

**KNOWLEDGE ABOUT HIV/AIDS TRANSMISSION AMONG
FEMALE YOUTH IN LAO P.D.R**



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(POPULATION AND REPRODUCTIVE HEALTH RESEARCH)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY**

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entitled

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the degree of Master of Arts (Population and Reproductive Health Research)

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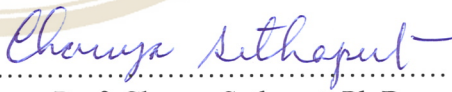
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Saiyadeth Chanthavong

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M.A. (POPULATION AND REPRODUCTIVE HEALTH RESEARCH)

THESIS ADVISORS: PIMONPAN ISARABHAKDI, Ph.D.,
CHANYA SETHAPUT, Ph.D.**ABSTRACT**

This study aims to identify the knowledge on HIV/AIDS transmission as well as determine effective sources of information on HIV/AIDS among female Laotian youth. Data for this study is derived from the Lao Reproductive Health Survey in 2000, conducted by the National Statistical Centre of Lao P.D.R. The analysis includes 4590 females aged 15-24 years. The majority of them never married and live in rural areas. Approximately one-third of the sample had no education.

It was found that only 62 % of female youth in this study have heard about HIV/AIDS. The HIV mode of transmission that respondents knew the most was through sexual intercourse, while mother to child was the least known by female youth. Youth in the older age group and those living in urban areas knew more about HIV/AIDS than those who were younger and lived in rural areas. The respondents who had higher education had greater knowledge of HIV transmission than those who had a lower educational level. The respondents who had heard about HIV/AIDS were most likely to hear about it through radio, television, health workers, and friends/relatives. Newspaper/magazine, school teachers and posters were mentioned by less than 20 % of them.

Multiple regression analysis was used to determine factors that related to HIV transmission knowledge among the 2844 females who had heard of HIV/AIDS. It was found that only the level of education was statistically related to knowledge of respondents. Controlling for socio-demographic characteristics, it was found that the most effective sources of information about HIV/AIDS, which contributed to the increase in HIV transmission knowledge of female youths were posters, school teachers, television, and health workers.

The results indicate that education is a significant factor related to HIV knowledge of female youth. Interpersonal communication such as teachers and health workers were also effective sources of information among female Laotian youth. The mass media campaign for HIV/AIDS prevention among youth could also be integrated in school curriculum and community based programs through health workers.

**KEY WORDS: FEMALE YOUTH / HIV/AIDS TRANSMISSION KNOWLEDGE /
SOURCE OF INFORMATION / LAO P.D.R**

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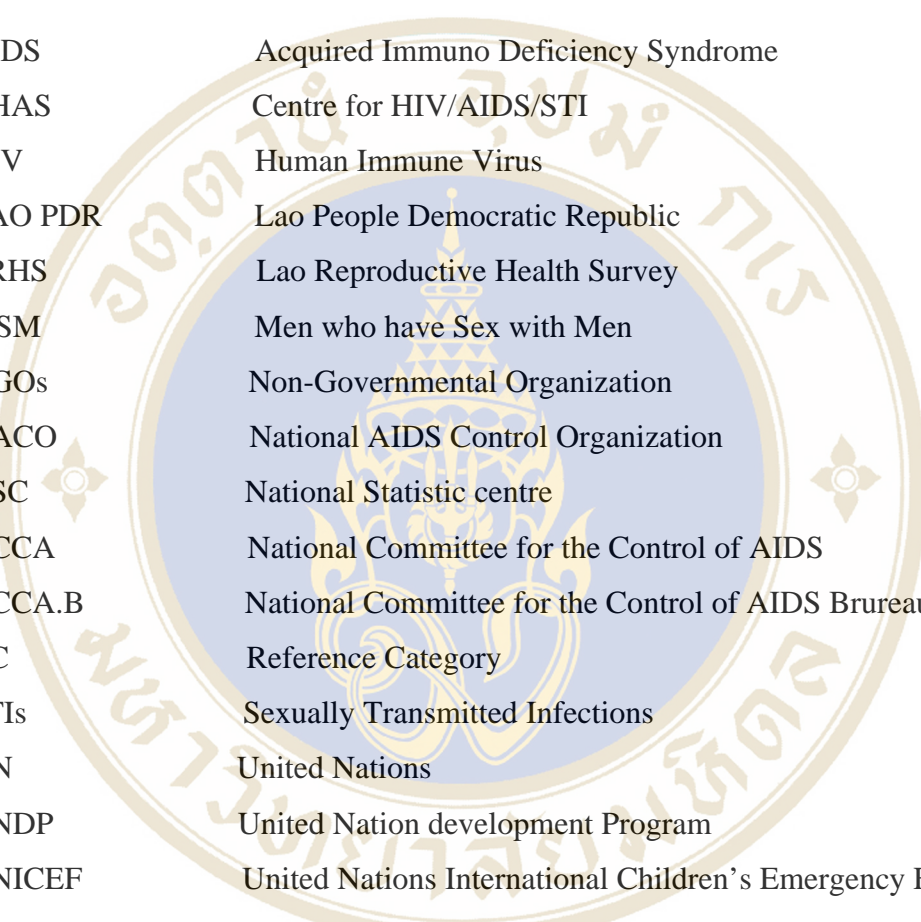
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LIST OF ABBREVIATIONS



AIDS	Acquired Immuno Deficiency Syndrome
CHAS	Centre for HIV/AIDS/STI
HIV	Human Immune Virus
LAO PDR	Lao People Democratic Republic
LRHS	Lao Reproductive Health Survey
MSM	Men who have Sex with Men
NGOs	Non-Governmental Organization
NACO	National AIDS Control Organization
NSC	National Statistic centre
NCCA	National Committee for the Control of AIDS
NCCA.B	National Committee for the Control of AIDS Brureau
RC	Reference Category
STIs	Sexually Transmitted Infections
UN	United Nations
UNDP	United Nation development Program
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization

CHAPTER I

INTRODUCTION

1.1 Background of the study

1.1.1 Global overview

The first reports of acquired immunodeficiency syndrome (AIDS) in 1981 in the United States, HIV infection has reached pandemic proportions, resulting in more than 65 million infections and 25 million deaths worldwide. The global HIV epidemic has emerged as an unavoidable challenge to public health, development, and human rights. In countries most severely affected by HIV, it has eroded improvements in life expectancy. More than 95 percent of these new infections were in low and middle income countries. Eleven thousand persons per day become new cases infected from HIV. Among these, half of HIV infections are women, and 40 percent are young people (15–24 years old). Of the estimated 37 million adults living with HIV worldwide, nearly 18 million are women. However, young people aged 15–24 are not only the most threatened globally accounting for 40 percent of new HIV infections but also potentially the most likely group to influence the future course of the epidemic. An estimated 2 million youth aged 15–24 live in the Southeast Asia. Early sexual debut and risky sexual behaviors are contributing to HIV transmission among the youth in this region (HIV/AIDS in the South East Asian region: WHO-SEARO, 2007).

1.1.2 Situation of HIV/AIDS in Lao PDR

In Lao PDR, first HIV case was identified in 1990, and the first AIDS case was identified in 1992. From case reports in 14 out of 18 provinces and from 98,063 blood samples test, cumulative number from 1990 to 31 December 2003, there were 1,212 HIV positive, 670 AIDS cases and 482 persons died of AIDS. The most affected people are between 20-35 years old, and the main route of transmission is heterosexual

between women and men (mid term review in the implementation of HIV/AIDS/STI for NCCAB for 2002-2005, and Report on June 2007, Vientiane Lao P.D.R). The official cumulative number of HIV infected notification was 2,400, of whom 1,523 were known to be AIDS cases and 775 had already died, 58.0 percent of reported HIV cases were male and 42.0 percent female. More than 50.0 percent of infected are between 20 and 39 years old. The major mode of transmission of HIV infection in Lao PDR is through heterosexual intercourse (85 percent) (AIDS Period: January 2006 December 2007). Similarly, about STIs in female sex workers at Vientiane Municipality the percentage of transmission is quite high for Chlamydia is (34.8 percent) and gonococcal infection is 42.0 percent (Behavioral Surveillance survey 2000-2001)

1.2 Lao PDR response in combating HIV/AIDS

1.2.1 Government response

The response to HIV/AIDS in Lao PDR is coordinated by the National Committee for the Control of AIDS (NCCA). The NCCA was established in 1988 and restructured in 2003. The first comprehensive national STIs/HIV/AIDS policy was approved by the NCCA in December 2001 and revised in 2005. The national policy has served as the guideline for the development of the national strategy on STIs/HIV/AIDS. The national policy strongly encourages a multicultural response to STIs/HIV/AIDS. Several ministries and mass organizations have been many actively involved in the national STI/ HIV/AIDS programme also under the Ministry of health (National Strategic and Action Plan on HIV/AIDS/STIs 2006-2010).

1.2.2 HIV/AIDS Prevention Program in Lao P.D.R

The government of Lao PDR has initiated many programmes related to youth activity. For example, peer group has been used to disseminate correct information about STIs and HIV/AIDS to labors in factories, supported by international organizations such as UNICEF, WHO. The government has declared the national policy strongly encourages a multisectoral response to STIs and HIV/AIDS. Several line ministries and mass organizations have been actively involved in the national STIs

and HIV/AIDS programmes including the ministries of health, education, information and culture, youth union, and labour and social welfare and agriculture.

1.3 Problem identification and justification

HIV/AIDS is a serious global problem and also an emerging health concern all over the world. Every country is fighting HIV/AIDS, as well as Lao P.D.R which is classified as a low prevalence country. However, the HIV infection rate is increasing; HIV prevalence among sex workers in Lao PDR has doubled during 2001-2004 from 0.9 percent to 2 percent (National Sentinel Surveillance, Rounds 1&2). In addition, the second round of sentinel surveillance in 2004 found 3.3 percent and 3.9 percent HIV prevalence in two provinces of respectively. Fifty percent of clients of sex workers were found to be married. In 2005, the majority of new STIs infections were found in married men and women (CHAS 2006).

However, The STIs infection rate, in particularly in Chlamydia (34.8 percent) and gonorrhoea (42 percent) were report in 2000-2001 Behavioral Surveillance survey. These are only some of the factors which could lead to a rapid escalation of the HIV infection in Laos. The HIV prevalence is still relatively low with the cumulative number of reported cases of HIV infection from 1990 to December 2005 at 1,827, of which 1,069 were AIDS cases and 637 have already died. The HIV infection rate in men is 60 percent of the total reported cases and 40 percent in women. The infection rate of women has increased in comparison to figures in previous years. The percentage of reported HIV infection cases in women was 38 percent in 2003; 39 percent in 2004 and 40 percent in 2005. The main mode of HIV+ transmission is through heterosexual intercourse, and temporary labour migrants who have worked in neighboring countries constitute the majority of the infected. Most HIV reported cases are between 20 to 39 years of age. Moreover, as Lao PDR is situated among other high HIV/AIDS prevalence rate such as Thailand, Cambodia and Vietnam and Myanmar. The risk of HIV transmission across borders may also increase as mobility of populations across borders is increasing. As knowledge is one prerequisite for HIV prevention measures, therefore, it is necessary to assess the knowledge of HIV/AIDS among youth who are vulnerable to HIV infection.

1.4 Definitions of term used:

1.4.1 Youth:

This study uses WHO definition of “Youth” that covers young people aged 15-24 years old.

1.5 Research questions:

1. What is the level of knowledge about HIV/AIDS among female youth in Lao P.D.R?
2. What are the factors that relate to level of knowledge about HIV/AIDS among female youth in Lao P.D.R?

1.6 Objectives:

The purposes of this study are:

1. To identify the level of knowledge on HIV/AIDS among female youth in Lao P.D.R
2. To determine the factors related to level of knowledge on HIV/AIDS among female youth in Lao P.D.R
3. To identify effects of source of information on HIV/AIDS among female youth in Lao P.D.R.

CHAPTER II

LITERATURE REVIEW

This chapter reviews theoretical perspectives and previous studies regarding knowledge about HIV/AIDS, socio-demographic background characteristics and sources of information that may affect knowledge on HIV/AIDS transmission among female youth in Lao PDR.

2.1 Knowledge about HIV/AIDS

The importance of informing young people about HIV/AIDS is widely recognized. In the evaluation of school curricula in 107 countries, it is found that 44 out of 107 countries did not include AIDS education in their school curricula. In interviewing with 277 secondary school principals in South Africa, 60 per cent acknowledged that their students were at moderate or high risk of acquiring HIV/AIDS, but only 18 per cent of the schools offered a full sex-education curriculum. However, in many countries with generalized epidemics such as Cameroon, Equatorial Guinea and Sierra Leone, more than 80 percent of young women aged 15-24 years did not have sufficient knowledge about HIV. Approximately half of the girls in this age group in Tanzania and more than a quarter in Nicaragua 27 percent did not know how to protect themselves from the virus.

Although a large percentage of young people have some knowledge about AIDS, their understanding often lacks depth understanding about HIV/AIDS. For example, when students in Papua New Guinea were asked how to protect against HIV, 27 percent said it was enough to get to know a partner first or to make sure their partner had not had sex in the previous six months. In Ukraine, 99 per cent of young women had heard of AIDS, but only 9 percent could correctly identify the three primary ways of avoiding sexual transmission (HIV/AIDS and young people |World

Youth Report, 2003). Particularly, in the Lao PDR only 25 percent of primary school children and 56 percent of secondary students nationwide received life skills education on STIs and HIV/AIDS, reproductive health, and drug use in 2005, and in this curriculum which being piloted in 28 school I Vientiane Capital as an extra curriculum activity (Lao P.D.R Country report, 2006).

The knowledge about HIV testing and personal experience of the population in Lao PDR is very low. Less than 15.0 percent of all population had ever known someone living with or who had died of HIV/AIDS. It was found that 14.0 percent of male and 11.2 percent of female respondents have known someone who dies of AIDS. Among these respondents, 8.0 percent of service women, 3.0 percent of the factory workers responded that they had ever known a person who was living with or had died from HIV/AIDS (Behavioral, Surveillance and Survey, 2000-2001 in Lao P.D.R).

A study in India also found low level of knowledge among rural women. It had found that 47.0 percent of all rural women in Maharashtra were aware of AIDS and only 28.0 percent knew that one can avoid it, only 16.0 percent possessed correct knowledge about HIV transmission. On the other hand in Tamil Nadu, where overall 82.0 percent of rural women had awareness of AIDS, 71.0 percent knew that one can avoid the disease but only 31.0 percent possessed correct knowledge about its transmission (Pallikadavath, sanneh, Mcwhirter, & Stones, 2005). Therefore, the majority mode of transmission of HIV known by respondents is sex work 85.7 percent whereas the remainder of transmission is through injection drug use 2.2 percent, blood transfusion and blood product infusion 2.6 percent, perinatal or mother to child transmission 2.7 percent and other unknown factors 6.8 percent (NACO, 2003).

2.2 Social - Demographic Characteristics

The social demographic factors that are most consistent related with levels of knowledge of HIV/AIDS are age, sex, education, occupation, marital status, and place of residence (rural and urban).

2.2.1 Age

Age is an important factor influencing health related to the knowledge of and HIV/AIDS. However, the relationship between age and knowledge of HIV/AIDS is not consistent as found in Leblanc (1993), an increase in age reflects an increase in knowledge of HIV/AIDS. A study in Vietnam found that respondents whose aged from 18 to 22 had a higher level of HIV/AIDS knowledge scores than those who were 13 to 17 years old (Mensch et al, 2000 cited in Linh, 2001). Some research studies have shown that younger people have more knowledge than older people. A research in Nepal found that younger women of 15-24 age group had more knowledge about HIV/AIDS than women aged 25 and above (Ministry of Health, Nepal, 2005).

2.2.2 Sex

HIV/AIDS knowledge is essential for both sexes (male and female). However, it may be more important for female adolescents since they are more vulnerable than are males. Many studies have shown a strong relationship between knowledge and gender, however, research findings vary from studies, and country to country. Many studies indicate that female in reproductive age had higher level of knowledge about HIV/AIDS than male. For example a study in Sri Lanka agreed that females knew more about HIV/AIDS than did males (Subasinghe, 1998).

A study in Thailand found that knowledge about HIV transmission through sex and blood is more or less equal for males and females. But, females had a higher proportion of misconceptions about who HIV/AIDS is transmission, many believing that HIV could be transmitted through bodily contact, sharing foods, insect bites, and using public toilets (Sittitrai et al., 1992).

2.2.3 Education

Education plays a significant role in the knowledge about HIV/AIDS. Education also makes it easier for individuals to process and understand the information. More education is associated with greater awareness and better knowledge about HIV/AIDS (Shah et al, 1987; United Nation, 2002). Demographic and Health Survey data from 39 African, Latin American and Asian counties showed

higher positive correlation between the education levels about knowledge of HIV/AIDS. In almost in all countries educated female respondents knew more about HIV/AIDS than uneducated women. However, in the high prevalence countries, awareness was high among the general population even though some people had a low level of education (United Nation, 2002). For example, a study in Nepal found that completing high school was strongly and significantly associated with the knowledge about HIV/AIDS among urban young people (Thapa et al., 2003). Other research also found that education has a major effect on correct knowledge about HIV/AIDS prevention also in China (Chen et al., 2003) and in Uganda (Bessinger et al., 2004)

2.2.4 Marital status

Marital status is also found to be related to the sexual behavior of women. Explain in conclusion of the findings of Unitenbrocsk. (1994) reported that age and marital status were strongly related to sexual behavior. However, there is evidence of individuals engaging in risky behaviors in all age and marital status groups. Also some Vietnam's report found that married people are usually more responsible and careful than those who are single. The reason mentioned behind is that the married due to their family responsibilities and obligations become more responsible and careful in their sexual activities. These factors make married people more responsible and careful in avoiding risky sexual activities

2.2.5 Place of Residence (Rural and Urban)

Residence also has a significant effect on knowledge about HIV/AIDS. Usually rural people have less knowledge about HIV/AIDS than urban people. One of the likely reasons behind this is that, urban people normally have higher social status than rural people. They have higher access to information than rural people. For example previous research in Nepal (Central Bureau of Statistic, 2000), and a study in Bangladesh (Khan, 2004) found that urban women have higher awareness and knowledge about HIV/AIDS than rural women. 39 African, Latin American and Asian countries also found the consistent results (United Nation, 2002).

2.2.6 Sources of information

Sources of information include television, newspaper/magazine, radio, poster, health worker, school/teachers, and relative/friends. The government and NGOs have been intensively using several medias to disseminate HIV/AIDS knowledge, because this information could raise awareness and knowledge about HIV/AIDS of population in their countries. The source of information could also change the attitudes and behavior of people to practices safe sex, and also help to reduce misconceptions of transmitted HIV/AIDS.

A study in Uganda found that even watching television at least once a week had a positive and significant effect on HIV/AIDS awareness. However, it was found that effect of watching television on quality of knowledge was significant only for relatively less educated women because the coefficient of television in the multivariate analysis was highest for women who had not completed primary schooling in both rural and urban areas. Likewise radio plays a less significant role in the knowledge of HIV/AIDS because coefficient for radio was found lower than the corresponding coefficients for television at each educational attainment level. Furthermore the effect of reading the newspaper at least once a week was also positive and statistically significant in both the awareness and quality of knowledge equations (Bessinger et al. 2004). According to DHS data from 39 Africa, Latin America and Asian countries they found that radio was the major source and television was the third important source for disseminating information about HIV/AIDS (United Nation, 2002)

One study in Nepal was conducted among urban youth aged 15 to 24 years old. The aim of this study to was to evaluate the impact of mass media on the social and health issues, HIV/AIDS information, sex education, puberty and the factors that affect the behaviors of urban youth. The study concluded that about 91 percent of the youth got information about HIV/AIDS from TV, about 75 percent from radio and 48 percent from newspapers or magazines. Similarly in this study about 79 percent married female youth got information about HIV/AIDS from TV, 70 percent from radio and 24 percent from newspapers (Thapa & Mishra, 2003).

However, a recent research in Thailand has found that knowledge about HIV can be effectively channeled through each kind of media. The study found that accessing to mass medias everyday or almost everyday or many times a week may be frequent enough to create some impact on individual's knowledge and attitudes. The predominant media among the general public including television and radio, newspapers, magazines and the internet (National Sexual Behavior Survey of Thailand, 2006).

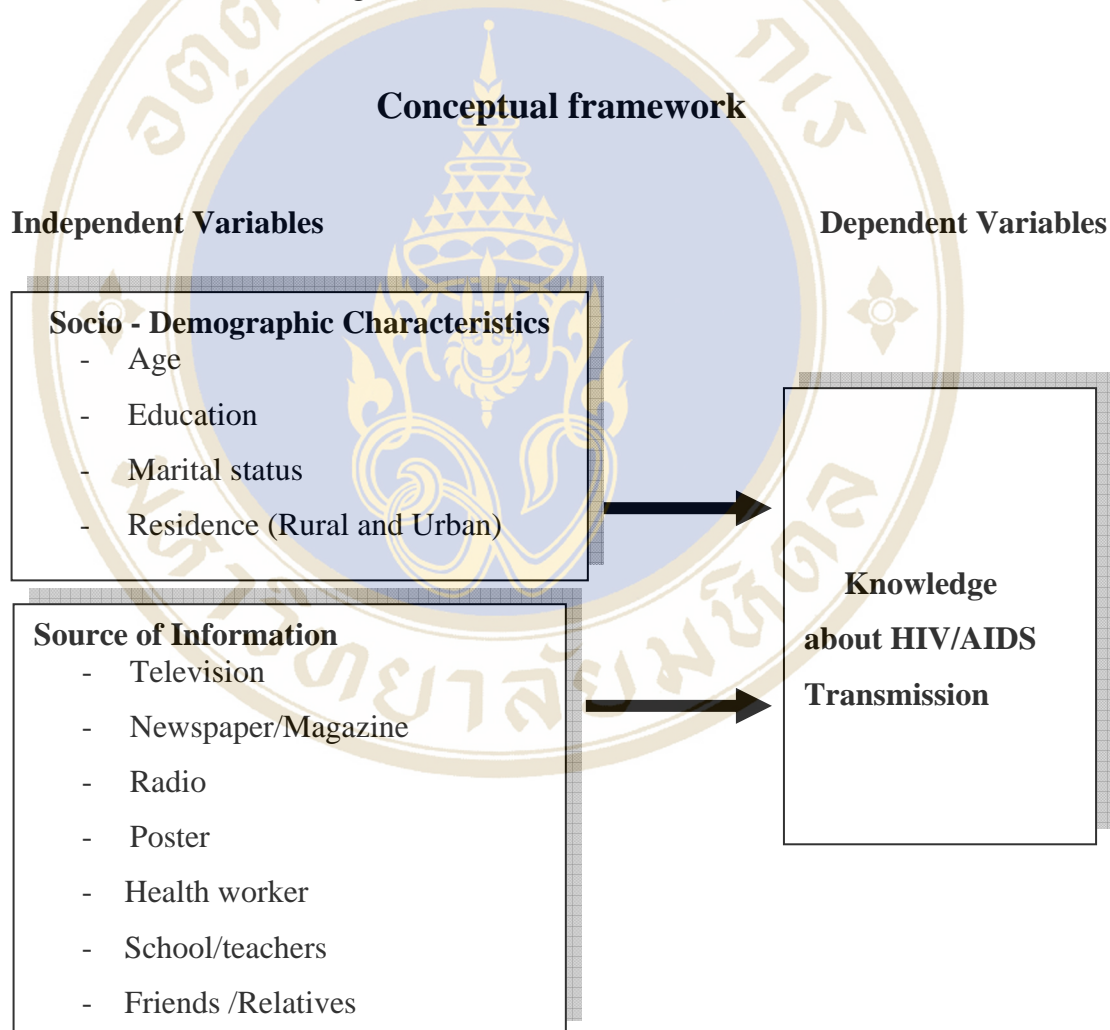
In another study conducted in Alexandria, Egypt among 4.000 family planning clients showed that 96.0 percent of women who knew about HIV/AIDS got this knowledge through mass media, for example, TV and radio educating 77.0 percent of them. 18.0 percent of the women got HIV/AIDS knowledge from general information whereas for only 2.0 percent of them, the source of information was physicians and/or nurse (Megeid, Sheikh, Ginedy, & Araby, 1996).

Previous study of the association between mass media and HIV transmission knowledge of ever-married women in Pakistan found that for HIV transmission through sexual intercourse, the majority of respondents got correct information from their husbands 89.4 percent and from print media 89.3 percent. Medical personnel, TV/radio, relative/friend/neighbor and other sources provided 81.1 percent, 79.8 percent, 79.4 percent and 70.3 percent, respectively. For HIV transmission through blood transfusion, the majority of respondents got correct information from print media 83.9 percent. Other sources of information included medical personnel, husband, relative/friend/neighbor, TV/radio and others.

For HIV transmission through contaminated equipment, the majority of respondents got correct information from print media 82.8 percent. Other sources, such as medical personnel, husband, TV/radio, relative/friend/neighbor and others, provided 77.1 percent, 63.7 percent, 60.2 percent, 58.1 percent and 50.0 percent, respectively. For HIV transmission from mother-to-child, the majority of the respondents got correct information from medical personnel 69.1 percent. Printed media, husband, relative/friend/neighbor, TV/radio and others (Muhammad, 2007).

2.3 Conceptual Framework:

This study proposes a conceptual framework that shows relationship between socio demographic characteristics and sources of information, and the knowledge of HIV/AIDS. In this conceptual framework socio demographic background characteristics of female youth i.e. age, education, marital status and place of residence (rural and urban), and sources of information i.e. television, newspaper/magazine, radio, poster, health worker, school/teachers, relatives and friends are expected to have effects on level of knowledge about HIV/AIDS.



2.4 Hypotheses:

This study aims to find out how much knowledge about HIV/AIDS the Laotian youth have. However, it is important to know what factors that affect the knowledge of youth. Therefore, this study would like to specify effects of source of information on knowledge of youth. As youth is a period that they are more likely to be in school and socialize with friends and person with the same age, therefore this study hypothesizes that friends/relatives are more likely to have influence on level of knowledge on HIV/AIDS than other sources.



CHAPTER III

MATERIALS AND METHODS

3.1 Source of data

For this study, data are derived from the Lao Reproductive Health Survey in 2000 (LRHS, 2000) conducted by National Statistical Centre of Lao PDR (NSC). This data were collected in seventeen provinces and one special zone in Lao PDR. Data collected include family planning, infant and child mortality, level and trends of fertility, reproductive health and child health, knowledge and use of contraceptive, and knowledge about STIs and HIV/AIDS.

3.2 Sample design and sample size

The 2000 Lao Reproductive Health Survey used two-stage stratified cluster sampling method covering 17 provinces and one special zone from the lists of villages and lists of households (1999 Agriculture Census), sampling frame.

At the first stage- within each province, administrative districts were arranged in geographic order to ensure that systematic selection procedures would yield an adequate spread in the sample. Forty villages in each province were selected by applying systematic probability proportionate to size sampling.

At the second stage-within each sample village, a fixed number of 30 households was selected using systematic sampling. This selection procedure resulted in a total of 21,067 households distributed in 720 villages in the sample. With the sample of 21,067 households, 12,759 women aged 15-49 and sub-sample of 3,060 men (husbands) aged 15-59 were selected for interview.

This study focused only female youth, because there were very small numbers of male youth that they not yield valid results of the study. Moreover, female youth are more vulnerable to HIV infection that they should know how to prevent themselves from HIV infection. For this study, the samples were female ages 15-24. years. The sample size is 4,590 out of 12,759 all female respondents of the Lao Reproductive Health Survey in 2000 (LRHS, 2000). For the analysis related to knowledge of HIV/AIDS transmission, only female who ever heard about HIV/AIDS were selected. Therefore, 2,844 out of 4,590 female youth were included in the second part of the analysis of this study.

The questionnaire package consisted of three separate folders that included: the household questionnaire, the individual questionnaire for women and the individual for men (husbands). The household questionnaire was designed to obtain basic information about household characteristics, fertility and mortality. It was used to list the usual member of the sample household and visitors who slept in the sample household prior to the date of interview and some of their characteristics, such as age, sex, educational level, relationship to household head and usual residence. Information on age and sex from the household questionnaire was used to identify eligible women and men for interview using the Individual questionnaire for women and men.

3.3 Operational Definition of Variables

3.3.1 Knowledge of HIV/AIDS

The knowledge of HIV/AIDS refers to the correct answers given by female youths, (aged 15-24) concerning to HIV/AIDS transmission, giving the score 1 to every correct answer and 0 to every incorrect answer. However, if the respondents responded DO NOT KNOW or No they are regarded “do not have knowledge” about HIV/AIDS, we are giving 0 score for the composite index of knowledge. There are four questions that respondents were asked about HIV transmission. Therefore, the scores of knowledge about HIV used in this study ranges from 0 to 4. The measurement of the level of knowledge about HIV/AIDS as follow:

How is HIV/AIDS transmitted?

Sexual intercourse	Yes = 1 score	No = 0 score
Blood transmitted	Yes = 1 score	No = 0 score
Injections	Yes = 1 score	No = 0 score
Mother to child	Yes = 1 score	No = 0 score

For analysis about level of knowledge about HIV/AIDS the respondents are categorized into five groups for measurement in ordinal scale based on the knowledge scores.

- Those who 0 score = No knowledge
- Those who have 1 score = Low level of knowledge
- Those who have 2 scores = Medium level of knowledge
- Those who have 3 scores = High level of knowledge
- Those who have 4 scores = Complete knowledge

3.3.2 Socio-Demographic Characteristics Variable

3.3.2.1 Age

“Age” refers to the completed age of youths at the time of survey. For this analysis, it is grouped into 2 groups, 15 - 19 years old and 20 - 24 years old and measured as ordinal scale.

3.3.2.2 Education

“Education” refers to the highest level of education completed by the respondents at the time of survey. It is originally measured by years of education completed. For univariate and bivariate analysis, education is divided into four categories: no schooling, primary school, lower secondary school, and upper secondary and higher.

- 0 year = No schooling
- 1-6 years = Primary school
- 7-9 years = Lower secondary school
- 10 years and over = Upper secondary and higher

3.3.2.3 Residence

“Residence” refers to the place of residence of the respondents at the time of survey. It is divided into urban and rural. Those who are living in the municipal areas are classified as urban and those who are living other than the municipal areas as rural. For residence is measured at nominal scale.

3.3.2.4 Marital status

“Marital status” of the respondent refers their current marriage and is classified into two groups: never married = 0 and ever married = 1. For marital status is measured by nominal scale.

3.3.3 Sources of Information

“Sources of information” refer to the sources from which youths received information about HIV/AIDS. It was basically the multiple answer questions. This variable is the main independent variable for multiple regression model. Female youth were asked to report their sources of information on HIV transmission. The sources of information include radio, TV, newspaper/magazines, poster, health worker, school/teacher, and friend/relative. It is important to note those female youth were allowed to choose multiple source of information.

Table 3.1 Summary of operational definitions and measurement of variables

Variable Name	Description of variable	Scale of Measurement
Dependent Variable		
Knowledge of HIV/AIDS	The Knowledge of HIV/AIDS refers to the number of correct answers for HIV transmission mode given by youths. A composite index is formed from 4 responses related to HIV/AIDS.	Multivariate analysis Interval Scale range from 0 to 4 <hr/> Univariate analysis/ordinal scale 0 score = No knowledge 1 score = Low level of know

Table 3.1 Summary of operational definitions and measurement of variables
(cont.)

Variable Name	Description of variable	Scale of Measurement
Dependent Variable		
Knowledge of HIV/AIDS (cont.)		2 scores = Medium level of k 3 scores=High level of knowledge 4 scores =Complete knowledge
Independent variables		
Age	Age groups	Ordinal scale 15 to 19 years 20 to 24 years
Residence	Place of Residence in the Urban and Rural areas	Nominal scale - Rural = 0 - Urban = 1
Education	Level of educational attainment	Ordinal - 0 year = No schooling - 1-6 years = Primary school - 7-9 years= Lower second school - 10 years and over = Upper secondary and higher
Marital Status	Refer to current marital status	Nominal - Unmarried = 0 - Married = 1

Table 3.1 Summary of operational definitions and measurement of variables
(cont.)

Variable Name	Description of variable	Scale of Measurement
Source of information	Sources of information from the question “Which Sources of Information have you heard about HIV/AIDS?” They are coded as dummy variables.	Nominal Scale - Radio Yes = 1 No= 0 -TV Yes = 1 No= 0 - Newspaper/Magaz Yes= 1No= 0 - Poster Yes = 1 No= 0 - Health worker Yes = 1 No= 0 - School/Teacher Yes = 1 No= 0 - Friend/Relative Yes = 1 No= 0

3.4 Data Analysis

Univariate analysis, i.e. frequency distribution is performed to describe youth’s socio-demographic characteristics, level of HIV/AIDS knowledge and sources of information about HIV/AIDS transmission.

Bivariate analysis is employed in the form of cross-tabulation, to illustrate the relationships between dependent variables and independent variables.

Multiple regression analysis is used to determine the effect of sources of information on knowledge about HIV/AIDS among female youths after controlling for various socio-demographic characteristics such as age, education, residence, and marital status. Statistical analysis is performed by using statistical package program.

3.5 Limitation of the study

This study uses secondary data from existing survey in the year 2000 in which the main objectives of that particular study are not much related to HIV/AIDS knowledge. Therefore, questions related to HIV/AIDS are limited. Some important variables of background characteristics are not included in this research, for example occupation, and ethnicity. Moreover, the survey was conducted in the year 2000, the results of this study were to be interpreted in the context of that time period.

CHAPTER IV

FINDINGS

This chapter is divided into three sections. The first section is a univariate analysis that describes socio-demographic characteristics, knowledge of HIV/AIDS and sources of information regarding HIV transmission of all female youth.

The second section is an analysis of HIV/AIDS knowledge of the selected respondents who have ever heard about HIV/AIDS and their sources of information about HIV/AIDS transmission.

The third section is a multivariate analysis of the factors that affect HIV/AIDS transmission knowledge, and identifying efficient sources of information regarding HIV transmission, using multiple regression analysis.

4.1 Background Characteristics of the Respondents

The respondents of this study are 4590 female aged 15-24. Table 4.1 shows percentage distribution of the respondents by their socio-demographic characteristics. More than half (56.6 percent) of female youth were in the 15-19 age group, while only 43.4 percent are in the 20-24 age group. The proportions of female respondents who were never married and currently married are almost equal (50.1 and 49.9 percent respectively).

The majority (81.2 percent) of the respondents in this study lived in rural areas of Lao P.D.R. This pattern is corresponding to the population distribution of Lao P.D.R where the majority of populations live in rural areas. Table 4.1 shows that almost one-third of respondents reported having no education. Almost half of them

had primary level education. The proportions of female respondents who attained lower secondary and upper secondary and higher are 30 percent.

Table 4.1 Percentage distribution of the respondents by background characteristics

Background characteristics	Percent	Number
Age group		
15-19	56.6	2600
20-24	43.4	1990
Total	100.0	4590
Marital status		
Unmarried	50.1	2300
Married	49.9	2290
Total	100.0	4590
Residence		
Urban	18.8	862
Rural	81.2	3728
Total	100.0	4590
Education		
None	28.3	1301
Primary	41.9	1920
Lower secondary	18.9	867
Upper secondary and higher	10.9	502
Total	100.0	4590

4.2 Knowledge of HIV/AIDS

4.2.1 Ever heard of HIV/AIDS

Of all female youth, 61.9 percent of them reported ever heard of HIV/AIDS. Table 4.2.1 shows percentage of female who had ever heard about HIV/AIDS by their background characteristics. It is found that there was no significant difference between the two age groups. A little higher proportion of the older female youth in 20-24 year age group had ever heard of HIV/AIDS more than the 15-19 year age group.

The proportion of the respondents who ever heard of HIV/AIDS are statistical significant different by their marital status, place of residence and educational attainment. The higher proportion of never married female respondents (64.1 percent) than the married (59.9 percent) ever heard about HIV/AIDS. Female respondents in

urban areas were more likely to be ever heard about HIV/AIDS than those living in rural areas. Approximately 82.0 percent of female youth living in urban area, but only 57.0 percent of their rural counterparts had ever heard of HIV/AIDS.

When looking at educational attainment, it is found that proportion of the respondents who ever heard of HIV/AIDS are statistically significant different by their level of education completed. The proportion of the respondents who have heard about HIV/AIDS increases with their level of education. Only about one-third of the respondents who did not have education had ever heard about HIV/AIDS, while percentages of those who had primary, lower secondary and upper secondary and higher who had ever heard about HIV/AIDS are 63.6, 81.3, and 92.2 respectively.

Table 4.2.1 Percentages of female youth who had ever heard about HIV/AIDS by socio-demographic characteristics

	Ever heard of HIV/AIDS			Number
	Yes	No	Total	
All respondents	62.00	38.00	100.0	4590
Age group				
15-19	61.7	38.3	100.0	2600
20-24	62.3	37.7	100.0	1990
Total	61.9	38.1	100.0	4590
Marital status***				
Unmarried	64.1	35.8	100.0	2300
Married	59.9	40.2	100.0	2290
Total	62.0	38.0	100.0	4590
Residence***				
Urban	81.6	18.4	100.0	862
Rural	57.4	42.6	100.0	3728
Total	61.9	38.1	100.0	4590
Education***				
None	34.8	65.2	100.0	1301
Primary	63.6	36.4	100.0	1920
Lower secondary	81.3	18.7	100.0	867
Upper secondary and Higher	92.2	7.8	100.0	502
Total	61.9	38.1	100.0	4590

***Chi square significant at $p \leq 0.001$

The results of logistic regression analysis of factors associated with whether or not respondents ever heard of HIV/AIDS are shown in Table 4.2.1. It shows that female youth who lived in urban area were more likely to be ever heard of HIV/AIDS. Moreover, educational attainment were statistically significant factors that associated with whether or not female youth in Lao P.D.R. had ever heard of HIV/AIDS.

Factors	Coefficient(b)	Standard Errors of b	odd
Constant***	-0.694	0.09	0.5
Age group			
15-19 (Ref)			
20-24	-0.14	0.07	0.87
Marital status			
Unmarried (Ref)			
Married	0.19	0.07	1.22
Place of Residence***			
Rural (Ref)			
Urban	0.33	0.1	1.4
Education***			
No education (Ref)			
Primary	1.19	0.07	3.3
Lower secondary	2.07	0.11	7.96
Upper secondary and higher	3.03	0.18	20.85

4.2.2 Knowledge of HIV Transmission mode

Knowledge of HIV is a necessary, though not sufficient pre-requisite for safe sex and drug use behaviors. The following analysis includes only 2844 female youth who reported ever heard of HIV/AIDS.

Table 4.2.2 presents percentages of female youth who reported correct answers for each HIV/AIDS transmission mode. In this study, the highest proportion (91.8 percent) of female youth who ever heard of HIV/AIDS knew that sexual intercourse is the main mode of HIV transmission, followed by injection (63.5 percent).

Approximately half of female youth (49.7 percent) knew that HIV can be transmitted through blood transfusion. The least known mode of HIV transmission mode is mother to child. Only 20.1 percent of female youth who ever heard of HIV/AIDS knew that HIV can be transmitted from mother to child.

Table 4.2.2 Percentage of respondents (who ever heard of HIV/AIDS) have knowledge on HIV/AIDS Transmission mode

HIV Transmission Mode	Yes	No	Total (N=2844)
Sexual intercourse	91.8	8.2	100.0
Blood transfusion	49.7	50.3	100.0
Injection	63.5	36.5	100.0
Mother to child	20.1	79.9	100.0

In order to assess respondents by their level of knowledge of HIV transmission, level of knowledge on how HIV transmitted was categorized into no knowledge (0 correct response), low (1 correct response), medium (2 correct responses), high (3 correct responses), and complete knowledge (4 correct responses). Table 4.2.2.1 shows that female youth in this study had not much knowledge about HIV transmission. Though the respondents have ever heard of HIV/AIDS, there are 3.6 percents of them that could not answer any correct HIV transmission mode. A quarter of female youth could tell only one correct answer. Approximately 60 percent of female youth answered 2-3 correct HIV transmission modes. There are only 13.4 percent of them who had 4 correct answers regarding knowledge about HIV transmission modes.

Table 4.2.2.1 Percentage distribution of the respondents by level of knowledge on HIV transmission

Level of knowledge	Percent	Number
No knowledge	3.6	101
Low level of knowledge	24.2	689
Medium level of knowledge	29.3	833
High level of knowledge	29.5	840
Complete knowledge	13.4	381
Total	100.0	2844
Mean score of HIV/AIDS knowledge = 2.25 and median =2.0		
Mini = 0 Max = 4		

The **table 4.2.2.2** shows further analysis of knowledge of each HIV transmission mode by background characteristics of female youth who have ever heard about HIV/AIDS. As the knowledge that HIV can be transmitted through sexual intercourse is best known by the respondents, there is not much difference in percentages of female youth in different groups. The significant difference is shown only between female youth of different educational attainment levels.

For knowledge on HIV transmission through blood transfusion and injection, differences of proportions of female youth who had correct responses are found according to their marital status, place of residence and educational level. The proportion of female youth who were unmarried higher than who ever married youth, they knew about these modes of HIV transmission. Female youth who were living in urban areas could answer correctly about modes of HIV transmission more than ones who lived in rural areas. Those who had higher educational attainment had more knowledge about HIV transmission modes than those who had lower education. The least known mode of HIV transmission is through mother to child. The female youth in younger age group, unmarried, lived in urban area, and had high educations were more knowledgeable about this mode of transmission than their counterparts.

Table 4.2.2.2 Percentage of female youth (who ever heard of HIV/AIDS) and their knowledge of HIV transmission, by background characteristics

Background characteristics	Knowledge of HIV transmission by			
	Sexual intercourse	Blood transfusion	Injection	Mother to child
Age group				
15-19	91.7	49.0	64.4	21.1
20-24	91.9	50.5	62.3	18.7
Marital status				
Unmarried	91.8	54.6	67.9	22.9
Married	91.7	44.3	58.7	17.0
Residence				
Urban	94.2	63.1	71.0	28.4
Rural	91.0	45.3	61.0	17.3
Education				
None	86.3	37.9	49.3	9.7
Primary	90.6	45.4	60.2	16.0
Lower secondary	94.3	52.8	67.9	25.0
Upper secondary and higher	96.3	67.8	79.0	33.5
Total	92.0	52.0	64.2	21.0
Number of respondents	2610	1413	1805	571

4.2.3 Sources of Information about HIV/AIDS

Among female youth in this study, mass media i.e radio and television are significant sources of information about HIV/AIDS. Table 4.2.3.1 shows that radio was found to be the most frequent source of information that reported by 62.1 percent of the female respondents in this study while, television was the second important source of information about HIV/AIDS, reported by 45.5 percent of respondents. Other equally important sources among female youth were health worker and friend/relative. It should be noted that school/teacher was reported by only 16

percent of female youth as sources of HIV/AIDS. Printed media such as poster and newspaper/magazine were also not widely cited by the respondents.

Table 4.2.3.1 Percentages of the female youth who have ever heard about HIV transmission from specific source of information

Source of information	Yes	No	Total (N= 2844)
Radio	62.1	37.9	100.0
TV	45.5	54.5	100.0
Newspaper/magazines	14.3	85.7	100.0
Poster	17.4	82.6	100.0
Health worker	41.2	58.8	100.0
School/teacher	15.6	84.4	100.0
Friend/relative	40.6	59.4	100.0

Table 4.2.3.2 shows percentages of female youth who had ever heard about HIV/AIDS from each source of information by background characteristics. The younger respondents were more likely to know about HIV/AIDS from school/teacher, while the older group knew more from friend/relative.

Marital status was found to be related to sources of information. The unmarried female youth reported that they know about HIV/AIDS from mass media and school teacher more than the married youth. The latter were more likely to know from health worker and from friends and relatives than the never married. Mass media particularly television, newspapers/magazines, poster were reported by much higher proportions of urban respondents than their rural counterparts. Respondents who had high education mentioned mass media and printed media as well as school/teacher more than those who had lower education. The female youth in low educational groups knew more from friend/relatives.

Table 4.2.3.2 Percentage of female youth who had ever heard of HIV/AIDS from each source of information by background characteristics

Background characteristic	Sources of Information						
	Radio	TV	Newspaper/ magazines	Poster	Health worker	School/ teacher	Friend/ relative
Age group							
15-19	62.5	46.0	16.2	18.0	40.0	23.7	38.4
20-24	61.6	44.9	11.8	16.5	42.8	5.2	43.4
Marital status							
Unmarried	66.0	52.7	19.6	20.3	38.5	27.3	38.7
Married	57.9	37.8	8.5	14.2	44.1	3.0	42.7
Residence							
Urban	67.8	75.7	30.7	26.3	33.7	27.3	42.2
Rural	60.2	35.6	8.9	14.4	43.7	11.8	40.1
Education							
None	51.5	18.5	2.4	11.0	42.5	1.3	45.2
Primary	59.2	35.7	6.7	13.3	43.1	7.4	42.5
Lower secondary	66.7	60.9	19.3	21.3	37.2	22.3	34.6
Upper secondary and Higher	73.2	74.5	38.2	28.3	41.0	41.0	37.6
Total	62.1	45.5	14.3	17.4	41.2	15.6	40.6

This study would like to explore which sources of information that respondents had heard about specific knowledge of HIV transmission mode. Table 4.2.3.3 presents percentages of female youth who had correct answer to each HIV transition mode by sources of information. Though the patterns of most frequently reported sources of information are similar for every HIV transition modes that radio was the most frequent reported, followed by television, health worker, friend/relatives. School teacher, poster and newspaper/magazine were less mentioned by respondents. However, it should be noted that youth could had ever received information from multiple sources. There are differences in proportions of respondents who reported ever heard of HIV from each sources of information by HIV transition mode. For every source of information, sexual intercourse was a transition mode that smallest

proportions of respondents have mentioned compared to other modes. Whereas, the highest proportion of respondents in all sources of information were found among those who knew about mother to child transmission. This may imply that those who knew about mother to child transmission mode were likely to know about HIV/AIDS through multiple sources.

Table 4.2.3.3 Percentages of female youth (who had correct HIV/AIDS knowledge) by transmission mode and sources of information

Source of information	Transmission mode			Mother to Child
	Sexual Intercourse	Blood transfusion	Injection	
Radio	63.3	68.3	67.0	73.7
Television	47.0	55.8	53.1	62.5
Newspaper/magazines	15.1	19.7	18.3	28.4
Poster	18.3	25.3	22.7	34.2
Health worker	41.8	45.2	45.5	55.9
School/teacher	16.4	21.4	20.3	29.8
Friend/relative	41.0	43.7	41.7	49.6
Total	92.0	52.0	64.2	21.0
Number of respondents	2610	1413	1805	571

4.3 Multivariate analysis

The results of multivariate analysis of factors affecting knowledge of HIV transmission are shown in Table 4.3.1 The model is statistically significant at $p \leq .001$ and can describe 62.2 percent of total variation of HIV knowledge score of female youth in this study ($R^2 = 0.622$).

When looking at background characteristics of respondents, it is found that age, marital status, and place of residence are not statistically significantly related to variation on knowledge of HIV transmission modes. Only educational level attained by female youth is statistically related to knowledge of HIV transmission. Female youth who attended lower secondary and upper secondary and higher education have

more knowledge on HIV transmission and statistically significantly than those who have no education. In the mean time, there is no statistically significant difference between knowledge of female respondents who had primary school and those who had no education.

One of the main objectives of this study is to identify the effect of sources of information on knowledge of HIV/AIDS. After controlling for socio-demographic characteristic of respondents, the results of multivariate analysis have shown that all sources of information are statistically significant related to knowledge of HIV/AIDS of respondents. Respondents who ever heard of HIV/AIDS from specific source of information had more knowledge of HIV than those who never heard of HIV/AIDS from that particular source. It is found that the most effective source of information about HIV/AIDS for female youth are poster, television, school/teacher, followed by health worker, radio, and friend/relative. It should be noted that printed media like newspaper and magazines have the least effect on HIV knowledge among female youth in this study.

Table 4.3.1 Regression coefficient of factors affecting knowledge of HIV among female youth respondents

Factors	Coefficient(b)	Beta	Standard Errors of b
Constant	1.195***		0.08
Age group			
15-19 (Ref)			
20-24	0.05	0.02	0.03
Marital status			
Unmarried (Ref)			
Married	-0.01	-0.01	0.03
Place of Residence			
Urban (Ref)			
Rural	0.01	0.01	0.03
Education			
No education (Ref)	---		---
Primary	0.6	0.02	0.27
Lower secondary	0.12***	0.04	0.04
Upper secondary and higher	0.21***	0.05	0.05
Sources of information			
Radio	0.34***	0.12	0.03
TV	0.43***	0.17	0.03
Newspaper/magazines	0.25***	0.11	0.04
Poster	0.52***	0.22	0.04
Health worker	0.40***	0.16	0.03
School/teacher	0.43***	0.18	0.04
Friend/relative	0.31***	0.12	0.03

R² = 0.622

*** Significant at 0.001

Ref=Reference Category

CHAPTER V

DISCUSSION

The findings from previous chapter have shown that female youth had quite low level of knowledge of HIV/AIDS transmission methods. Though they had ever heard of HIV/AIDS, however, it does not mean they had good understanding about HIV/AIDS transmission. The majority of female youth who had heard of AIDS knew that HIV could be transmitted through sexual intercourse. But their knowledge declined gradually for other modes of transmission as they knew least about mother-to-child transmission of HIV. The reason for their fairly good knowledge of HIV transmission through sexual intercourse might be affected by the social conviction that HIV/AIDS is a disease associated with illicit sexual relationships.

The much higher proportions of youth who had ever heard of HIV/AIDS were found among urban residence compared to rural youth. As education increases, the percentage who reported having heard about HIV/AIDS also increases. Approximately one-third of female youth with no formal education have heard of AIDS whereas almost all the respondents with higher education, up to college or university levels, had heard of HIV/AIDS.

It was observed that female youth got information on HIV/AIDS from multiple sources, the major source is radios. Fewer youth with correct HIV transmission knowledge reported interpersonal communication (including health worker, friend/relative and school/teacher) as their sources. Very few got information from printed media. After controlling for socio-demographic characteristic of respondents, the results of multivariate analysis have confirmed the HIV/AIDS information only concentrated among urban residence and those with higher education. It is shown that the most effective source of information about HIV/AIDS for female youth is a poster,

television, school/teacher, followed by health worker, radio, and friend/relative. Printed media like newspaper and magazines have the least effect on HIV knowledge among female youth in this study.

It can be concluded that overall dissemination of HIV transmission knowledge was not wide spread in Lao P.D.R. Since the majority of this study lived in rural areas and had low level of education, printed media was not significant source of information for HIV knowledge. These findings correspond to findings from previous studies. A report by the World Health Organization and Joint United Nations Program on HIV/AIDS found that rural populations do not have adequate knowledge because of high illiteracy levels, low levels of education, and poor infrastructure (Mabunda, 2004).

Though it is found that the higher level of education the female youth had, the more likely they were to have more on HIV transmission, school/teacher was a source of information that very few respondents mentioned. This is may be because information related to reproductive health, including STI and HIV/AIDS has just recently (less than 10 years) included in school curriculum. Moreover, number of curriculum is not enough in the school and the main problem is large proportion of STIs curriculum was not in Lao language.

The findings of this study regarding effects of sources of information do not support the hypothesis that friends/relatives are more likely to have influence on level of knowledge on HIV/AIDS than other sources. This may be due to the fact that, in Lao P.D.R, Youth have barriers to discussing about sex and sex related issues. The norm is not mentioning sexual matters openly. It obstructs their discussion within families, schools, and sometimes with the health worker. Lacking of interpersonal communication often effectively hampers the access to appropriate sexual and reproductive health information.

CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study has three objectives, first, to identify the level of knowledge on HIV/AIDS among female youth in Lao P.D.R, second to determine the factors related to level of knowledge on HIV/AIDS among female youth and lastly, to identify effects of source of information on HIV/AIDS among female youth. This study uses secondary data from Lao Reproductive Health Survey in 2000. The total number of female youth aged 15-24 years included in this study is 4590 person. The majority of the respondents lived in rural areas and almost one-third of respondents reported having no education and the other one-thirds attained secondary education and higher education.

It is found that only 62 percent of female respondents have ever heard about HIV/AIDS. Though respondents have ever heard of HIV/AIDS, there are 3.6 percents of them that could not answer any correct HIV transmission mode. A quarter of female youth could tell only one correct answer. Approximately 60 percent of female youth answered 2-3 correct HIV transmission modes. There are only 13.4 percent of them who had 4 correct answers regarding knowledge about HIV transmission modes. Among female youth who ever heard of HIV/AIDS, sexual intercourse is the most widely known mode of HIV transmission, followed by injection and blood transfusion. The least known mode of HIV transmission mode is mother to child.

Among female youth in this study, mass media such as radio and television are significant sources of information about HIV/AIDS. Other important sources among female youth are health workers and friend/relative, whereas school/teacher and printed media such as poster and newspaper/magazines are not widely cited by respondents.

The younger respondents were more likely to know about HIV/AIDS from school/teacher, while the older group knew more from friend/relative. The unmarried female youth reported that they know about HIV/AIDS from mass media and school teacher more than the married youth. The latter are more likely to know from health worker and from friend and relatives than the never married. Mass media particularly television, newspapers/magazines, poster are reported by much higher proportions of urban respondents than their rural counterparts. It may indicate that dissemination of HIV/AIDS knowledge through printed media was concentrated only in urban areas. Respondents who had high education mentioned mass media and printed media as well as school/teacher more than those who had lower education. The female youth in low educational groups knew more from friend/relatives.

The results of multivariate analysis of factors affecting knowledge of HIV transmission show that age, marital status, and place of residence are not statistically significantly related to variation on knowledge of HIV transmission modes. Only educational level attained by female youth is statistically related to knowledge of HIV transmission. All sources of information are statistically significant related to knowledge of HIV/AIDS of respondents. It is found that the most effective source of information about HIV/AIDS for female youth are poster, television, school/teacher, followed by health worker, radio, and friend/relative. It should be noted that printed media like newspaper and magazines have the least effect on HIV knowledge among female youth in this study.

6.2 Recommendations for policy implications

The limited HIV/AIDS related knowledge among female youth in this study poses a serious threat for the future as Lao P.D.R. is neighbored with other high prevalence HIV/AIDS countries. At the same time various socio-cultural and economic conditions conducive to expand HIV epidemic exist within Lao P.D.R, including poverty, low education, weak health infrastructure and restricted norms of open discussion on sexual related issues among female youth, while lack of HIV/AIDS knowledge among the youth remains. Youth are in need of HIV/AIDS knowledge due to all of the above factors that directly affect them and prevent them

from getting information of HIV/AIDS. An important recommendation of this study is drawing the attention of the policy-makers towards the necessity to address poor HIV/AIDS knowledge among youth in Lao P.D.R.

1. This study calls for carefully formulated mass media campaigns in Lao P.D.R. especially through mass media such as radio and television and supplemented by printed media for youth, in addition to other risk groups.
2. There is a need for comprehensive information, education and communication initiatives starting from primary school until higher level of education to increase the knowledge of youth on STIs and HIV/AIDS prevention/transmission because youth are more likely to leave school and get married at early age.
3. For rural youth, mass media campaigns should be used along with interpersonal communication including peer-to-peer, and communication between health provider and youth. Community members, leaders, and peer groups should be trained and mobilized to disseminate about STIs and HIV/AIDS.

6.3 Recommendations for future research

1. This study has explored the relationship between HIV/AIDS knowledge and sources of information by using the Lao P.D.R Reproductive Health Survey in 2000. There are some variables that needed to be further investigated such as ethnicity, exposure to mass media, lifestyle etc.
2. It is also recommended to further study HIV/AIDS risky behaviors.
3. In this regards, this study recommends further exploring the relationship between HIV/AIDS related knowledge and risk behavior and the abovementioned factors through analysis of other recent survey.
4. Moreover, this study can be more fruitful if it can be analyzed by using the longitudinal study design to see the changes as well as factors that affect the changes in knowledge and risk behaviors.

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APPENDIX

Questionnaire (Some selected questions used in this study)

1. Background social-demographics characteristic

Individual information

Q. 102 How old are you? (Complete year)

Q. 104 what is the highest your studying/complete?

Q. 805 have you ever heard HIV/AIDS?

1 Yes 0 No

Q. 806 From which sources of information have you heard about HIV/AIDS?

- Radio 1 Yes 0 No

- TV 1 Yes 0 No

- Newspaper/magazines 1 Yes 0 No

- Poster 1 Yes 0 No

- Health workers 1 Yes 0 No

- School/teacher 1 Yes 0 No

- Friend/relative 1 Yes 0 No

Q. 809 How is HIV/AIDS transmitted?

- Sexual intercourse 1 Yes 0 No

- Blood transmitted 1 Yes 0 No

- Injections 1 Yes 0 No

- Mother to child 1 Yes 0 No

BIOGRAPHY

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