simple logistic regression were used to identify significant between socio-demographic factors, knowledge, perception, source of information, social support and HIV/AIDS preventive behavior of respondents.

With regard to socio-demographic factors, there was only gender found to be statistically significantly associated with student's HIV/AIDS preventive behavior. Male students were 1.9 times more likely to have high preventive behavior regarding HIV/AIDS than female students (OR=1.9, 95%CI=1.14-3.07). Other factors showed

Copyright by Mahidol University

no statically significant association with HIV/AIDS preventive behavior. The results are shown in Table 4.13.

Table 4.13 Association between socio-demographic factors and HIV/AIDS preventive behavior

Socio-demographic factors	n	HIV/AIDS preventive - behavior		Crude OR	95%CI		P-value
		High (%)	Low (%)		Lower	Upper	
Age group(yrs)							
16-21	164	54.3	45.7	0.93	0.57	1.51	0.755
22-28	107	52.3	47.7	1			
Gender							
Male	1 01	56.4.	43.6	1.9	1.14	3.07	0.013*
Female	171	40.9	59.1	1			
Level of education							
1st year	19	68.4	31.6	1			0.383
2nd year	37	48.7	51.4	0.44	0.14	1.4	
3rd year	40	55.0	45.0	0.56	0.18	1.8	
Final part1	42	54.8	45.2	0.56	0.18	1.7	
Final part2	31	58.1	41.9	0.65	0.19	2.1	
HS	103	49.5	50.5	0.45	0.16	1.3	
Live with parents							
Yes	238	54.2	45.8	0.75	0.37	1.54	0.435
No	34	47.1	52.9	1			
Allowance per month(USD)							
>80(High)	137	51.8	48.2	0.84	0.51	1.41	0.514
≥80(Low)	103	47.6	52.4	1			

*p-value<0.005

Copyright by Mahidol University

Table 4.14 shows the association between levels of knowledge regarding HIV/AIDS and HIV/AIDS preventive behavior. There was a statically significant association between the respondents' knowledge level and HIV/AIDS preventive behavior. The students who had high knowledge have good preventive behavior than those who had low knowledge (p-value=0.002).

Table 4.14 Association between knowledge about HIV/AIDS and HIV/AIDS preventive behavior

Knowledge	n	HIV/AIDS preventive behavior		Crude OR	95%OR		p-value
		High (%)	Low (%)		Lower	Upper	
High	143	62.2	37.8	2.15	1.3	3.5	0.002*
Low	129	43.3	56.6	1			

*p-value<0.01

Table 4.15 shows the association between levels of perception regarding HIV/AIDS and HIV/AIDS preventive behavior. In case of perception, there was no association between perception and preventive behavior (p-value=0.302).

Table 4.15 Association between perception about HIV/AIDS and HIV/AIDS preventive behavior

Perception	n	HIV/AIDS preventive behavior		Crude OR	95% OR		p-value
		High (%)	Low (%)		Lower	Upper	
High	144	50	50	0.78	0.48	1.25	0.302
Low	128	43.7	56.2	1			

Copyright by Mahidol University

Table 4.16 shows the association between HIV/AIDS information from person and HIV/AIDS preventive behavior of medical students. There was also no significant association between HIV/AIDS information from person and their preventive behavior (p-value=0.302). But the students who got much information from person seems to have good preventive behavior than those who got few information from person.

Table 4.16 Association between HIV/AIDS information from person and HIV/AIDS preventive behavior

HIV/AIDS Information from person	n	HIV/AIDS preventive behavior		Crude OR	95%OR		p-value
		High (%)	Low (%)		Lower	Upper	
Much	144	56.3	43.8	1.29	0.8	2.07	0.302
Few	128	50	50	1			

Table 4.17 shows the association between HIV/AIDS information from mass media and HIV/AIDS preventive behavior of medical students. There was statistically significant association between HIV/AIDS information from mass media and their preventive behavior (p-value=0.007*).The students who got much information from mass media were two times more likely to have good preventive behavior than those who got few information.

Table 4.17 Association between HIV/AIDS information from mass media and HIV/AIDS preventive behavior

HIV/AIDS Information from mass media	n	HIV/AIDS preventive behavior		Crude OR	95%OR		p-value
		High (%)	Low (%)		Lower	Upper	
Much	189	58.7	41.3	2.05	1.21	3.47	0.007*
Few	83	40.9	59	1			

*p-value<0.01

Copyright by Mahidol University

Table 4.18 shows the association between social support regarding HIV/AIDS and preventive behavior. There was no significant association between social support and HIV/AIDS preventive behavior. The results are shown in Table 4.18.

Table 4.18 Association between social support about HIV/AIDS and HIV/AIDS preventive behavior

Social support	n	HIV/AIDS Preventive behavior		Crude OR	95% OR		p-value
		High (%)	Low (%)		Lower	Upper	
High	46	60.9	39.1	1.45	0.76	2.77	0.259
Low	226	51.8	48.2	1			

Copyright by Mahidol University

CHAPTER V
DISCUSSION

This cross-sectional study was conducted in the medical students of university of medicine (1), Yangon city, Myanmar. The questionnaire comprised 54 structured questions concerning socio-demographic factors, knowledge about HIV/AIDS, perception of HIV/AIDS, cues to action and HIV/AIDS preventive behavior among medical students. 272 respondents were participated in this study. This study is to describe about HIV/AIDS preventive behavior among medical students, socio-demographic factors, knowledge about HIV/AIDS, perception of HIV/AIDS and cues to action. HIV/AIDS preventive behavior among medical students was the independent variable in this study. The study's aim was to determine the association between HIV/AIDS preventive behavior and the dependent variables such as socio-demographic factors, knowledge about HIV/AIDS, perception of HIV/AIDS and cues to action.

Although many factors may influence preventive behavior of medical students, this study focused on the following selected factors:

Socio-demographic factors

Knowledge

Perception

Source of information

Social support

5.1 Preventive behaviors on HIV/AIDS

In this study, it was found that 53.3 percent of the medical students had high preventive behavior and 46.7 percent had low preventive behavior. Items analysis showed more than eighty three (83.3) percent replied that they avoid having sexual intercourse as a kind of preventing HIV/AIDS. Only 16.2 percent answered they don't

Copyright by Mahidol University

avoid sexual intercourse as to prevent HIV/AIDS. Even though they don't avoid sexual intercourse, 75.6 percent of them have had sex with only one sexual partner. Only 24.4 percent have had sex with more than one partner. But in term of condom usage, this study showed that only 40 percent answered they have ever used condom whenever they have sex. 60 percent haven't ever used condom whenever they have sex. Third-fourth of the students (76.1 %) answered they have ever read sexual education magazine/journal/book and 79.4 percent also replied that they have ever listened HIV/AIDS preventive education programs on television/radio. And 98.2 percent of the respondents answered they have never shared needle injection before and 98.1 percent answered they don't have tattoo.

This study result in preventive behavior was compatible with the previous study in Singapore "Attitude to AIDS and sexual behavior among a cohort of medical students in Singapore" (42) which found that only 13.7 percent of the respondent had engaged in sexual intercourse. It is quite same with this study result (16.2%) since it is a little bit higher. Study in Singapore also noted that the relationship with the most recent sexual partner is a steady boyfriend or girlfriend in about 60% of cases. This study result was 75.6 percent, it was a little higher but quite same.

Study in Singapore was noted only 35% of sexually active respondents used the condom. This study result about condom usage is 40 percent. It might be because of they thought that having sexual intercourse with one sexual partner might not cause HIV/AIDS or it might be also because of even though medical students, according to Myanmar culture, most of the people still think that buying and carrying condom is a kind of shameful. It might be also because of as they are human, they would have two different type of thinking; in general: rational thinking and emotional thinking. Mostly, sexual intercourse is concerned with emotional feeling and it might be because of people think condom usage can reduce sexual pleasure (50). 100% TCP (targeted condom promotion), it was multi-sectoral version of the 100% CUP (condom use program) launched in Myanmar since 2001 was also not very successful (51).

Copyright by Mahidol University

5.2 Association between socio-demographic characteristics and HIV/AIDS preventive behavior

The present study noted that the gender of the medical students has association with their HIV/AIDs preventive behavior. The result showed the male students were more likely to have two time high preventive behavior than female students (p-value=0.013, Crude OR= 1.9).

USAID stated that gender norms may discourage women from asserting control over the timing and circumstances of sex, including negotiation protection against HIV and other sexually transmitted infections (STIs). This is copulated with social norms, held by men and women, in related to masculinity that may encourage male control in sexual decision making (52). It was also compatible with the previous study conducted in Madagascar (53). Female university students were as likely as male university students to say that they would not use condoms with a steady partner. Female were unwilling to use condom with their steady boyfriends. This was that women engaged in unprotected sexual intercourse in steady relationship and in this way, they are exposed to STIs and HIV infection. It might be also because of my structured questionnaires were also not strong enough to measure the actual preventive behavior of medical students and so because of the above facts and factors, that might also lead to man had high preventive behavior than women. Similar previous study, Gopali' study "Preventive behavior on HIV/AIDS among vocational students in Nogkeam District, Thailand (2007)" (41), also found that male student had high preventive behavior on HIV/AIDS than female students. Zolaiha study in Jakarta, Indonesia also found that gender had an association with preventive behavior on HIV/AIDS (13).

Other socio-demographic factors such as age group, grade, living with parents and monthly allowance did not exhibit any association with HIV/AIDS preventive behavior. Otherwise, preventive behavior was not directly related to socio-demographic factors.

Copyright by Mahidol University

5.3 Association between knowledge and HIV/AIDS preventive behavior

According to number and percentage distribution, the level of knowledge on HIV/AIDS, 52.6 percent of the medical students have high level of knowledge, 47.4 percent of the medical students have low level of knowledge on HIV/AIDS. Almost all of the students (99.3%) had correct knowledge for Transmission of HIV. It was compatible with previous study in Singapore "Attitude to AIDS and sexual behavior among a cohort of medical students in Singapore" (42m), it was noted that 94.5% of the medical students in the survey were aware that there are basically 3 ways in which are can contract HIV infection (1) unprotected sexual intercourse with an infected person, (2) infected blood passing into the blood stream (3) infected mother to baby during pregnancy, delivery or through breastfeeding.

More than 90 percent of the medical students answered correctly in almost all knowledge questions about HIV/AIDS. 92.6 percent know the best way to prevent HIV infection; 92.3 percent also know the high risk behavior for HIV infection; 91.9 percent know the high risk group for contracting HIV; 90.81percent know the causal agent of HIV/AIDS; 91.2 percent know the symptoms suspected as case of AIDS; 90.1 percent know the meaning of safe sex practice. However, the third-fourth of the medical students (75%) know the longest time that take people to become full-blown AIDS patient from time firstly infected with HIV and 87.9 percent answered correctly the best test to diagnose HIV. It might be because of these two questions were advanced for lower grade students and these two questions were not generally included in public education programs about HIV/AIDS or these students seem to be poorly informed.

Chi square tests and simple logistic regression analysis showed that there was statistically significant association between knowledge level of the medical students and their HIV/AIDS preventive behavior (p-value=0.002, COR=2.15), that means the student who had high level of knowledge have twice more likely to have high level of preventive behavior than those who had low knowledge. This study was compatible with a study of Zolaiha done in Jakarta, Indonesia about HIV/AIDS preventive behavior among adolescents in high school (13) stated that there was an

Copyright by Mahidol University

association between knowledge and preventive behavior of HIV/AIDS. There was a strong belief that if university students had high knowledge, they would have high preventive behavior of HIV/AIDS if that knowledge may be sufficient to elicit in changes in behavior. It was also a common belief that the mere presence of knowledge about what influences health is sufficient to motivate individuals, it is possible to change their behavior into healthier alternative (54) (55).The population of this study was medical students and they were highest in knowledge about health, prevention and disease control. According to their individual interested in studying and their grade, there might be just a little different in knowledge about HIV/AIDS.

5.4 Association between perception and HIV/AIDS preventive behavior

In this study, it showed that there was no statistically significant association between perception and HIV/AIDS preventive behavior. There was not much difference between percentage of respondents with high level of perception and low level of perception. It showed 47.1 percent had high level of perception and 52.9 percent had low level of perception.

In this study, most of the medical students had positive perception about mode transmission of HIV, HIV and its opportunistic disease and defect, safe sex practice, number of sexual partner and condom usage (Their means score were also high). It might be because of this study population were medical students and generally their knowledge level and perception would be higher than others and no one would be doubt about that facts. Psychologist strongly believed that knowledge and perception are strongly related. Thus, perception is definitely a means of knowledge , however, it is not the only means of knowledge. It is just one of the means of knowledge (56). That means their daily exposure to knowledge of medicine might support their positive aspect of perception to disease prevention including HIV/AIDS.

But although behavior depends on high perception, perception couldn’t transform to behavior, behavior depends mainly on enabling environment to do

Copyright by Mahidol University

desirable behavior and transformation of perception to behavior is very difficult and still challenging for most of the public health problems in the world like non-communicable diseases /HIV-AIDS. Although people had high perception or attitude, they couldn't transform to practice or behavior if there is lack of enabling environments. It can also be compatible with an example of smoking or physical exercise, because almost all people know that smoking can cause harmful effect to human health but still many people are smoking including medical doctors. They know smoking is bad for health but they couldn't quit. Also doing physical exercise regularly is good for health but many people couldn't if there is lack of enabling environment.

5.5 Association between source of information and HIV/AIDS preventive behavior

In this study, there was no statistically significant association between HIV/AIDS information from individuals and preventive behavior (p-value = 0.302). However, medical students who got much of information from individuals were seemed to have a little high preventive behavior than those who got few of information (COR=1.29, 95%CI lower=0.8, upper=2.07). But there was a statistically significant association between HIV/AIDS information from mass media and HIV/AIDS preventive behavior (p-value=0.007). Medical students who got much information from mass media were more than two times more likely to have high preventive behavior than those who got few information from mass media (COR=2.05, 95%COR lower=1.21, upper=3.47).

The result showed that most of the respondents got a lot of information about HIV/AIDS from their teachers, health personnel from health center, community hospital, newspapers and books than public media like television and radio. Very few information were from their family. It might be because of Myanmar strict culture and society, Myanmar people are not opened about sexuality and information. The public media are also strict and not very developed in my country yet, even government had to think about many things before they published sex education program like

Copyright by Mahidol University

HIV/AIDS prevention. Internet accessed was also available in few places and many sites were restricted. Internet was not provided in medical university as learning equipment and as an information sources also. So for the medical students, teachers, books, newspapers, information from their studies and hospitals were main sources about HIV/AIDS. Parents were also not used to explain sex education to their children. Study in Nongkeam District, Thailand showed that there was statistically significant association between media (radio) and preventive behavior on HIV/AIDS (42). Other previous study (13) found that there was no association between source of information and HIV/AIDS preventive behavior. Previous studied in Vietnam found that more than 50 percent of the respondent high school students had poor communication with their parents regarding HIV/AIDS (57).

5.6 Association between social support and HIV/AIDS preventive behavior

In this study, there were no statically significant association between social support and HIV/AIDS preventive behavior. However, the students who got high social support were seemed to have a little high preventive behavior than those who got low information support (COR=1.45, 95%CI lower= 0.76, upper= 2.77).

The result showed that students haven't got much social support from their surroundings. Only 16.9 percent got good social support and 83.1percent are under poor social support after differentiating by median score. But item analysis showed that mostly they got a lot of social support from their teachers followed by their friends and family. But very few were from their relatives.

Copyright by Mahidol University

CHAPTER VI
CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study was carried out to determine the factors of which are associated with HIV/AIDS preventive behavior among medical students in university of medicine (1), Yangon city, Myanmar. The aim of this study was to determine the association between the independent variables and dependent variable such as socio-demographic factors, knowledge about HIV/AIDS, perception of HIV/AIDS and cues to action. The research design of this study was cross-sectional descriptive study. Two hundred and seventy two (272) respondents were participated in this study. Self-administrative questionnaire was used as a research instrument. Data were analyzed by using descriptive statistic and chi-square test.

Majority of the respondents (74.2%) were aged between 16 and 22 years and 25.8 percent aged 23 to 28 years. Median age was approximately 21 years old. Nearly two-third of the respondents (62.9%) was female, while 37.1 percent were male.

With regard to academic education levels, 6.9 percent of the respondents from 1^{st}, 13.6 percent from 2^{nd}, 14.7 percent from 3^{rd}, 15.4 percent from 4^{th} (Final part1), 11.4 percent from 5^{th}(Final part2) and 37.9 percent from Final (House surgeon) academic year.

In relation to live with parent, a large majority of the respondents (87.5%) answered “Yes”, only a small percent (12.5%) responded “No”. In reference to monthly allowance, 57.1 percent of the sample were found to have a low allowance group (rang from 10 USD to 80 USD), while 42.9 percent had high allowance (more than 80 USD).

With regard to knowledge, 52.6 percent of the respondents had high level of knowledge and 47.4 percent had low level of knowledge about HIV/AIDS preventive behavior.

Copyright by Mahidol University

In case of perception, 47.1percent of the medical students had high perception regarding HIV/AIDS preventive behavior and 52.9percent had low perception. In this case, even though they have had high level of knowledge,

According to source of information, 52.9percent of the medial student got much of information from person source and 69.5percent got much information from mass media source. In social support, 16.9percent of the medial student got good social support and 83.1percent got poor social support.

In this study, based on Chi-square tests and simple logistic regression analysis, gender showed statistically significant association with preventive behavior on HIV/AIDS (p-value=0.013). Male medical students were two times more likely to have high preventive behavior than female medical students. Age, grade, living with parents and monthly allowance showed no statistically significant association with HIV/AIDS preventive behavior.

With regard to knowledge of the respondents, using chi-square tests, there was a statistical significant association between knowledge and their HIV/AIDS preventive behavior (P-value was 0.002). Medical students with high knowledge level were two times more likely to have high preventive behavior compared to the medical students with low knowledge level. But perception, source of information and social support had no statistically significant association with HIV/AIDS preventive behavior in this study.

With regard to source of information, it was found that there was statistically association between information gotten from media source and HIV/AIDS preventive behavior (p-value=0.002). Medical students who got good information from media source were two times more likely to have high preventive behavior than those who got poor information from media source.

The result of the study showed that 53.3percent of the medical students have high levels of preventive behavior and 46.7percent have low levels of preventive behavior.

Copyright by Mahidol University

6.2 Recommendation

The most significant findings emerging from this study, therefore, were that only about 40% of the students were sexually active. With regard to where and how they obtained health education information about HIV /AIDS it is interesting to note that parents and NGOs, TV and the Radio, in particular, were less important than, for example, teachers and the print media. The present study was also limited to medical students in Yangon and so the results should be treated cautiously and cannot necessarily be generalized to all adolescents in Myanmar. Accordingly, recommendations from this research relate, first, to future research, and, second, to how health education programs targeting adolescents might be more effectively communicated.

First, with regard to further future research, a more representative cross-section of the adolescent population should be used and any study group should not be limited to the Yangon region. Because the data in this study was gathered by means of any self-administered questionnaire, having regard to the sensitive nature of the topic, additional observation study should also be conducted to confirm the actual preventive behavior of the respondents. Quantitative research methods should be complemented by qualitative research, and in-depth interviews might usefully be utilized to generate a more complete understanding of the factors influencing students' preventive behavior. Further research might also focus on identifying why certain factors such as parents, NGOs, TV and the Radio are not as successful in conveying health education information to adolescents as, for example, other forms of media and teachers.

Meanwhile, for educationalists and health administrators concerned with issues of health education, especially the management and control of HIV/AIDS, this research points to the most effective forms of education and suggests the need to focus on how to make the less effective forms of health education more effective. It is surprising that the respondents gained most information from their teachers rather than their parents and families. Teachers, therefore, need to be aware of their influence and parents should also be aware that their influence is not significantly associated with preventive behavior. This may well be a cause of concern to many parents if they are aware of this. Parents, therefore, also need to be encouraged to find ways to communicate about health education issues more effectively.

Copyright by Mahidol University

REFERENCES

1. Henry J. Kaiser Family Foundation. The global HIV/AIDS Epidemic, HIV/AIDS policy fact sheet. [Online] Available from: http//kff.org. [Accessed 2010 sep 11]
2. Ministry of Health, Department of Health. National AIDS Program (5-10) 2005. [Online] Available from: http//www.searo.who.int.com [Accessed 2010 Oct 25]
3. UNAIDS. The United Nations and Partners Joint Plan of Action on HIV/AIDS in Myanmar Implementation Plan 2002-2003: Overview. Myanmar UNAIDS; 2002.
4. UNICEF. Strategic Framework for Support of Responses to HIV in Myanmar. Myanmar:UNICEF; 2002.
5. Hindawi: Elijah Paintsil. Antiretroviral Therapy in HIV-Infected Children in Resource-Limited Countries. [Online] Available from: http//www. hindawi.com. [Accessed 2010 Dec 2]
6. UNAIDS. Report on global HIV/AIDS epidemic. Geneva :UNAIDS; 2008.
7. UNAIDS, World Health Organization. Report on global HIV/AIDS epidemic. Geneva : UNAIDS; 2007.
8. Ministry of health. HIV/AIDS in Vietnam. Vietnam: the ministry; 2005.
9. HIV/AIDS Projection and Demographic Impact Analysis Workshop in September 2007. [Online] Available from: http//www.cpho.chula [Accessed 2010 Dec 15]
10. UNAIDS report on global HIV/AIDS pandemic; 2006 [Online] Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5531a1.htm [Accessed 2010 Dec 16]
11. UNAIDS report on global HIV/AIDS epidemic; 2008 [Online] Available from: http://www.wilsoncenter.org [Accessed 2010 Dec 16]

Copyright by Mahidol University

12. Mayo Clinic staff. “Causes of HIV/AIDS” [Online] Available from: http://www.mayoclinic.com/health/hiv-aids/DS00005/DSECTION=causes [Accessed 2011 Apr 15]
13. ZOLAIHA. HIV/AIDS prevention behavior among adolescents in High School of Jakarta, Indonesia. [MPHM Thesis in Primary Health Care Management] Nakhonpathom: Faculty of Graduate Study, Mahidol University; 2005]
14. Diclemente Rf.(ed). Adolescence and AIDS : A Generation in Jeopardy. Newbury Park, Ca.Sage; 1992. [Online] Available from: https//www.aidsbs.org [Accessed 2010 Nov 9]
15. AIDS Analysis Asia; Sept.1998. [Online] Available from: http: www.unaids.org [Accessed 2010 Nov 9]
16. TDR Méthodes qualitatives en recherché sociale sur les maladies tropicales. Rapport du matériel didactique. Geneva: UNDP/World. Bank/WHO Special Programme for Research and Training in Tropical; 2002.
17. Kilbourne BW., Buehler J W, Rogers M F. AIDS as a cause of death in children, adolescents and young adults. *Am J Public Health 199;* 80: 499-500.
18. Hochbaum G.M. Public Participation in Medical Screening Programs: A socio-psychological study (Public Health Service Publication No.572). Washington DC: Government Printing Office; 1958.
19. McCormick-Brown, K. Health Belief Model. 1999 [Online] Available from http://hsc.usf.edu/~kmbrown/Health_Belief_Model_Overview.htm.[Accessed 2010 Nov 15]
20. Chen J.K., Fox, S.A., Cantrell, C.H., Stockdale, S.E., Kagawa-Singer M. Health Disparities and prevention: Racial/ethnic barriers to flu vaccinations. Journal of Community Health. 2007. 32 (1): 5-20.
21. Belcher, L., Sternberg, M.R., Wolotski, R.J., Halkitis, P., Hoff, C.Condom use and perceived risk of HIV transmission among sexually active HIV positive men who have sex with men. AIDS Education and Prevention. 2005; 17 (1), 79-89.
22. de Wit, J.B.F., Vet, R., Schutten, M., van Steenbergen, J. Social-cognitive determinants of vaccination behavior against hepatitis B: An assessment

Copyright by Mahidol University

among men who have sex with men. *Preventive Medicine*. 2005; 40 (6), 795-802.

23. Rose M.A. Knowledge of human immunodeficiency virus and acquired immunodeficiency syndrome, perception of risk, and behaviors among older adults. Holistic Nursing Practice. 1995 10 (1), 10-17.
24. Maes C.A., Louis, M. Knowledge of AIDS, perceived risk of AIDS, and at-risk sexual behaviors of older adults. The Journal of the American Academy of Nurse Practitioners.2003; 15 (11), 509-516.
25. Yep G.A. HIV prevention among Asian American college students: Does the Health Belief Model work? Journal of American College Health,1993*;* 41 (5): 199-205.
26. Courtenay, W.H. College men's health: An overview and call to action. Journal of American College Health. 1998; 46, 279-87.
27. Lewis J.E., Malow R.M . HIV/AIDS risks in heterosexual college students, Journal of American College Health. 1997*;*45(4): 147-55.
28. Lamanna L.M. College students' knowledge and attitudes about cancer and perceived risks of developing skin cancer. Dermatology Nursing. 2004; 16 (2), 161-76.
29. Hospital. Colonoscopy promoted during colorectal cancer awareness month. 2006 [Online] Available from: http://www.nyp.org/news/health/060322.html. [Accessed 2010 Nov 29]
30. Frank D., Swedmark J., Grubbs L. Colon cancers screening in African American women. ABNF Journa. 2004; 15 (4), 67-70.
31. Graham, M.E. Health beliefs and self breast examination in black women, Journal of Cultural Diversity, 2002*;* 9 (2): 49-54.
32. Janz, N.K., & Becker, M.H. The Health Belief Model: A decade later, *Health Education Quarterly*. 1984; 11(1), 1-47.
33. Champion V. Instrument for breast cancer screening behaviors. *Nursing Research.* 1993*;* 42, 139-143.
34. Umeh K., Rogan-Gibson, J. Perception of threat, benefits, and barriers in breast self-examination amongst young asymptomatic women. British Journal of Health Psychology. *2001;* 6 (4), 361-673.

Copyright by Mahidol University

35. Byrd, T.L., Peterson, S.K., Chavez, R., Heckert, A. (Cervical cancer screening beliefs among young Hispanic women. Preventive Medicine. 2004; 33 (2): 192-198.

36. Burak L.J., Meyer, M. Using the Health Belief Model to examine and predict college women's cancer screening beliefs and behavior. Health Care for Women International. 1997; 18(3): 251-63.

37. Weinrich S., Hodlfor, D., Boyd M., Creanga D., Cover K., Johnson A., Frank-Stromborg, M., Weinrich M. Prostate cancer education in African American churches. *Public Health Nursing, 1998;15 (*3): 188-95.

38. Hanson, J.A., Benedict, J.A. Use of Health Belief Model to examine older adults' food-handing behaviors. *Journal of Nutrition Education. 2002; 34*, 525-30.

39. Sheeran P. Abraham C. The Health Belief Model in Predicting Health Behavior. Buckingham: Open University Press; 1995.

40. Denison J .Behavior Change: A summary of Four Major Theories, Family Health International. 1996 [Online] Available from : http://ww2.fhi.org/en/aids/aidscap/aidspubs/brhres/bcr4thro.html [Accessed 2011 Jan 8]

41. Singh K, Fong YF, Ratnam SS. Attitude to AIDS and sexual behavior among a cohort of medical students in Singapore. [Online] Available from : http://smj.sma.org.sg/3301/3301a 9.pdf [Accessed 2011 Mar 10]

42. Gopali's study. "Preventive behavior on HIV/AIDS among vocational students in Nongkeam District, Thailand". [MPHM Thesis in Primary Health Care Management] Nakhonpathom: Faculty of Graduate Study, Mahidol University; 2007.

43. Aboagye-Kwarteng T, Modic R. Community action on HIV, A Resource Manual for HIV Prevention & Care. Australia Australian Agency for International Development; 1995.

44. Aung KK. Risk Behaviors on HIV/AIDS among high school students in Insein township, Yangon, Myanmar. [M.P.H. Thesis in Public Health International] Bangkok: Faculty of Graduate Studies, Mahidol University; 2009.

45. Homenouhak K. Safe sex intension toward HIV/AIDS prevention among high school students of Khammouane province, LAO P.D.R. [M.P.H.M. Thesis

Copyright by Mahidol University

in Public Health Care Management] Nakhonpathom: Faculty of Graduate Studies, Mahidol University; 2009.

46. Cho C A. Factors underlying condom use among male Myanmar migrant workers in Samut Sakhon Province,Thailand. [M.P.H Theisis in Health Promotion]. Bangkok:Faculty of Graduate Studies, Mahidol University; 2002.
47. Kitaura H, et al. Knowledge and attitude of Japanese dental care workers toward HIV related Disease. J Dent 1997; 25(3-5):279-83.
48. Uch C, et al. Extramarital Relation and Perception of HIV/AIDS in Nigeria. Health Transit Rev 1994; 4(2): 111-25.
49. University of medicine 1,Yangon, Myanmar [Wikipedia]
50. Condom usage and sexual pleasure: [Online] Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2410083/ [Accessed 2011 Apr l5]
51. Experiences of 100% condom use programme in selected countries of Asia. [Online] Available from: http://www.wpro.who.int/NR/rdonlyres/CDB9792C-3815-44CD-A285-6D28BA88298E/0/100_condom_program_experience.pdf [Accessed 2011 Apr 7]
52. USAID Gender and HIV/AIDS overviews. Online available from ; http://www.usaid.gov/our_work/global_health/aids/TechAreas/prevention/gender.html [Accessed 2011 Mar 15]
53. Rahamefy OH, Rivard M, Ravaoarinoro Met. al. Sexual behavior and condom use among university students in Masagascar. Journal of social aspects of HIV/AIDS. 2008; 5(1):28=35 [Online] Available from: http://ufh.netd.ac.za/jspui/bitstream/10353/235/1/Majara%20thesis.pdf [Accessed 2011 Mar 9]
54. Aung KK. Risk behavior on HIV/AIDS among high school students in Insein township, Yangon, Myanmar. [M.P.H. Thesis in Public Health International] Bangkok : Faculty of Graduate studies, Mahidol University ; 2009.
55. Khin PPN. Factors related to HIV risk behaviors among Myanmar migrant sexually active women. [M.P.H Thesis in public Health Technology] Bangkok: Faculty of Graduate Studies, Mahidol University; 2006.

Copyright by Mahidol University

56. Anushka' Blog. [Online] Available from; http://theliteraturemachine.com/anushka/2011/01/31/the-relationship-between-perception-and-knowledge/ [Accessed 2011 Apr 8]

57. Pimsurang Taechaboonsermsak, Luu Ho Thanh Tuan, Suporn Apinuntavech. "Factors associated with HIV/AIDS preventive behavior among high school students in Dongda District, Hanoi" [Online] Available from: http://thailand.digitaljournals.org/index.php/JPH/article/view/2875 [Accessed 2011 May 10]

Copyright by Mahidol University

APPENDIX

Copyright by Mahidol University

SELF ADMINISTERED QUESTIONNAIRE ON HIV/AIDS PREVENTIVE BEHAVIOR

Questionnaire Identification Number | | | |

Introduction: My name is Dr. Thit Min Swe. I'm a post-graduate student of Primary Health Care Management in Mahidol University, Thailand. I'm going to distribute these self administered questionnaires to medical students here in order to find HIV/AIDS preventive behavior among medical university students.

Confidentiality and consent: I'm going to ask some particular questions. Your answers are completely confidential. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. Please try to answer all of the questions. Your honest answers to these questions will help us better understand what students think, say and do about HIV/AIDS. We would greatly appreciate your help in responding to this survey. The survey will take about 30 minutes. Would you be willing to participate?

_____

(Signature of Interviewee)

Copyright by Mahidol University

PART (I) GENERAL CHARACTERISTICS OF THE RESPONDENT

Please answer all questions. Please write an appropriate numbers for No.1/No.6 and put the mark ☐ in the appropriate box to answer the question for multiple choice.

1. How old are you? (Age in completed years) _____ years old

2. What is your gender?
☐ Male
☐ Female

3. What is your Grade? (Academic year)
☐ 1st year ☐ 2nd year ☐ 3rd year ☐ Final part1 ☐ Final part2 ☐ HS

4. Live with parents?
☐ Yes
☐ No

5. Monthly allowance (Kyat) ☐☐☐☐☐☐☐☐

Copyright by Mahidol University

PART (II) Knowledge about HIV/AIDS

Please put the mark ☐ in the appropriate box ☐ to answer the question

6. What is the causal agent of HIV/AIDS?

☐ 1.Bacteria ☐ 2.Virus ☐ 3.Fungus ☐ 4.Parasite

7. Which one is correct about the transmission of HIV?

☐ 1.By hugging a person with a person infected with HIV

☐ 2.By using drinking glasses and utensils used by a person infected with HIV

☐ 3.By having sexual intercourse without condom with a person infected with HIV

☐ 4.By being bitten by a mosquito after it has just bitten a person infected with HIV

8. Which kind of test is the best test that we can know whether people get infected with HIV or not?

☐ 1.By taking X-ray examination to the whole body

☐ 2.By taking urine teat at any time

☐ 3.By taking blood test after sexual intercourse

☐ 4.By taking blood test at least 3 months after the risk behavior

9. Which one of the following is the best way to prevent HIV infection?

☐ 1.By having sexual intercourse with virgin

☐ 2.By using condom everytime having sexual intercourse

☐ 3.By taking birth control pills

☐ 4.By reducing the number of sexual partners

Copyright by Mahidol University

10. Which one of the following groups is at high risk for contracting HIV?

☐ 1.Commercial sex workers who consistently use condom

☐ 2.MSM (Men who have sex with men) who consistently use condom

☐ 3.People injecting drug who do not share needles and syringes

☐ 4.Young people who do not use condoms with plural partners

11. Which one of the following is the highest risk behavior for HIV infection?

☐ 1.Individual's behavior of going to karaoke bars and nigh club

☐ 2. Individual's personal hygienic behavior

☐ 3. Individual's sexual behavior

☐ 4. Individual's drinking behavior

12.What is the longest time that takes people to become full-brown AIDS patient from time firstly infected with HIV?

☐ 1. 2 weeks ☐ 2. 3 weeks

☐ 3. 6 months ☐ 4. 6-10 year

13. What does safe sex practice mean?

☐ 1.Having sexual intercourse without condom, with a healthy looking partner

☐ 2.Being faithful to the single partner each other

☐ 3.Cleaning sex organ immediately after sexual intercourse without condom

☐ 4.All of the above

14. Which one of the following is the symptom suspected as case of AIDS?

☐ 1.By decreasing weight more than 10% of body weight without any reason

☐ 2.By getting headache and fever for 2 weeks

☐ 3.By having diarrhea for 3 days

☐ 4.By yellow discoloration of the skin and sclera

Copyright by Mahidol University

PART(III) Perception about HIV/AIDS

No	Statement	Agree	Not sure	Disagree
15	AIDS is a disease that can happen to all people.			
16	Contact with HIV infected body fluids with injuries and wounds can get HIV infection.			
17	Using the sharp instruments and syringes stained with other's blood can get a chance of HIV infection.			
18	Having sex with someone doesn't know properly without the use of condom can get HIV infection.			
19	A person with only one unsafe sex practice may not cause HIV infection.			
20	Multiple sex partners cannot increase the risk of HIV infection.			
21	AIDS is a deadly disease.			
22	AIDS patients will not die before full life-span.			
23	AIDS patient can get some opportunistic diseases more than normal person.			
24	Even a person is infected with HIV, he/she can work like a normal person.			
25	AIDS is a curable disease.			
26	AIDS person can die easily because of opportunistic diseases (eg. TB).			
27	A person should use condom while having sex with regular partner?			
28	Consistent condom use can prevent HIV infection.			

Copyright by Mahidol University

No	Statement	Agree	Not sure	Disagree
29	Refraining from multiple sexual partners can save from HIV infection.			
30	Refraining from CSW can prevent from HIV infection.			
31	People feel uncomfortable while using condom with their sexual partners.			
32	Using condom during sexual relationship is difficult.			
33	Condom usage is wastage of money.			
34	Carrying condom when going outside is shameful.			
35	Buying condom at the shop is shameful.			

Copyright by Mahidol University

PART (IV) Source of information

Please mark ( ) in the column you agree.

No	Questions	A lot	Moderate	A few	Never
36	Have you ever gotten HIV/AIDS related information from Teacher?				
37	Have you ever gotten HIV/AIDS related information from health personnel from health center, community hospital or so on?				
38	Have you ever gotten HIV/AIDS related information from NGOs?				
39	Have you ever gotten HIV/AIDS related information from other peer educators?				
40	Have you ever gotten HIV/AIDS related information from your family?				
41	Have you ever gotten HIV/AIDS related information from Newspaper and booklet?				
42	Have you ever gotten any HIV/AIDS related information from Television?				
43	Have you ever gotten any HIV/AIDS related information from Radio?				

Copyright by Mahidol University

PART (V) Social support

Please mark ( ) in the column you agree.

No	Questions	A lot	Moderate	A few	Never
44	Have you ever gotten any advice about HIV/AIDS prevention from Teacher?				
45	Have you ever gotten any advice about HIV/AIDS prevention from your family?				
46	Have you ever gotten any advice about HIV/AIDS prevention from your friends?				
47	Have you ever gotten any advice about HIV/AIDS prevention from relative?				

PART (VI) HIV/AIDS PREVENTIVE BEHAVIOR

No	Questions about preventive behavior	Yes	No
48	Do you avoid sexual intercourse? If “yes” skip to question 51		
49	Have you ever had sexual intercourse with only one sexual partner?		
50	Have you ever used condom whenever you have sex?		
51	Have you ever read sexual education magazine/journal/book?		
52	Have you ever listened Health Education programs to prevent HIV on television/radio?		
53	Have you ever shared needle injection?		
54	Do you have a tattoo?		

Copyright by Mahidol University

BIOGRAPHY

NAME	Dr. Thit Min Swe
DATE OF BIRTH	March 20, 1987
PLACE OF BIRTH	Thayet, Megway Division, Myanmar
INSTITUTION ATTENDED	University of Medicine I, Yangon, 2004-2009, Myanmar Bachelor of Medicine and Bachelor of surgery M.B., B.S. Mahidol University, 2010-2011, Thailand Master of Primary Health Care Management
HOME ADDRESS	No.24 (A), Inya myaing street, Yangon, Myanmar Tel. +95-1-526371 E-mail: thitminswe@gmail.com

Copyright by Mahidol University