ปัจจัยที่เกี่ยวข้องกับพฤติกรรมเสี่ยงทางเพศในการป้องกัน การแพร่เชื้อ เอชไอวี/เอดส์ ในแรงงานชาวประมงพม่าอพยพ จังหวัดระนอง ประทศไทย

เค.มาเลอร์ ตูห์

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต
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ปีการศึกษา 2551

FACTORS ASSOCIATED WITH UNSAFE SEX BEHAVIORS FOR PREVENTION OF HIV/AIDS TRANSMISSION AMONG MYANMAR MIGRANT FISHERMEN IN RANONG, THAILAND

Mr. K. Maler Htoo

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Public Health Program in Health Systems Development
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Thesis Title	FACTORS ASSOCIATED WITH UNSAFE SEX BEHAVIORS FOR PREVENTION OF HIV/AIDS TRANSMISSION AMONG MYANMAR MIGRANT FISHERMEN IN RANONG, THAILAND
By	K. Maler Htoo
Field of Study	Health Systems Development
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Accepted by the College of Public Heath Sciences, Chulalongkorn University in Partial Fulfillment of the Requirement for the Master's Degree.

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เค. มาเลอร์ ตูห์: ปัจจัยที่มีความสัมพันธ์กับพฤติกรรมทางเพศ ที่ไม่ปลอดภัยในการป้องกันการถ่ายทอดเชื้อเอช ไอ วี / เอดส์ ในชาวประมงแรงงานอพยพจากพม่า ในจังหวัดระนอง ประเทศไทย (FACTORS ASSOCIATED WITH UNSAFE SEX BEHAVIORS FOR PREVENTION OF HIV/AIDS TRANSMISSION AMONG MYANMAR MIGRANT FISHERMEN IN RANONG, THAILAND) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: เอเลสซิโอ แพนซา M.D., MPH, DTM. &H, 86 หน้า

การศึกษานี้ได้ทำขึ้นในช่วงปลายเดือนกุมภาพันธ์ พ.ศ. 2552 เพื่ออธิบายตัวแปรอิสระ (ลักษณะทางประชากรและสังคม การเข้าถึงถุงยางอนามัย และข้อมูลข่าวสารในเรื่องเอช ไอ วี และเอดส์ แรงกดดันจากเพื่อน การใช้ยาและแอลกอฮอล์ ความรู้เกี่ยวกับ เอช ไอ วี ทัศนคติ และทักษะการปฏิบัติตัวและการใช้ชีวิต) และเพื่อประเมินหาความสัมพันธ์ของตัวแปรอิสระเหล่านี้กับตัวแปรตาม(พฤติกรรมทางเพศที่ไม่ปลอดภัยกับผู้ที่ทำงานขายบริการทางเพศ) ในกลุ่มชาวประมงที่เป็นแรงงานอพยพจากพม่าในจังหวัดระนอง ประเทศไทย โดยเก็บข้อมูลโดยการใช้แบบสอบถามที่ให้ตอบด้วยตนเองและการอภิปรายกลุ่ม

ผู้ตอบแบบสอบถามส่วนใหญ่อยู่ในกลุ่มอายุ 26 – 35 ปี สถานภาพโสด ระดับการศึกษาชั้นมัธยมศึกษา เป็นชาวพม่า นับถือศาสนาพุทธ มีรายได้ 4,000 – 5,000 บาทต่อเดือน อยู่ในประเทศไทยมาเป็นเวลา 1 – 4 ปี และไม่เคยกลับพม่า ผู้ตอบทั้งหมดได้คะแนนความรู้ 0.6941 ผู้ตอบส่วนใหญ่ได้รับข่าวสารเรื่อง เอชไอวี/เอดส์ และรู้สถานที่รับถุงยางอนามัย ร้อยละ 63 ของผู้ตอบเคยมีเพศสัมพันธ์กับผู้ที่ทำงานขายบริการทางเพศ และในจำนวนนี้มีร้อยละ 70.7 ที่ใช้ถุงยางอนามัยเป็นประจำเมื่อมีเพศสัมพันธ์กับผู้ที่ขายบริการทางเพศ มีผู้ตอบร้อยละ 18 ที่เคยมีคู่นอนชั่วคราว และในจำนวนนี้มีผู้ที่ใช้ถุงยางอนามัยเป็นประจำร้อยละ 40.1 ในช่วงระยะเวลา 6 เดือนที่ผ่านมา

ในการวิเคราะห์แบบตัวแปรคู่ แสดงให้เห็นว่าระยะเวลาที่อาศัยอยู่ในประเทศไทยที่นานขึ้นกับรายได้ที่มากกว่า 5,000 บาท การมีทัศนคติด้านลบกับ เอช ไอ วี และเอดส์ รวมทั้งการใช้ถุงยางอนามัย และการฉีดยาเสพติด มีความสัมพันธ์อย่างมีนัยสำคัญทางสถิติกับการมีเพศสัมพันธ์ที่ไม่ปลอดภัยกับผู้ที่ทำงานขายบริการทางเพศ (p-value <0.005) นอกจากนี้การได้รับข้อมูลที่เกี่ยวข้องกับเอช ไอ วี และเอดส์ การรับทราบแหล่งของถุงยางอนามัย และการมีทักษะในการใช้ชีวิต เช่น การปฏิเสธการมีเพศสัมพันธ์ที่ไม่พึงปรารถนา การปฏิเสธแรงกดดันในการใช้ยาเสพติด การปฏิเสธการมีเพศสัมพันธ์เมื่อไม่มีถุงยางอนามัย และการต่อรองให้มีการใช้ถุงยางอนามัย มีความสัมพันธ์กับการมีเพศสัมพันธ์ที่ปลอดภัยกับผู้ที่ทำงานขายบริการทางเพศอย่างมีนัยสำคัญ (p-value <0.005)

ในการวิเคราะห์แบบหลายตัวแปร พบว่า อายุ ระยะเวลาที่อยู่ในประเทศไทย การรู้จักสถานที่รับถุงยางอนามัย การปฏิเสธการมีเพศสัมพันธ์เมื่อไม่มีถุงยางอนามัย และการต่อรองให้มีการใช้ถุงยางอนามัย ยังคงมีความสัมพันธ์อย่างมีนัยสำคัญกับการมีเพศสัมพันธ์ที่ไม่ปลอดภัยเมื่อมีการควบคุมตัวแปรอิสระอื่นๆ

จากการศึกษาที่พบพฤติกรรมเสี่ยงที่สูง จึงควรจัดให้มีการให้สุขศึกษาร่วมกับการจัดหาถุงยางอนามัย พร้อมกับการส่งเสริมการใช้ทักษะชีวิตกับกลุ่มชาวประมงที่เป็นแรงงานอพยพจากพม่าในจังหวัดระนองด้วย

สาขาวิชา: .....การพัฒนาระบบสาธารณสุข .....ลายมือชื่อนิสิต:.....

ปีการศึกษา: ....2551.....ลายมือชื่ออ.ที่ปรึกษาวิทยานิพนธ์หลัก:.....

##5179105953: MAJOR HEALTH SYSTEMS DEVELOPMENT

KEYWORDS : HIV/AIDS/UNSAFE SEX BAHAVIORS/MYANMAR MIGRANT FISHERMEN/RANONG/THAILAND

K. MALER HTOO: FACTORS ASSOCIATED WITH UNSAFE SEX BEHAVIORS FOR PREVENTION OF HIV/AIDS TRANSMISSION AMONG MYANMAR MIGRANT FISHERMEN IN RANONG, THAILAND. ADVISOR: ALESSIO PANZA, M.D., MPH, DTM&H, 86 pp.

The study was conducted on late February 2009, to describe independent variables (socio-demographic characteristics, condom availability, HIV/AIDS information, peer pressure, drug and alcohol use, HIV related knowledge, attitudes & skills), and to assess any association of these independent variables with the dependent variable (unsafe sex with sex workers) among Myanmar migrant fishermen in Ranong, Thailand. The data was collected using interviewer administrated questionnaire and Focus Group Discussion.

The majority of the respondents was in the 26-35 years age group, single, had attained middle school education, Barma, Buddhist, had an income of 4,000-5,000 Baht per month, stayed in Thailand for 1-4 years and never went back home. The mean knowledge score for total respondents was 0.6941. Most of the respondents received HIV/AIDS information and knew where they could get condoms. About 63% of the respondents have had sex with sex workers and 70.7% of them always used a condom when having sex with sex worker. 18.0% of the respondents had casual sexual partners. 40.1% of them always used condom when they had sex with casual partners in the six months previous to the study.

In bivariate analysis, The results showed that longer duration of stay in Thailand and earning of more than 5,000 Thai baht, negative attitude towards HIV/AIDS and condom use, and injected narcotic drugs were statistically associated with practice of unsafe sex with sex workers (p-value <0.005). Receiving HIV/AIDS information, known sources of condom, life skills such as refusing undesired sex, pressure to use drug, to have sex without condom and discussing to use a condom were statically associated with safe sex practice in sex workers (p-value <0.005).

In multivariate, the results suggest that Age, Duration of stay Thailand, Knew where to get condoms, Refusal to have sex without a condom, and Discussing condom use maintained significant association with unsafe sex while controlling for other independent variables.

Given the high prevalence of risk behavior, providing health education together with condoms constantly to this group of Myanmar migrant fishermen in Ranong is crucial. Health education should include teaching life skills such as refusal to have sex without a condom, and discuss to use condoms. The 100% condom use program should be promoted among Myanmar migrant fishermen.

Field of Study: …Health Systems Development… Student's Signature: .....

Academic Year: ..2008..... Advisor's Signature: .....

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LIST OF ABBREVIATIONS

AIDS- Acquired Immunodeficiency Syndrome

CIA- Central Intelligence Agency

HIV- Human Immunodeficiency Virus

IDU- Intravenous Drug User

IOM- International Organization for Migration

ILO- International Labour Organizaiton

MSM- Men Who have Sex with Men

MSF- Medicines Sans Frontiers

PHAMIT- The Prevention of HIV/AIDS among Migrant Workers in Thailand Project

STD- Sexually Transmitted Disease

STI- Sexually Transmitted Infection

UNAIDS- The Joint United Nations Programme on HIV/AIDS

UNGASS- United Nations General Assembly Special Session

UNESCO- United Nations Educational Scientific and Cultural Organization

WHO- World Health Organization

OTOP- One Tabon One Product

CHAPTER I

INTRODUCTION

1.1 Background & Rationale

Acquired Immunodeficiency Syndrome (AIDS) is a pandemic disease that it can devastate families, communities and whole continents. We have seen the epidemic knock decades off countries' national development, widen the gulf between rich and poor nations and push already-stigmatized groups closer to the margins of society. According to the UNAIDS report 2007, every day over 6800 persons become infected with HIV and over 5,700 persons die from AIDS, mostly because of inadequate access to HIV prevention and treatment services. The HIV pandemic remains the most serious of infectious disease challenges to public health. As of the end of 2007, 33 million people were estimated to be living with HIV/AIDS worldwide, according to the latest data from the Joint United Nations Programmer on HIV/AIDS (UNAIDS) and the World Health Organization (WHO). An estimated 2.7 million people became newly infected with HIV in 2007, and 2.0 million people died of AIDS-related causes in 2007. Women comprise half (50%) of adults estimated to be living with HIV/AIDS worldwide. Young people under the age of 25 are estimated to account for more than half of all new HIV infections worldwide (UNAIDS/WHO, 2007).

Thailand and AIDS problems:

The first case of AIDS in Thailand occurred in 1984. Between 1988 and 1989, the HIV prevalence among injecting drug users rose dramatically, from virtually zero to 40%. The prevalence among sex workers also increased, with studies in Chang

Mai, northern Thailand, suggesting that 44% of sex workers were infected with HIV (Annabel Kanabus & Jenni Fredriksson, 2008).

The MOPH (Ministry of Public Health) has conducted HIV surveillance among those populations with presumed high-risk factors since 1989 to the present including direct and indirect female sex workers, IDU, and male clients of STD clinics. Among groups, IDU had the highest levels of infection, ranging from 30% to 50% between 1989 and 1999, reaching a peak of 50.8%. Data from national sentinel surveillance among army recruit and pregnant women showed HIV peak prevalence reaching 3.4% and 2.3% by 1992 and 1995 respectively. HIV among direct female sex workers shows steady increases until reaching a peak of 33.2% in 1994. Since then, there have been mostly steady declines in prevalence with a slight up-turn to 5.3% in 2007. HIV surveillance among male sex workers (MSW) began in 1997. After some decline in the first two years, HIV began to increase, and exceeded 12% by 2006. Ad hoc studies of HIV prevalence among Men who have sex with Men (MSM) in 2005 and 2007 in Bangkok, Chiang Mai and Phuket found that HIV increased rapidly from 18.9%, 11.4% and 14.4% to 27.0%, 15.5% and 19.3% respectively (UNGASS, 2008).

- The majority of Thailand's HIV infections (around 80%) occur through heterosexual sex.
- HIV affects more men than women in Thailand; the male-female ratio is 7:5.
- HIV prevalence among pregnant women, which reached a peak of 2.35% in 1995, had fallen to 1.18% by 2003.

- An estimated 1 in 5 new HIV infections in Thailand are attributable to unprotected sex between men (Annabel Kanabus & Jenni Fredriksson, 2008).

Myanmar and AIDS problems:

Myanmar has one of the most serious epidemics in Asia, with an estimated national adult prevalence of between 1-2%. HIV continues to increase in various populations groups. Among military recruits tested in Yangon and Mandalay, HIV prevalence has increased from 0.5% in 1992 to 1.4% in 2000 and to 2.09% in 2003 **(**International HIV/AIDS Alliance**).**

Myanmar has one of the largest AIDS epidemics in Asia. The nation's extreme poverty, high levels of migration, growing sex industry, gender inequalities, and lack of economic resources make its AIDS epidemic very difficult to manage. (UNAIDS-Myanmar). The disease affects all areas of society and it continues to spread at increasing rates each year. Prevalence rates are significantly higher among certain groups of society. For example, more than 25% of sex workers in Myanmar are infected. This creates a problem when many male youth go to sex workers because of Myanmar's conservative sexual environment, often becoming infected.

AIDS strikes those in the most productive age groups and is fatal without antiretroviral medication. The cost of health facilities, medical treatments, and funerals are a strain on the economy. The disease also can have a large effect on the workplace. Staff illnesses, absentees, and death negatively affect productivity. Also, more children will be orphaned as the number of AIDS-related fatalities increase. Therefore, the more people that become infected in Myanmar, the larger the burden

placed on the country. Misperceptions and stigmas surrounding HIV/AIDS are huge barriers to successful prevention and treatment of the disease in Myanmar. For example, it is generally believed that those infected with HIV are in some way "morally corrupt." Like in many other countries, the discrimination faced by infected people is so bad, that many PLWHAs (people living with HIV/AIDS) attempt to keep their status a secret and do not seek help or support. The traditional and conservative social values about sexuality, combined with a lack of education and awareness about the disease, helps explain why the epidemic is expanding so quickly. This situation is particular serious for women. "Women and girls face heavier risks of HIV infection than men because their diminished economic, social, and cultural status compromises their ability to choose safer and healthier life strategies" (Joint Programme for HIV/AIDS: Myanmar).

Estimated population of Myanmar in July 2005 is 42,909,464. Estimated number of people living with HIV/AIDS by the end of 2005 is 360,000, Estimated percentage of adults (ages 15-49) living with HIV/AIDS by the end of 2005 is 1.3%, Estimated percentage of HIV cases that occurred among women (ages 15-49) by the end of 2005 is 31%, Estimated number of deaths due to AIDS during 2003 is 37,000 (UNAIDS, 2006).

Overall Migrant and HIV/AIDS Problems:

At the start of the 21 century, the International Organization for Migration estimates that one person out of every 35 worldwide, or some 175 million people, is

international migrants (IOM, 2003). Eighty six million people migrated for reasons of work in 2003, of who some 32 million are in developing countries (ILO, 2004).

Migration is in fact a phenomenon of growing significance in 2002 there were 175 million international migrants, that is, 2.9% of the world's population, and 48% of them were women. Migration increases vulnerability to HIV/AIDS, as the migrants are far away from their families and partners, living in poverty and all too often exploited, their status in the host country is precarious or even illegal, and they may have limited or no access to health services and appropriate medical information. In addition to these vulnerabilities, their lifestyles undergo change, they meet new people, modify their sexual practices and call relations between men and women into question – and all of these upheavals have a particular impact on migrant men and women (UNESCO, 2005).

Several factors increase migrants' vulnerability to HIV. These include separation from families and partners, and also from the norms that guide behaviors in stable communities. They also include loneliness, and the alienation and despair that follow the stigma and discrimination experienced by many migrants. Factors of a more social nature particularly drive migrants' HIV risk and vulnerability. These include poverty, lack of legal protection, powerlessness and exploitation – all of which may drive people to engage in behaviors in which they would not otherwise engage. Sexual violence is a risk factor for many migrant and refugee women, especially. Finally, non-nationals and others in transit often lack of access to health promotion in general and AIDS prevention in specific, as well as to voluntary counseling and testing, and to HIV care and support (UNAIDS, 2004).

In Niger, for example, 70 per cent of all AIDS cases registered at the central hospital in Niamey have a history of migrating to the coast, particularly to Cote d'Ivoire. Again two of the major emigration areas in Niger, Tohoua and Niamey, together accounted for 90 per cent of all known AIDS cases in Niger in 1991 (John, K. ANARFI).

The links between HIV/AIDS and migration include moving from areas where HIV is relatively unknown to a situation in which there are increased chances that it will be encountered. The situation of a migrant's life itself is a contributing factor to HIV vulnerability among migrants and others (Wolfers, 1999).

A new report offers the first-ever analysis of current migration patterns and their link to HIV infection in the 10 member countries of the Association of Southeast Asian Nations. Produced jointly by ASEAN and the UN, the new report says 1.5 million people - most of them working-age - are living with HIV in the region. "Migrant workers are a vital force to national economies in Southeast Asia, yet when it comes to protecting their rights and ensuring HIV prevention and treatment, they are often among the forgotten," said Ajay Chhibber, regional director for the UN Development Program.

The report found that HIV infection rates and risk behaviors are considerably higher among migrants than in the general population. "While migrants and their sexual partners are included as a vulnerable group in the national strategic plans of ASEAN countries, comprehensive programs to address their needs have yet to be developed, funded and implemented," according to J.V.R. Prasada Rao, UNAIDS' regional director. Among the report's findings:

-HIV infection rates as high as 9.0 percent were noted among migrant fisherman in Thailand, which has developed the region's most comprehensive data on the epidemic.
-More than 1.5 percent of the adult population is HIV-infected in Cambodia, Myanmar and Thailand.
-Though the report questioned the effectiveness of the sessions; it noted that Cambodia, Indonesia, the Philippines, and Vietnam have developed pre-departure HIV prevention training for documented migrants leaving to work in other countries. However, many of the training sessions were ineffective, the report found.
-HIV among migrants is compounded by their lack of access to AIDS services and legal and social protection.

High risk of HIV/AIDS among migrant from Myanmar in Thailand

The size of the migrant population from Burma in Thailand is estimated to be from 400,000 to 2 million persons, making up approximately 80 percent of the migrant workforce in Thailand, (Institute for Population and Social Research, 2005). In Burma, the SPDC has been unwilling to engage in any large-scale education campaigns and references to condoms are still heavily restricted in the Burmese media. Lack of understanding and awareness of HIV/AIDS among the migrant population is exacerbated by limited Thai government-sanctioned prevention initiatives targeting the migrant population (Mizzima, 2005).

Social taboos prohibiting open discussions about sex and lack of public information regarding sexually transmitted diseases render migrants from Burma at high-risk for contracting HIV/AIDS. The migrant community’s knowledge of

sexually transmitted diseases is riddled with myths, including the belief that transmission can occur via toilet seats, kissing and coughing. Of greater concern is the belief that contraceptive pills act as transmission preventatives (Irrawaddy, 2002). Staff form the Migrant Assistance Program (MAP) Foundation states that “The HIV infections among the migrant communities look like those of Thai people about ten years ago. It's infected so fast at that time. Now migrant workers are like this because they don't know how to prevent HIV and some people think that “HIV/AIDS is not a big problem for them.” (SHAN, 2005). Fearing ostracism by their employers and community members, most seek counsel via telephone. Thai media provides some information however it is generally inaccessible to migrants from Burma who typically has low levels of comprehension of the Thai language (SHAN, 2005). The lack of access to information, HIV/AIDS in the migrant community is perpetuated by a lack of access to healthcare, lack of protection for pregnant migrant workers in the work force, and the prevalence of trafficking, violence and exploitation. Such discriminatory treatment renders the migrant community to be more susceptible to HIV/AIDS than the local population in Thailand (Physicians for Human Rights, 2004). The UNDP reported that 4.3 percent of pregnant migrant women were HIV positive as opposed to 2 percent of pregnant Thai women (Mizzima, 2005). Statistics from Mae Sot Hospital revealed that 11.11 percent of sex workers who have quarterly checkups at the hospital are HIV positive (Jean, 2005).

Behavior change is complex issue and is the object of many theories. For instance, Health Belief Model by Rosenstock (1966) for studying and promoting social psychologists services (health seeking behaviors) then expanded by Becker

(1970s-1980s) to include evidence on the role of knowledge and perceptions play in personal responsibility. It is a model to predict general health behaviors and the core beliefs of individual on perceived susceptibility of their risk of getting the condition, severity and potential consequences of the condition, barriers that discourage (or bridges that facilitate) adoption of the promoted behavior), and benefits (the positive consequences of adopting the behavior) . The later additional constructs are ddemographic variables (such as age, gender, ethnicity, occupation), socio-psychological variables (such as social economic status, personality, coping strategies, perceived efficacy (ability to successfully adopt the desired behavior), cues to action (external influences promoting the desired behavior, may include information provided or sought, reminders by powerful others, persuasive communications, and personal experiences, Health motivation (reasons to stick to a given health goal), and perceived threat (danger by not undertaking a certain behaviors). The theory of reasoned action by (Fishbein & Ajzen, 1980) mentioned that a person's intention to perform a specific behavior is a function of two factors: 1) attitude (positive or negative) toward the behavior and 2) the influence of the social environment (general subjective norms) on the behavior.

1.2 Research questions

1. What are the socio-demographic characteristics, availability of information & condoms, peer influence, HIV related knowledge, attitudes & skills, drug & alcohol use and the practice of unsafe sex with casual partners among Myanmar migrant fisherman in Ranong?

2. Are there any associations between unsafe sex with sex workers (dependent variable) and the following independent variables: socio-demographic characteristics, availability of information & condoms, peer influence, HIV related knowledge, attitudes & skills, drug & alcohol use among Myanmar migrant fisherman in Ranong?

1.3 Objective(s)

(i) Objectives of the Study:

The general objective of the study is to examine the factors associated with unsafe sex with sex workers/casual partners for prevention of HIV/AIDS transmission among Myanmar migrant fisherman in Ranong, Thailand.

(ii) Specific Objectives:

1. Describe the socio-demographic characteristics, availability of condom and information, peer pressure, drug and alcohol use and unsafe sex behaviors with casual partners among Myanmar migrants fisherman in Ranong.

2. Describe HIV related knowledge, attitudes & skills, drug & alcohol use among these workers.

3. Assess any association between unsafe sex with sex workers and socio-demographic characteristics, available of condom and information, peer pressure, drug and alcohol use among these workers.

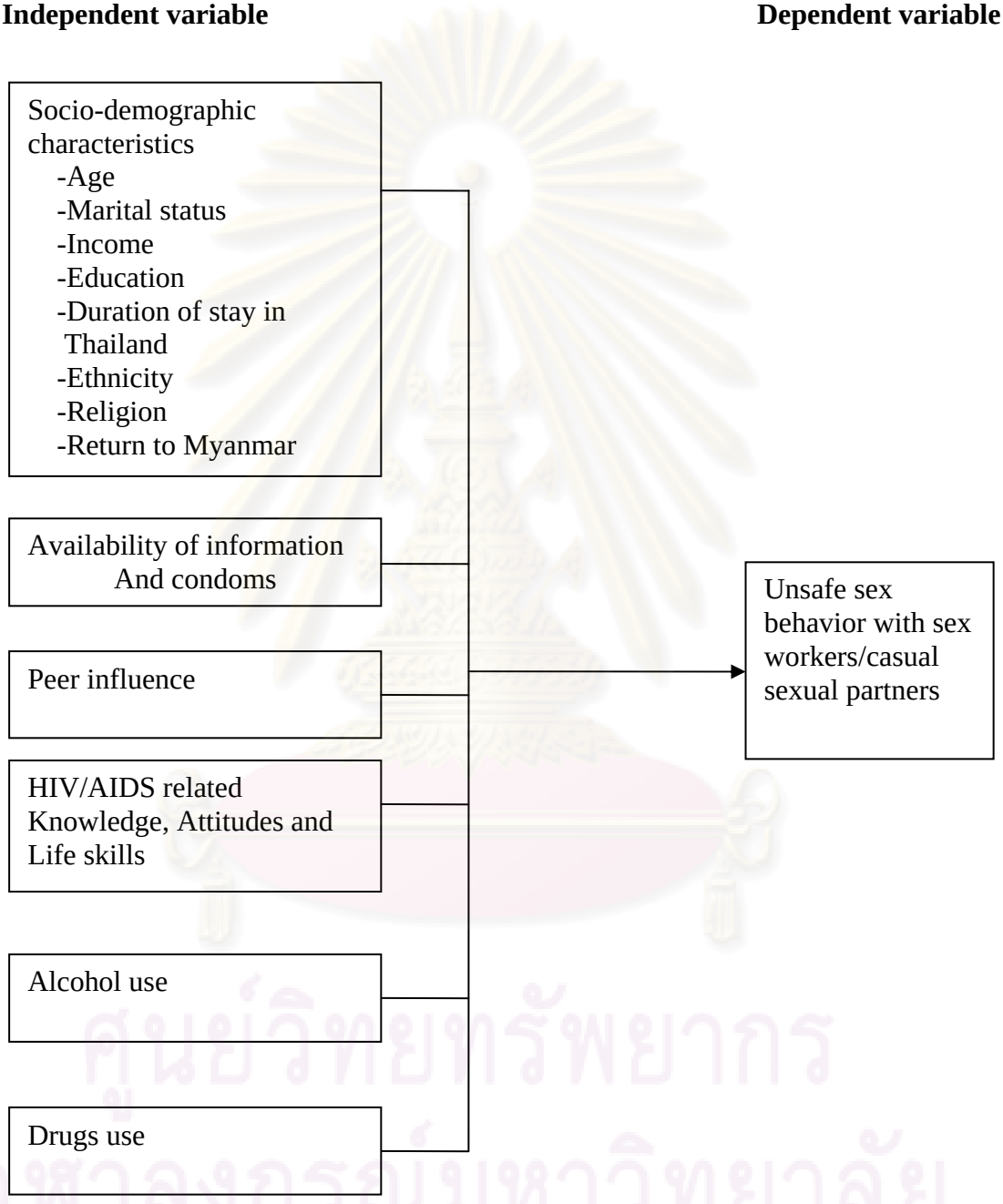
4. Assess any association between unsafe sex workers and HIV related knowledge, attitude, and practice towards HIV/AIDS prevention among these workers.

1.4 VARIABLES OF THE STUDY

1. Independent variables
    a. Socio-demographic characteristics
    b. Availability of information And condoms
    c. Peer influence
    d. HIV/AIDS related Knowledge, Attitudes and Skills (life and functional)
    e. Drugs and alcohol use

2. Dependent variable
    a. Unsafe sex behavior with sex workers

1.5 Conceptual Framework



1.6 Operational Definitions

Socio-demographic characteristics of Myanmar migrant, in this study, include age, marital status, income, education, duration of stay in Thailand, ethnicity, religion, and return to Myanmar.

Risk factors of HIV/AIDS among Myanmar migrant include alcohol use, drug abuse, and peer influence, and multi-sexual partners, etc…

Knowledge on HIV/AIDS means knowing the basic facts about HIV/AIDS and its preventive methods.

Attitudes towards HIV/AIDS, in this study, means beliefs, needs and values on AIDS itself, safe sex, and condom use.

Source of information includes Thai TV, Thai radio, Thai magazine, Thai newspaper, Myanmar TV, Myanmar radio, Myanmar magazine, Myanmar newspaper, family, friends, and NGOs activities, etc...

Availability of condom, in this study, means whether the respondents know where they can get condom and if they can pay for it every time.

Unsafe sex behavior is defined as the incorrect, inconsistent use of condom during every sexual intercourse with a sex worker.

Casual Partner is *somebody a fisherman:*

-has sex with only, without pay money, gifts or favors

-has sex with by paying or accepting money, gifts or favors

Life skills- Defined by WHO “abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life”. There are many skills, but in this study mainly focus in the skills of communication, decision making, and stress coping towards unsafe sex behavior.

CHAPTER II

LITERATURE REVIEW

2.1 Myanmar Migrant and Ranong province

Ranong, the least populated of Thailand's 76 provinces with 180,000 Thais, is home to 50,000 registered and 20,000 unregistered Myanmar migrants, Governor Kanchanapa said. But Suwat said other estimates suggest the entire Myanmar population in Ranong could be three times higher as most employers' under-report the number of migrants they hire. It is the biggest supplier of migrant workers to the rest of the country and it shares 170 km (105 mile) water and land border with Myanmar's fishing port city of Victoria Point, is one of the busiest transit points for migrants," legal aid worker Suwat Ongsomwhang said. "If it were a contest, migrant workers would be Ranong's OTOP," he said, referring to the acronym for a government programme promoting well-known products from villages **(**Nopporn W, 2008).

According to the Thai Ministry of Labor (2005), there were 1,816,025 Myanmar migrants in Thailand and less than half of these were legal migrants.

Migrant fishermen are vulnerable to HIV/AIDS infection. They tend to engage more often in sexually risky behaviors when they arrive ashore since they are young, away from home, separated from culture and social constraints, lower educated, with constant peer pressure, and facing risk environment such as alcohol and commercial sex readily available on shore. Using the services of a sex worker is a bonus for their hard work (Kominbut, 1995). From the prevalence survey of HIV infection in Myanmar fishermen at Ranong province in the middle of 1990, the HIV infection rate was 17.43% (Chanvanich, 2000).

Migrant fishermen faced some difficulties in accessing health information or services due to their migrant status and language barrier. For example, in Ranong province, the provincial public health department and Ranong hospital cannot provide both prevention and health care services to migrants for their inconsistent registration (The Thailand Seafarers Research Team, 2002).

2.2 Risk Behavior of Getting HIV/AIDS

One research of factors affecting safe sex behavior for HIV/AIDS prevention among Myanmar migrant fishermen was conducted in Ranong. The results revealed that 22% of respondents reported drinking alcohol, 8.6% reported using narcotic drug, 1.6% reported sharing a needle with someone for drug injection, and more than 50% have had sex with sex workers and have gone to the brothel when they are drunk. Among the respondents, only 44.6% use condom always when they have sex with sex workers.

Bivariate Analysis of Risk Factors for Unsafe Sex and Safe Sex Behavior of Respondents showed that safe sex behavior is associated with not drinking alcohol (*p* value, 0.000), not drunk and has not gone to the brothel (*p* value, 0.000) and not being invited by friends to drink alcohol and have sex with sex worker (*p* value, 0.008). Bivariate Analysis of Source of Information about HIV/AIDS and Safe Sex Behavior of Respondents showed that safe sex behavior is associated with getting HIV/AIDS information (*p* value, 0.012) as well as with gaining information on HIV/AIDS from NGOs (*p* value, 0.003) (Paw, 2006).

Migrants are more likely to have two or more lifetime partners which, in and of itself, increase their risk of HIV infection. Migration is also found to be an

independent risk factor for HIV in which migrants are 1.6 times more likely to be infected with HIV than non-migrants (Jewkes, 2002).

A study of HIV prevalence and risk factors among migrant and non-migrant males of Kailali districts in Nepal shows that the rate for international migrants is 19.8% and the rate of non-migrants is 4.3%. The use of condom among international migrants is 37.1% whereas among non-migrants is 63.9% (Marga & Pul, 2002).

2.3 Socio-demographic, and knowledge and attitude towards HIV/AIDS transmission

Previously, a research had been conducted for socio-demographic, social network characteristics, and knowledge and attitude towards HIV/AIDS transmission in Myanmar migrant factory workers in Mahachai district, Samut Sakorn province, Thailand. The results showed that the respondents with ≥ 26 years were more likely to have more than one sexual partner and more likely to visit commercial sex workers than those with less than 26 years of age ($p< 0.000$) and ($p< 0.047$). Single, divorced, widowed, or separated men were more likely to visit commercial sex workers as compared to those who were married and live with spouse ($p< 0.003$). There was a higher probability for respondents who had stayed more than one year in Thailand to have risk of infection with commercial sex workers as compared with those who had stayed less than one year in Thailand ($p< 0.008$) (Thu, 2003). In 2006, the research of factors affecting safe sex behaviors for HIV/AIDS prevention among Myanmar migrant fishermen in Ranong revealed that Non-Baman ethnicity, drinking alcohol and drunk and go to the brothel are significantly associated with unsafe sex behavior. Baman respondents had more safe sex behavior compared to non-Baman respondents (odds ratio 2.600). Respondents who did not drink alcohol had lower odds of unsafe

sex behavior compared with those who drank alcohol (odds ratio 0.229). The respondents who drank and went to the brothel had higher odd ratio compared with those who were not (odds ratio 0.394) (Paw, 2006).

2.4 Availability of Condom and Safe Sex Behavior

A study that examined the availability of condom and safe sex behavior among migrant fishermen in Ranong, Thailand showed that all respondents can obtain condoms within one hour. One fourth of them can obtain condoms at once. The main sources that provided respondents with condoms were pharmacies (drug stores), sex workers, and friends. The study also showed that respondents who consistently used condoms with sex workers were more likely to obtain condoms at a pharmacy (drug store) than respondents who inconsistently used condoms with sex workers ($p<0.05$) (Hu, 2004).

2.5 Peer influence and safe sex behavior among fishermen

Peer influence has an important role in safe sex behavior among fishermen in Thailand. According to Vanlandingham et al (1998), male peer groups are closely linked with both the initiation of and the continued participation in sexual activity involving commercial sex workers. Their survey indicated that commercial sex patronage among young unmarried Thai men, often including first intercourse, is very common and that Thai men usually patronize commercial sex establishments in small groups. This peer group context is important for commercial sex visitation among both single and married men. Unsafe sexual behavior is often influenced by peer pressure. According to Hu (2004), regarding peer influence, most respondents who had sexual intercourse and visited commercial sex worker (CSW) during the past 12 months visited CSW in groups. Only 2.8% went to the brothel alone. In addition, they

reported that almost all their friends (98.6%) visited CSW; 35.2% of them reported that almost all of their friends asked them to go to the brothel.

2.6 Slippage AND breakage: Condom errors and problems

A study was conducted in USA, to comprehensively assess the prevalence of condom-use errors and problems among male clients attending a public sexually transmitted disease (STD) clinic. Men (n = 278) attending an STD clinic completed an anonymous questionnaire. Seven errors and six problems were assessed. Summative scores were tested for associations with three key variables. Of 834 condom-protected events: 19% were associated with 'fit and feel' problems, 15% involved breakage, 14% involved lost erection, 9% were associated with lost erection while applying condoms, 8% involved slippage during withdrawal and 7% involved slippage during sex. A mean of 6.4 errors/problems were observed. None of these summative variables (total errors, total problems or total of errors and problems) were significantly associated with age, minority status or whether men indicated they had ever been taught how to use condoms (International Journal of STD and AIDS, 2008).

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CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

Research design was a cross-sectional descriptive and analytical study.

3.2 Instruments

The research instrument was an interviewer administrated questionnaire and was based on a modification of a set of an existing questionnaire in English. The questionnaires was translated into Myanmar language and used for quantitative study. A set of guidelines questions focus group discussion was used for qualitative study as instruments.

Interview questionnaire for quantitative study consisted of six parts:

Part I: Socio-Demographic Characteristics

This part of the questionnaire consists of questions on the socio-demographic profile of the sample population which includes: age, marital status, education, ethnicity, religion, monthly income, duration of stay in Thailand, and number of times returned to Myanmar.

Part II. Source of Information about HIV/AIDS and Availability of Condom

Questions in this part were about source of information related to HIV/AIDS and availability of condom.

Part III: Knowledge about HIV/AIDS and Condom

This part of the questionnaires aimed at finding out to what extent the sample population has correct knowledge on IV/AIDS and condom use. There were 34 questions consisted of knowledge on symptoms of HIV/AIDS, prevention of HIV/AIDS transmission.

A correct answer was given 1 score and 0 score for wrong answer and do not know. The score varied from 1-34 points and was classified into 3 levels as follows: Bloom's cut off point, 60%-80%

High level (80-100%) 28-34 scores

Moderate level (60-80%) 21-27 scores

Low level (Less than 59%) 1-20 scores

Part IV. Attitude towards HIV/AIDS and Condom Use

This part of questions aimed at determining the attitudes of the sample population toward HIV/AIDS and condom use by using Likert Scale: The answer was categorized as strongly agree, agree, not sure, disagree, or strongly disagree. The rating scale was measured as follows:

Positive Statement		Negative Statement	
Choice	Scores	Choice	Scores
Strongly agree	5	Strongly agree	1
Agree	4	Agree	2
Neutral	3	Neutral	3
Disagree	2	Disagree	4
Strongly disagree	1	Strongly disagree	5

The scores varied from 1 to 50 and all individual answers were summed up for total scores and calculated for means. The scores were classified into 3 levels (Positive Attitude, Neutral Attitude, and Negative Attitude).

Positive Attitude 41-50 scores

Neutral Attitude 31-40 scores

Negative Attitude 1-30 scores

Part V. Risk Behavior of Getting HIV Infection

The questions in this section aimed at finding out kind and the frequency of risk behavior of getting HIV infection among the sample population. The answers will report practice or not of investigated behaviors.

Part VI. Skills on condom use and life skills towards unsafe sex behaviors

The questions in this section aimed at finding out the functional skills on condom use and life-skills that can help practice healthy behaviors such as condom use during sex and avoidance of drugs and alcohol.

3.3 Target area and Population

The target area was in Ranong province in south of Thailand that has a large Myanmar migrant population.

3.4 **Study Population**

The study population was Myanmar migrant fishermen, aged 15 and above, all males since this profession are not practiced by females.

3.5 (A) Sampling Techniques for Quantitative Study

Multistage sampling method was used to collect the sample.

First stage – There are 5 districts in Ranong province. Muaeng district was selected purposively from these districts because the district has highest number of Myanmar migrant population.

Second stage – There were six Tabons (sub-district) in Muaeng district. Among six, two Tabons had the highest population of Myanmar migrant fishermen and these Tabons were selected purposively. A cluster sampling method was used for

interviewing fishermen. The unit of sampling in the room where fishermen live, the first unit was selected randomly.

(B) Sample Size

Sample size in this research was calculated by the following formula that is created by (Daniel, 2005)

$$n = \frac{Z^2\ pq}{d^2}$$

n = sample size

Z = standard value for 95% confidence interval = 1.96

d = absolute precision of study = 0.05 (acceptable error)

p = the proportion of high knowledge = 0.68 (From the previous study at Ranong Province, Paw 2006)

q = 1-p = 1-0.68 = 0.32

$$n = \frac{Z^2\ pq}{d^2}$$

$$n = \frac{(1.96)^2 (0.68)\ (0.32)}{(0.05)^2} = 334 \text{(Sample size)}$$

After adding drop-out rate (10%), my final sample size was 367

(C) Inclusion Criteria for sample selection (Quantitative study)

- Myanmar migrant fishermen in Ranong,
-age must be 15 years old and above,
-males,
- More than six months stayed in Thailand
- Those willing to cooperate in this survey.

(D) Exclusion Criteria for sample selection (Quantitative study)

- Those who work as factory workers, house helpers, constructors and street vendors etc. and all females.

(E) Qualitative Study Sampling Method (Focus Groups Discussion)

Key informant from NGO health volunteer working with Myanmar migrants recruited fishermen and migrant women who were willing to participate in focus group discussion. There were three groups of 5-8 members in each. Two groups were Myanmar migrant fishermen and one group was Myanmar female migrants to confirm the findings (triangulation) obtained from male migrants questionnaire.

(F) Inclusion criteria (focus group discussion)

- Myanmar migrant fishermen in Ranong
- Myanmar female migrants in Ranong who have at least one fisherman as friend and relative,
- More than six moths stay in Thailand
- Those willing to cooperate in this survey

(G) Exclusion criteria (focus group discussion)

-Those who could not communicate in Myanmar language e.g. some Mon & Karen cannot speak Myanmar.

-Myanmar female migrants who did not have at least one fisherman as friend or relative in Ranong

3.6 Reliability Test

To establish of the reliability of the questionnaire, before doing the actual data collection, pilot study was conducted among Myanmar migrant fishermen in Mahachai, Samut Sakorn Province. Then, internal consistency of the rating scales

was done by Cronbach's alpha coefficient to measure the reliability. The Cronbach's alpha coefficient was 0.81.

3.7 Validity Test

Ensuring the content validity was done by reviewing previous literature and consulting 3 content experts.

3.8 Data Collection

The data was collected late February, 2009. A total of five assistant interviewers were chosen in this study (four males and one female). The interviewers are the Migrant Health Volunteers (MHVs) from World Vision organization of Ranong. The researcher asked for the permission from the organization to hire these MHVs as interviewers. They all had experience in conducting face to face interview by using administered questionnaire. The interviewers were trained by the researcher one day prior to the data collection. Before conducting the interview, they explained the respondents about anonymity, confidentiality, free participation, freedom to withdraw, access to final report, and no use of data for other purpose and was thanked for their time. Actual data collection was done by the five assistant interviewers plus the researcher of this thesis for a total of 367 target respondents in Ranong, Thailand. In order to avoid asking a participant twice, there was a short meeting for 5-10 minutes every morning before going out for interviewing. They were divided and then assigned to go to a certain place each day. The interviewers had to mention what study was about and explained the purpose of the study. Interviewees were asked if they had already previously answered the same questionnaire. Nobody reported having answered the questionnaire previously. Answering the questionnaire was time consuming and there were no benefits whatsoever for those who agreed to answer, it

is, therefore, very unlikely that people lied about this and ended up answering twice the same questionnaire. Every evening, all filled in questionnaires were checked for completeness, correctness, and consistency. Clarification was asked to the interviewers before letting them go home.

3.9 Data Analysis

Questions and answers were coded and entered into the computer, The Statistical Package was used to perform the statistical analysis.

For descriptive statistics: frequencies, percentage, mean, and standard deviation was calculated.

For hypothesis testing: Pearson's Chi Square test and binary logistic regression were used to find the possible associations between:

- Unsafe sex with sex worker and socio-demographic characteristics, available of condom and information, peer pressure, drug and alcohol use among these workers.
- Unsafe sex with sex worker and knowledge, attitude, and practice towards HIV/AIDS prevention among these workers.

For qualitative data, manual analysis was used and grouping by common answers, subjects/issues, summarizing and drawing conclusion was done by the researcher.

3.10 Limitation of the Study

The study is limited to Myanmar migrant fishermen in Ranong only and therefore they do not represent the whole Myanmar Migrant employed in other occupations and communities in Thailand.

It was a big challenge for the interviewers to collect the data due to fishermen's working situation and used of free time, and their cultural sensitivity to HIV-related issues.

The design of this study was cross-sectional survey and it did not express their practice over a period of observation and as effect of an educational intervention (longitudinal study. Since the interview will be face to face, respondents felt uneasy about answering sensitive questions about sex and drugs use. Therefore they would give socially acceptable answers instead of telling the truth.

There were five interviewers and the problem of inter interviewers variability could occur. However, this limitation seems not to have been a problem because the answers collected were comparable for all interviewers.

The study used a convenience sample, so there was a chance of having selection bias. However, as the fishermen are highly mobile, it was challenging to get access to the fishermen. Simple randomization of respondents was not possible.

In-depth interviews and Focus Group were conducted within five days. This short period of time was not enough to build rapport because the interviewer was stranger to the respondents. This lack of rapport created barriers to attain in-depth information.

3.11 Application Benefits

The result of this study was expected to be useful for both government and non-governmental sectors to review and planning of health promotion and education programs for the migrant fishermen from Myanmar in Thailand.

3.12 Ethical Consideration

Before conducting the research, approval from the Ethical Committee of Chulalongkorn University (through the College of Public Health Sciences) was obtained. Before interviewing the participants, the researcher and interviewers gave clear verbal explanation to each participant on the purposes and procedures of the study. The informed consent which contains information of confidentiality, free participation, freedom to withdraw, and no use of data for other purpose was obtained from the participants who were willing to participate in the study. For focus group discussions, verbal consent was obtained from the participants who were willing to participate in the group discussion.

CHAPTER-IV

RESULTS

This chapter presents the findings from the data analysis of the survey. The chapter is divided into two major sections: Quantitative and qualitative data analysis.

4.1.1 Univariate Analysis

The univariate analysis includes the frequency, percentage distribution of the respondents' socio-demographic characteristics, source of information, availability of condom use, knowledge on HIV/AIDS and Condom use, attitude towards HIV/AIDS and Condom, risk factors facilitating HIV infection and life skills related to HIV/AIDS prevention.

(i) Social-Demographic Characteristics

Table 1 showed the socio-demographic characteristics of the respondents in Muang district, Ranong, Thailand. 85 % of the respondents were below the age of 35 years. Majority of the respondents, 58.9% were single, and 32.4% were married, 8.4% were divorced and 0.3% was widowed. As for the education status, the majority of the respondents 53% (52.9) attained middle school education. The majority of the respondents, 73.3 % were Bamar. Most of the respondents about 94 (93.7%) were Buddhist. 49% of the respondents earned between 4,001 and 5,000 Baht, 25.3% earned more than 5,000 Baht, 19.6% earned between 3,001 and 4,000 Baht, and 6% earned less than 3,000 Baht. Around 50% (49.9%) of the respondents had lived 1 to 4 years in Thailand. Among the respondents, about 62.7% never go back home.

Table 1: Number and Percentage Distribution of Respondents by Socio-Demographic Characteristics (n=367)

Socio-demographic characteristics		Number	Percentage
Age:	15-25 years	144	39.2
	26-35 years	168	45.8
	Above 35 years	55	15.0
Marital Status:	Single	216	58.9
	Married	119	32.4
	Divorced	38	8.4
	Widowed	1	0.3
Education:	Primary	64	17.4
	Middle School	194	52.9
	High School	73	19.9
	University	24	6.5
	Monastery	12	3.3
Ethnicity:	Bamar	269	73.3
	Mon	38	10.4
	Karen	32	8.7
	Tawai	12	3.3
	Rakaine	11	3.0
	India	3	0.8
	Muslim	2	0.5
Religion:	Buddhism	344	93.7
	Christian	16	4.4
	Islam	5	1.4
	Atheist	2	0.5
Income:	Less than 3,000	22	6.0
	3,001-4,000	72	19.6
	4,001-5,000	180	49.0
	More than 5,000	93	25.3
Duration of Staying in Thailand:	Less than 1 year	51	13.9
	1-4 years	183	49.9
	5-9 years	81	22.1
	10 year above	52	14.2
Number of time returned to Myanmar:	One time in 6 months	39	10.6
	One time in 1 year	32	8.7
	One time in 2 or more year	66	18.0
	Never go home	230	62.7

(ii) Sources of information on HIV/AIDS

The table 2 revealed that about 84% (83.7%) of the respondent received HIV/AIDS information. respondents could answer more than one source in the questionnaire and, therefore, the total number of sources of information will not be equal to 100%. Out of many sources, the majority of the respondents 56.4% received information from Non-governmental Organization activities, 12.5% from family member, 8.2% from Myanmar Magazine, 6.4% from Myanmar Newspaper, 6.0% from Myanmar Radio, less that 5% each from friends and Thai Television.

Table 2: Number and Percentage Distribution of Source of Information from which Respondents Know about HIV/AIDS N= (367)

HIV/AIDS information	Number	Percentage
Received HIV/AIDS information		
Yes	307	83.7
No	60	16.3
Source of information:		
Non-Governmental Organization:	207	56.4
Myanmar Magazine:	116	31.6
Family Member:	46	12.5
Myanmar Newspaper:	30	8.2
Myanmar Radio:	24	6.4
Myanmar Television:	22	6.0
Friends:	16	4.4
Thai Television:	9	2.5

(iii) Availability of Condom

Table 3 revealed that more than 80% of the respondents knew where to get condom. Out of many places, 51% (50.7%) of the respondents knew that condom is available at drug store, 45.5% know that condom is available at shop, about 40% (38.4%) and 37.6 know that condom is available at clinic and hospital/health center, and less than 10% know that condom is available at a brothel and vending machine.

Table 3: Number and Percentage Distribution of Availability of Condom from which Respondents know where to get condom (n=367)

Availability of condom	Yes	No
	n (%)	n (%)
Do you know where to get condom?	294(80.1)	73(19.9)
Source of condom:		
Drug Store:	186(50.7)	181(49.3)
Shop:	167(45.5)	200(54.5)
Clinic:	141(38.4)	226(61.6)
Hospital/Health Center:	37(10.1)	330(89.9)
Brothel:	26(7.5)	343(92.5)
Vending Machine:	16(4.4)	351(95.6)

(iv) Distribution of Total Knowledge on HIV/AIDS and Condom Use

Table 4 showed the frequency and percentage distribution of knowledge level of the respondent. The level were classified into three categories; low knowledge (0-20 scores: less than 60%), medium knowledge (21-27 scores: 60-80%), and high knowledge (28-34: more than 80-100%). The range of the knowledge was 3-33. The mean score was 23.6 and standard deviation was 5.57.Around 28% of the respondents had low and high knowledge, while 42.5 of them had medium knowledge.

Table 4: Number and Percentage Distribution of total Knowledge on HIV/AIDS and Condom Use of the Respondents (n=367)

Knowledge level	Number	Percentage
Low Knowledge (1-20 Scores)	105	28.6
Medium Knowledge (21-27 Scores)	156	42.5
High Knowledge (28-34)	106	28.9
Range 3-33		
Mean Score = 23.6		
SD = 5.57		

(v) Distribution of Knowledge on Symptoms of AIDS

Table 5 showed the frequency and percentage distribution of knowledge about the symptoms of AIDS. More than 90% of respondents were aware of chronic diarrhea and weight loss as symptoms of AIDS, while less than 70% of respondents were aware of prolonged fever as a symptom of AIDS.

Table 5: Number and Percentage Distribution of Knowledge on Symptoms of AIDS of the respondents (N = 367)

Knowledge on symptoms of AIDS	Yes	No	Don't know
	n (%)	n (%)	n (%)
Chronic diarrhea:	331(90.2)	10(2.7)	26(7.1)
Weight loss:	345(94.0)	11(3.0)	11(3.0)
Sneezing:	87(23.7)	139(37.9)	14(38.4)
Prolonged fever:	240(65.4)	62(16.9)	65(17.7)
Constipation:	87(23.7)	149(40.6)	13(35.7)

(vi) Distribution of Knowledge on Prevention of HIV/AIDS

Table 6 showed that 70% of respondents had knowledge on prevention of HIV/AIDS. Results indicated that 66.8% and 67% of respondents knew that HIV/AIDS occur only among men who have sex with me and when having sex with sex worker. 24.5% of respondents knew that having sex without condom once will not infect a person with HIV, 20.4% of respondents knew that it is possible to protect against AIDS by vaccination, 47.1% of them knew that they do not need to use condom with steady partner, 18% of the respondents knew that they can use contraceptive pills to prevent HIV/AIDS, more than 40% of respondents knew that they can prevent HIV/AIDS by taking antibiotics regularly and eating more meat, fish, or vegetables, about 40% of then knew that they can prevent HIV/AIDS by washing reproductive organs with antiseptic solution after sex every time, and about

50% of the respondents think that doing physical exercise daily can also prevent HIV infection.

Table 6: Number and Percentage Distribution of Knowledge on HIV/AIDS Prevention of the Respondents (N = 367)

Knowledge on prevention of HIV/AIDS:	Yes n (%)	No n (%)	Don't know n (%)
AIDS occurs only men who have sex with men*	245(66.8)	106(28.9)	16(4.4)
AIDS occurs only when has sex with sex worker*	246(67.0)	116(31.6)	5(1.4)
Sex without condom only once will not infect a person with HIV*	90(24.5)	248(67.6)	29(7.9)
Possible to get HIV/ADIS by having sex with healthy looking person	257(70.0)	57(15.5)	53(14.4)
Possible to protect against AIDS by vaccination*	75(20.4)	254(69.2)	38(10.4)
No need to use condom with steady partner*	173(47.1)	167(45.5)	2(7.4)
Sex with different partner increase chance of getting HIV	327(89.1)	18(4.9)	22(6.0)
Use of condom can protect HIV/AIDS	308(83.9)	33(9.0)	26(7.1)
Living abstinent (not having sex at all)	303(82.6)	54(14.7)	10(2.7)
Use the contraceptive pill*	66(18.0)	234(63.8)	67(18.3)
Use condom correctly every time when having sex	325(88.6)	31(8.4)	11(3.0)
Taking antibiotics regularly*	151(41.1)	171(46.6)	45(12.3)
Avoid sex with injecting drug user	306(83.4)	38(10.4)	23(6.3)
Avoiding injection with syringe and needle that already used on others	315(85.8)	34(9.3)	18(4.9)
Wash reproductive organs with antiseptic solution after sex every time*	146(39.8)	179(48.8)	42(11.4)
Doing physical exercise daily*	183(49.9)	158(43.0)	26(7.1)
Stay faithful to one uninfected sex partner who also has no other partner	315(85.8)	27(7.4)	25(6.8)
Eat more meat, fish, or vegetables*	161(43.9)	146(39.8)	60(16.3)

* Negative statement

(vii) Number and Percentage Distribution of Knowledge on HIV/AIDS Transmission

Table 7 showed that more than 70% of the respondents have correct knowledge on HIV/AIDS transmission such as blood transfusion, sharing syringe/needle, tattooing, and pregnant mother to her baby, breast feeding to child, men who have sex with men, having oral sex with wound in the mouth, and having sex without condom with commercial sex worker. About 70% of respondents knew that HIV/AIDS can be transmitted during delivery from mother to child. Around 20% and 13% of the respondents knew that HIV/AIDS could not be transmitted by using public toilet and from massage, hugging, and touching.

Table 7: Percentage Distribution of Knowledge on HIV/AIDS Transmission of the respondents (N = 367)

Knowledge on HIV/AIDS Transmission	Yes	No	Don't know
	n(%)	n(%)	n(%)
Blood transfusion	353(95.6)	9(2.5)	7(1.9)
Using public toilet*	74(20.2)	272(74.1)	21(5.7)
Sharing syringe/needle	342(93.2)	19(5.2)	6(1.6)
Tattooing	335(91.3)	21(5.7)	11(3.0)
Pregnant mother to her baby	284(77.4)	24(6.5)	59(16.1)
During delivery mother to child	251(68.4)	28(7.6)	88(24.0)
Breast feeding mother to child	279(76.0)	37(10.1)	51(13.9)
Men who have sex with men	310(84.5)	40(10.9)	17(4.6)
Having oral sex with wound in the mouth	264(71.9)	36(9.8)	67(18.3)
Having Massage, Hugging and touching*	48(13.1)	210(57.2)	109(29.7)
Having sex without condom with commercial sex worker:	326(88.8)	29(7.9)	12(3.3)

* Negative statement

(viii) Number and Percentage Distribution of type of sex that is considered the highest risk to contract HIV.

Table 8 showed that about 69% (68.7%) of the respondents thought that vaginal sex is the highest risk of sex to contract HIV.

Table 8: Percentage Distributions of knowledge on type of sex that has the highest risk to contract HIV of the respondents (n=367)

Type of sex	Number	Percentage
Vaginal	252	68.7
Anal	71	19.3
Oral	37	10.1
Mutual-masturbation	4	1.1
Self-masturbation	3	0.8

(vi) Distribution of attitude towards HIV/AIDS and Condom use

The table 9 showed that around 72% of the respondents had neutral attitude, while about 16 %(15.8) and 12 % of the respondents had high and low attitude to all attitude questions. More than 79% of the respondents agree that AIDS is serious health problem among fishermen in Ranong, every one has equal chance to get HIV/AIDS, and it is easy to use condom. Less then 65% of the respondents agree that one should not have sex if the partner refuses condom use and it is easy to talk about condom use with a partner. More than 79% of the respondents disagree that condoms are expensive to use regularly and I think I do not need to use condom with sex workers because not all sex workers have HIV/AIDS. Less than 65 disagree that it is not suitable to use condom with a regular partner because it causes them to feel distrusted, it is embarrassing to buy condom and use of condom makes sex less enjoyable.

Table 9: Number and Percentage Distributions of Attitude towards HIV/AIDS and Condom Use of the respondents (N = 367)

Attitude level	Number	Percentage
Low Attitude (1-30 Scores)	44	12.0
Neutral Attitude (31-40 scores)	265	72.2
High Attitude (41-50 Scores)	58	15.8
Range 25-50		
Mean 36.46		
SD 4.46		

Attitude	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
	(%)	(%)	(%)	(%)	(%)
AIDS is a serious health problem among fishermen in Ranong	25.1	64.9	4.6	4.1	1.4
Every one has equal chance to get HIV/AIDS	16.9	62.7	12.8	5.4	2.2
It is easy to use a condom	18.0	65.1	12.0	3.8	1.1
Condoms are expensive to use regularly*	4.1	7.6	9.3	54.8	24.3
It is not suitable to use condom with a regular partner because it causes them to feel distrusted*	8.7	23.4	15.5	37.1	15.3
One should not have sex if the partner refuses condom use	10.4	41.7	13.4	27.0	7.6
It is embarrassing to buy Condoms*	4.1	20.7	10.4	45.1	19.6
It is easy to talk about condom use with a partner	3.8	59.7	24.0	8.2	4.4
Use of condom makes sex less enjoyable*	4.6	32.4	15.0	37.9	10.1
I think I do not need to use condom with sex workers because not all sex workers have HIV/AIDS	1.6	8.2	8.4	52.6	29.2

Negative statement*

(x) Risk behavior facilitation HIV/AIDS infection

The table 10 showed that around 82% of the respondents got drunk in their life time. About 60% (59.9%) of the respondent had gone to the brothel when they got drunk and around 62% (62.4%) of the respondents were invited by their friends to go to the brothel. About 11% (10.9%) of the respondents had sex with male sex workers while around 63 % (63.2%) of the respondent had sex with female sex workers. 70.7% of the respondents who admitted having sex with sex workers always use condom. 3.3% of the respondents had ever inject narcotic drug and among those who injecting drug, two-third of them had ever share needle with someone for drug injection.

Table 10: Number and Percentage Distribution of Risk Behavior facilitating HIV/AIDS Infection o the Respondent (N = 367)

Risk behaviors	Number	Percentage
Did you ever get drunk in your life time?		
Yes	302	82.3
No	61	16.6
Do not want to answer	4	1.1
How often do you get drunk? *(N=302)*		
Every day	28	9.3
1-3 times a week	97	32.1
1-3 times a month	152	50.3
1-3 times a year	25	8.3
Have you ever gone to the brothel when you are drunk? *(N=302)*		
Yes	194	64.2
No	105	34.8
Do not want to answer	3	1.0
Have your friend ever invited you to go to brothel?		
Yes	229	62.4
No	135	36.8
Have you ever had sex with male sex worker?		
Yes	40	10.9
No	325	88.6
Do not want to answer	2	0.5

Table continue to next page

Have you ever have sex with female sex worker?		
Yes	232	63.2
No	132	36.0
Do not want to answer	3	0.8
Condom use of who admitted having sex with sex worker:		
Always	164	70.7
Often	34	14.6
Sometimes	23	10.0
Never	11	4.7
Did you use to inject narcotic drug in your life time?		
Yes	12	3.3
No	351	95.6
Do not want to answer	4	1.1
Have your ever shared a needle with someone for drug injection?		
Yes	8	2.2
No	358	97.5
Do not want to answer	1	0.3

(xi) Casual sexual partners, place, and times of sexual intercourse and condom use of the fishermen

The table 11 revealed that 18% of the respondents have ever had casual sexual partner. 7.9% and 7.1% of the respondents had sex with their casual partners at hotel and home (room). 16.6 % of the respondents had female casual partner while 0.5 of them had male causal partners. Among those who had casual sexual partners, more than 80 % of them had more than one male casual partner and more than 90% of them had more than one female casual sexual partner. In the past six months about 37% (36.7%) of them had one to three times sexual intercourse with casual partners. About 41% (40.9%) of them always used condom from the beginning to the end when they had sex with casual partners. 76.7% of the respondents intend to use condom with casual partners in the future.

Table 11: Number and Percentage Distribution of casual sexual partners, place, and times of sexual intercourse and condom use of the Respondents

Variables	Number	Percentage
Have you ever had sex with casual sexual partner?		
Yes	66	18.0
No	301	82.0
Place where having sex with casual sexual partner *(N=66)*		
Hotel	29	44.0
Home (room)	26	39.0
Both Hotel and Home	3	5.0
Other Place	8	12.0
Total number of Male casual sexual partner during your life time *(N=6)*		
One male casual sexual partner	1	16.7
Two-three male casual sexual partners	3	50.0
Four-eight male casual sexual partners	2	33.3
Total number female casual sexual partner during your life time *(N=61*)		
One female casual sexual partner	4	6.6
Two-four female casual sexual partners	31	50.8
Five-ten female casual sexual partners	25	41.0
11-20 female casual sexual partners	1	1.6
Average sexual intercourse of who admitted having sex with casual partners in the past six months *(N=49)*		
1-3 times	18	36.8
4-6 times	10	20.4
7-9 times	17	34.8
10-15 times	1	2.0
16-20 times	2	4.1
21-54 times	1	2.0
Condom use of who admitted having sex with casual sexual partner (beginning to the end) *(N=66)*		
Always	27	40.9
Almost always	12	18.4
Half of the time	3	4.5
Some of the time	7	10.6
Never	17	25.7
In the future, intend to use condom with casual sexual partner *(N=367)*		
For sure	281	76.6
Very likely	57	15.5
Fifty-fifty	14	3.8
Not likely	8	2.2
Surely not	7	1.9

(xii) Number and Percentage Distribution of those who accepted money, gift or favor for sex with casual partner and condom use of the respondents

6.3 % of the respondents have accepted money, gift or favor for sexual intercourse. 43.5% of them always used condom. 77.7 % of the respondents intended to use condom if they would accept money, gift or favor for sexual intercourse in the future.

Table 12: Number and Percentage Distribution of those who accepted money, gift or favor for sex with casual partner and condom use of the respondents

Variables	Number	Percentage
Ever accept money, gift or favor for sex (intercourse)? *(N=367)*		
No	344	93.7
Yes, money	12	3.3
Yes, gift or favor	11	3
Condom use of who admitted accepting Money, Gift or Favor and having sexual intercourse (beginning to the end) *(N=23)*		
Always	10	43.5
Almost always	5	21.7
Some of the time	3	13
Never	5	21.7
In the future intend to use condom use when accept Money, Gift or Favor and having sexual intercourse *(N=367)*		
For sure	285	77.7
Very likely	59	16.1
Fifty-fifty	11	3
Not likely	8	2.2
Surely not	4	1.1

(xiii) Number and Percentage Distribution of those who paid money, gift or favor for sex with casual partner and condom use of the respondents

9.3% of the respondents paid money, gift or favor for sexual intercourse. 50% of them paid 1-3 times of money, gift or favor for sexual intercourse. 38 % of them always used condom from the beginning to the end when they paid money, gift or favor for sexual intercourse.

More than 74% of the respondent will surely use condom from the beginning to the end if they will have sex with casual partners.

Table 13: Number and Percentage Distribution of those who paid money, gift or favor for sex with casual partner and condom use of the respondents

Variables	Number	Percentage
Ever Paid money, gift or favor for sex (intercourse) *(N=367)*		
No	333	90.7
Yes, money	23	6.3
Yes, gift or favor	11	3.0
How many times have you paid money, gifts or favors for sex in your life time? *(N=34)*		
1-3 times	17	50.0
4-5 times	9	26.5
6-10 times	6	17.6
11-20 times	2	5.9
Condom use of who admitted paying Money, Gift or Favor and having sexual intercourse (beginning to the end) *(N=34)*		
Always	13	38.2
Almost always	5	14.7
Half of the time	1	3.0
Some of the time	6	17.6
Never	9	26.4
In the future, intent to use condom use when pay Money, Gift or Favor and having sexual intercourse *(N=367)*		
For sure	272	74.1
Very likely	72	19.6
Fifty-fifty	14	3.3
Not likely	7	1.9
Surely not	4	1.1

(xiv) Life Skills for prevention of HIV/AIDS transmission.

The table 14 revealed that more than 55% of the respondents have negotiation skills for prevention of HIV/AIDS transmission such as refuse undesired sex, resist pressure to use drugs, refuse to have sex without condom, and discuss to use condom during sex. More than 80% of the respondents have good decision making skills such as negotiate to use condom when their partners refuse to use condom and go to see a

doctor when they think they have STI (Sexually Transmitted Diseases). 18% of the respondents will seek trusted person when they are stressed.

Table 14: Number and percentage distribution of life skills for prevention of HIV/AIDS transmission of the Respondents (N = 367)

Life Skills	Number	Percentage
Refuse undesired sex:		
Always	252	68.7
Sometimes	95	25.9
Never	20	5.4
Resist pressure to use drugs:		
Always	208	56.7
Sometimes	135	36.8
Never	24	6.5
Refuse to have sex without condom:		
Always	237	64.6
Sometimes	97	26.4
Never	33	9.0
Discuss to use condom during sex:		
Always	212	57.8
Sometimes	116	31.6
Never	39	10.6
What do you mostly do if you partner refuse to use condom:		
Avoid sex	44	12.0
Negotiate to use condom	295	80.4
Have sex without condom	25	6.8
Other	3	0.8
What do you mostly do when you are stressed?		
Seek trusted person for help	66	18.0
Seek friend for drinking	169	46.0
Drink alcohol alone	96	26.2
Take drug alone *(e.g. Yaa Baa) or* other drugs	3	0.8
Other	33	9.0
What do you mostly do when you think you have STI (Sexually Transmitted Disease)?		
Buy street medication	22	6.0
Go to see doctor	308	83.9
Buy medication at pharmacy	21	5.7
Take traditional medication	3	0.8
Other	13	3.5

(xv) Knowledge on condom use

The table 15 revealed that more than 80% of the respondents have correct knowledge on condom use for prevention of HIV/AIDS transmission. 55.5% of the respondents have knowledge about squeeze the air at the tip of the condom. About 72.2% of the respondent have ever used condom. Among them, 4.5% always had experience in condom broke during sex while 0.7 % had experience in condom slipped off during sex.

Table 15: Number and Percentage Distribution of knowledge on condom use skills for prevention of HIV/AIDS transmission of the Respondents (N = 367)

Knowledge on condom use	Number	Percentage
Put condom on after starting sexual intercourse:		
Always	13	3.7
Sometimes	54	14.5
Never	300	81.8
Remove condom before ending sex:		
Always	25	6.8
Sometimes	46	12.5
Never	296	80.7
Squeeze air at the tip of the condom before using it:		
Always	202	55.0
Sometimes	79	21.6
Never	86	23.4
Put the condom on the penis inside-out:		
Always	12	3.3
Sometimes	44	12.0
Never	311	84.7
Have you ever used condom?		
Yes	265	72.2
No	102	27.8
Condom broke during sex (n=266)		
Always	12	4.5
Sometimes	170	64.1
Never	84	31.6
Condom slipped off during sex (n=266)		
Always	2	0.7
Sometimes	121	45.5
Never	143	53.8

4.1.2 Bivariate Analysis

(i) Bivariate Analysis of Socio-demographic Characteristics of the Respondents and Unsafe Sex Behavior with Sex Workers

The table 16 revealed that unsafe sex behavior associated with earning more income, (*p* value 0.038), longer duration stay in Thailand, (*p* value 0.016). There was no association between age, marital status and education and unsafe behavior of the respondents with sex worker.

Table 16: Association between Socio-demographic Characteristics and Safe Sex Behavior with Sex Worker of the respondents

Socio-demographic Characteristics	Safe Sex Yes (n%)	No (n%)	Total n(%)	Chi-Square	*p* value
Age:					
15-25 years	47(61.0)	30(59.0)	77(100)		
26-35 years	88(77.2)	26(22.8)	114(100)	5.8	0.054
Over 35 years	28(68.3)	13(31.7)	41(100)		
Marital Status:					
Single	95(69.3)	42(30.7)	137(100)		
Married	48(67.6)	23(32.4)	71(100)	2.26	0.323
Divorced& Windowed	20(83.3)	4(16.7)	24(100)		
Education:					
Monastery &Primary	22(59.5)	15(40.5)	37(100)		
Middle School	105(75.5)	34(24.5)	139(100)	4.87	0.087
High School & above	36(64.3)	20(35.7)	56(100)		
Income:					
<3000 Baht	9(75.0)	3(25.0)	12(100)		
3001-5000 Baht	117(75.0)	39(25.0)	156(100)	6.55	0.038
>5000 Baht	37(57.8)	27(42.2)	64(100)		
Duration of stay in Thailand:					
<1 year	18(66.7)	9(33.3)	27(100)		
1-4 years	91(75.8)	29(24.2)	120(100)	10.25	0.016
5-9 years	43(71.7)	17(28.3)	60(100)		
10 years above	11(44.0)	14(56.0)	25(100)		

(ii) Bivariate analysis of availability of HIV/AIDS information and Safe Sex Behavior of Respondents

Table 17 showed that safe sex behavior with sex worker was associated with receiving HIV/AIDS information, (*p* value 0.002).

Table 17: Association between Availability of HIV/AIDS Information and Safe Sex Behavior with Sex Worker of the respondents

Information regarding HIV/AIDS	Safe Sex Yes (n%)	No (n%)	Total n(%)	Chi-Square	*p* value
Received HIV/AIDS Information					
Yes	149(73.8)	53(26.2)	202(100)	9.17	0.002
No	14(46.7)	16(53.3)	30(100)		

(iii) Bivariate analysis of availability of condom and Safe sex behavior with sex worker of the respondent

Table 18 revealed that safe sex behavior with sex worker was associated with knowing where to get condom, (*p* value 0.013).

Table 18: Association between Availability of Condom and Safe Sex behavior with Sex Worker of the respondents

Know where to get Condom:	Safe Sex Yes (n%)	No (n%)	Total n(%)	Chi-Square	*p* value
Known source of condom:					
Yes	152(72.7)	57(27.3)	209(100)	6.14	0.013
No	11(47.8)	12(52.2)	23(100)		

(iv) Bivariate Analysis of knowledge on HIV/AIDS, condom use and unsafe behavior with sex worker of the respondents

Table 19 revealed that there was no association between knowledge on HIV/AIDS, condom use and unsafe sex behavior with sex worker of the respondent, (*p* value 0.109).

Table 19: Association between Knowledge on HIV/AIDS, Condom Use and Safe Sex behavior with Sex Workers:

Knowledge regarding HIV/AIDS& Condom	Safe Sex Yes (n%)	No (n%)	Total n(%)	Chi-Square	*p* value
Low Knowledge	32(59.3)	22(40.7)	54(100)		
Medium Knowledge	82(75.2)	27(24.8)	109(100)	4.43	0.109
High Knowledge	49(71.0)	20(29.0)	69(100)		

(v) Bivariate analysis of attitude towards HIV/AIDS, condom use and unsafe sex behavior with sex worker of the respondent

Table 20 revealed unsafe sex behavior with sex worker was associated with negative attitude towards HIV/AIDS and condom use; (*p* value 0.001).

Table 20: Association between Attitude towards HIV/AIDS, condom use and Safe Sex behavior with sex worker of the respondents

Attitude towards HIV/AIDS& Condom	Safe Sex Yes (n%)	No (n%)	Total n(%)	Chi-Square	*p* value
Negative Attitude	6(31.6)	13(68.4)	19(100)		
Neutral Attitude	121(72.5)	46(27.5)	167(100)	15.4	0.001
Positive Attitude	36(78.3)	10(21.7)	46(100)		

(vi) Bivariate analysis of risk factors (alcohol use, drug use and peer influence and unsafe sex behavior with sex workers

Table 21 revealed that unsafe behavior with sex worker was associated with injection narcotic drug, (*p* value 0.006). There was no association between unsafe sex behavior of the respondent with drunk (*p* value 0.783) and peer influence. (*p* value 0.387).

Table 21: Association between risk factors facilitation HIV infection and Safe Sex Behavior with Sex Workers:

Risk Factor:	Safe Sex		Total	Chi-	*p*
	Yes (n%)	No (n%)	n(%)	Square	value
Drunk:					
Yes	151(69.9)	65(30.1)	216(100)	0.53	0.783
No	12(75.0)	4(25.0)	16(100)		
Injecting narcotic drug:					
Yes	5(35.7)	9(64.3)	149100)	8.51	0.006
No	158(72.5)	60(27.5)	218(100)		
Friend invited to go to brothel:					
Yes	129(69.0)	58(32.0)	187(100)	0.75	0.387
No	34(75.6)	11(24.4)	459100)		

(vii) Bivariate analysis of life skills and Safe sex behavior with sex worker of the respondents

Table 22 revealed that safe sex behavior with sex worker was associated with always refused undesired sex (*p* value 0.001), always refused pressure to use drug, (*p* value 0.020), always refused to have sex without condom, (*p* value <0.001), and always discussed to use condom, (*p* value < 0.001).

Table 22: Association between life skill and safe sex behavior with sex worker of the respondents

Life Skills:	Safe Sex		Total	Chi-Square	*p* value
	Yes (n %)	No (n %)	n(%)		
Refuse undesired sex:					
Yes	120(76.9)	36(23.1)	156(100)	10.12	0.001
No	43(56.6)	33(43.4)	76(100)		
Refuse pressure to use drug:					
Yes	105(76.1)	33(23.9)	138(100)	5.53	0.020
No	58(61.7)	36(38.3)	94(100)		
Refuse to have sex without condom:					
Yes	143(84.1)	27(15.9)	170(100)	58.47	<0.001
No	20(32.3)	42(67.7)	62(100)		
Discuss to use condom:					
Yes	134(84.3)	25(15.7)	159(100)	45.41	<0.001
No	29(39.7)	44(60.3)	73(100)		

4.1.3. Multivariate Analysis

Multivariate analysis was done using binary logistic regression. Variables which had p values of less than 0.2 by bivariate analysis were included in the analysis.

The variables included: Age, Education, Income, Duration of Stay in Thailand, Receiving HIV/AIDS information, Knew where to get condom, Knowledge regarding HIV/AIDS and Condom, Attitude towards HIV/AIDS and Condom, Injecting narcotic drug, Refuse undesired sex, Refuse pressure to use drug, refuse to have sex without condom, and Discuss to use condom.

Step by step, variables which had non significant p values were excluded from the model, starting with the one with the highest p value, until the final model as shown in table 23.

The results suggest that Age (p= 0.04), Duration of stay Thailand (p= 0.011), Knew where to get condoms (p=0.028), Refusal to have sex without a condom (p<0.001), and Discussing condom use (p=0.002), maintained significant association with unsafe sex while controlling for other variables among the Myanmar migrant fishermen in Ranong. Income was not associated with unsafe sex behavior (p = 0.068).

Table 23: Multivariate analysis of factors associated with unsafe sex behavior in Myanmar migrant fishermen in Ranong, Thailand

Variable	B	Adjusted OR	95% CI	p value
Age (years)				0.040
15-25	0.571	1.770	0.550 – 5.697	0.338
26-35	-0.544	0.581	0.195 – 1.727	0.328
>35®		1		
Income (Thai baht)				0.068
<3,000	-1.304	0.271	0.049 – 1.489	0.133
3000-5000	-0.907	0.404	0.176 – 0.924	0.032
>5,000®		1		
DST (years)				0.011
< 1	-1.143	0.319	0.067 – 1.509	0.150
1-4	-2.202	0.111	0.028 – 0.431	0.002
5-9	-1.581	0.206	0.055 – 0.763	0.018
>9 ®		1		
Know where to get condom*	-1.267	0.282	0.091 – 0.872	0.028
Refuse to have sex without condom*	-2.103	0.122	0.049 – 0.304	<0.001
Discuss to use condom*	-1.398	0.247	0.104 – 0.586	0.002
Constant	4.819	123.801		0.000

* yes compared to no
® Reference group

4.2 Qualitative Analysis

4.2.1 A qualitative study was used to explore respondents' opinion and attitude regarding to HIV/AIDS situation, sexual behaviors, condom use, and alcohol and drug use of Myanmar migrant fishermen in Ranong. A set of guideline questions was used and three focus group discussions were conducted (two groups of migrant fishermen and one group of female Myanmar migrant). Manual analysis was used and grouping by common answers, subjects/issues, summarizing and drawing conclusion was done by the researcher.

Focus group discussion guide:

1. HIV/AIDS, STI, alcohol and drug use situation in Ranong among them.

   What is the group's opinion on the situation, how serious it is, and what needs to be done about it?

2. Willingness to participate in the study.

   Whether they feel a study like this is necessary? Why and why not?

   Whether fishermen would be willing to participate in it? What makes them interested or not interested in the study?

3. Availability of information for HIV/AIDS prevention

   How do they get information regarding to HIV/AIDS information.

   Where they can get health services? How do they think about health service?

4. Acceptability of asking questions about sexual behaviors, preferences and drug use? Give the group some sample questions regarding sexual behavior and drug use.

   How does the group feel about asking these kinds of questions?

   How reliable would the answers be? Would people lie about it?

   Acceptability of discussing sex, drug and alcohol use and sexual preference.

How does the group feel about talking openly about sex, drug use, HIV/AIDS and sexual partners?

5. Sexual behavior and drug use

Ask group about whether migrant fishermen are aware of HIV, STI, drugs and their risks or not?

Fishermen Sexual behavior

How common is it for fishermen to have sex? How acceptable is it?

1. How do they negotiate for sex (e.g. do they pay money or other gifts for sex? What are the percentages of those who pay money?)
2. Do they receive money or other gifts for sex? What are the percentages?

Do they have casual partner? (A casual partner is somebody a fisherman has sex with only, without pay money, gifts or favors or has sex with by paying money, gifts or favors.

3. Is there same sex behavior (men who have sex with men) among fishermen? What are the percentages?
4. How do they think about condom use?
5. What about condom use? How frequent, with whom (*sex workers, casual partner, etc*).

Drug use:

1. How common is drug use among Myanmar migrant fishermen? How acceptable is it?
2. What are the percentage using drugs?
3. What kinds of drugs are being used? (*local names of drugs* others) What are the percentages?

4. Where are the drugs being used? (At home, workplace, disco, pub, etc)
5. How do you think each of these drugs can make you feel?
6. What are the drugs used for? (to lose weight, to work, for fun, etc)
7. How expensive is each of these drugs.

4.2.2 FOCUS GROUP DISCUSSION REPORT

1. HIV/AIDS situation in Ranong among Fishermen

Regarding to HIV/AIDS situation among fishermen, the groups agree that it could be a serious problem because most of the fishermen liked to drink and visited to brothel when they got drunk. There were many sex services in this area. Some fishermen went straight to a brothel right after they got off from the boat. The fishermen had to realize that they were in high risk to contract HIV infection and should learn about prevention of HIV/AIDS transmission. It would be better if we organized Groups' discussion like we were doing now often.

2. Willingness to participate in the study:

The groups thought that the study like this was necessary because HIV/AIDS was a serious disease and the fishermen should learn about it and prevent themselves from getting infection. Fishermen with higher education would be interested in the study. Some might not interest in it because they thought that it bothered their work. For those who found it good and benefit for them, they would be interested in the study.

3. Availability of information for HIV/AIDS prevention:

The main source of receiving information regarding to HIV/AIDS was NGO, namely World Vision. They received some health education materials and they found

it very useful. However, very few of them would pay attention to the organization's activities.

4. Acceptability of asking and discussion about sexual behaviors, preferences and drug use?

It is acceptable to discuss sex, drug and alcohol use and sexual preference among fishermen. However, the answers that they gave might not be reliable because around 50% or less than fifty percent would tell the truth.

5. Drug use and sexual behaviors

1. Whether migrant fishermen are aware of HIV, drugs and their risks or not?

The groups thought that more or less, fishermen did aware of HIV, STI, drugs and their risks. However, it depends on their attitude towards HIV/AIDS and their risks. Some fishermen thought that going to have sex with SW once would have no risk to contract HIV. Further, those who could not read, did not read HIV/AIDS related materials and never attend health education activities would not know anything about the diseases and their risks.

Fishermen Sexual behavior

From the groups opinion, around 60-80% of the fishermen paid for sex and had sex with sex workers. Very few had casual sexual partners. Among those who had sex with casual partners, around 10% would buy presents for their partners. Very few of them would accept money, gift or favor for sexual intercourse with casual partners.

They thought that there was the same sex behavior (men who have sex with men) among fishermen, but very few. It could be more if there was no sex service available. They had heard that the same sex like men who have sex with men happened more in the prison.

Some fishermen who had knowledge and thought that the condoms were good for them would use it. Mostly, they used condoms when visited brothel and had sex with sex workers. The reason for using was the condoms were provided by sex workers when a client would like to have sex with them. They were not allowed to have sex if they refused to use it. The sexual activities among casual partners involved mutual agreement, trust each other and make them feel safe, and sexual activities could happen where there was no available of condoms or when they did not carry along condom with them. Sometimes, they might not use it when they were drunk. In this situation, it relied heavily on the SW. They had to take responsibility.

Drug and alcohol use

The groups agreed that the drugs used among fishermen were common. The common local drugs were Ahseian and Kyoutsein (pill for cough). Around 60-80% of them used Ahseian and 10-30% used Kyoutsein respectively. They used it when they had free time and rested on shore for awhile, and during fishing in the boats. The main purposes for taking those drugs were to be able to tolerate tiredness and work harder. They felt happy, calm, and amused; they had no worry and could tolerate curse when they used these drugs. From the group opinion, the drugs were not expensive. The groups said that *yaba and narcotic drugs were* found very little or no more in this area due to the restriction of Thai Government, inaccessibility and the cost.

CHAPTER V

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 DISCUSSION

The study was conducted to describe independent variables such as socio-demographic characteristics, availability of condom and HIV/AIDS information, peer pressure, drug and alcohol use, HIV related knowledge, attitudes & life and functional skills, and to assess any association of these independent variables with dependent variable (unsafe sex with sex workers) among Myanmar migrant fishermen in Ranong. The data was collected using structured questionnaires and Focus Group Discussion.

Social-Demographics Characteristics

The majority of the respondents was in the 26-35 years age group, single, had attained middle education, Barma, Buddhist, had an income of 4,000-5,000 Baht per month, stayed in Thailand for 1-4 years and never went back home. The highlight findings that were different from those of a previous study among Myanmar migrant fishermen, Ranong by (Paw, 2006) were that the majority had attained primary education and had an income of 3000-4000 baht per month. Further, 81% of the respondents were under 25 years old in another study on risk behaviors of Myanmar migrant by (Hu, 2004), while they were 39.2% in this study.

This study revealed that longer duration of stay in Thailand was statistically associated with practiced of unsafe sex with sex workers; p-value <0.005. The finding was consistent with the previous results found among Myanmar migrant fishermen (Paw, 2006). This study also showed that earning more than 5,000 Thai baht was statistically associated with unsafe sex. From this study respondents with more

income were more likely to practice unsafe sex than those with less income. It is widely reported that sex workers may accept to have sex without condom if the client pays more money. Migrants with higher income have more money to pay for unsafe sex with sex workers in need of more income in spite of the risk of HIV infection

In bivariate analysis, there was no statistically significant association between age, education and marital status with unsafe sex. Although there was no significant difference, this study had found the highest percentage distribution of unsafe sex practice among the respondents aged 25 years and below and among those with primary education and below.

In multivariate analysis, compared to fishermen aged more than 35 years, fishermen aged 15-25 years were about 1.8 times more likely to engage in unsafe sex behavior, while those aged 26-35 years were only 0.6 times more likely to engage in unsafe sex behavior. These differences however, were not significant. As for duration of stay in Thailand, compared to fishermen who had stayed for more than 9 years, those who had stayed for less than one year were 0.3 times more likely to engage in unsafe sex behavior although this difference was not significant, while those who had stayed for 1-4 years were only 0.1 times more likely to engage in unsafe sex behavior. Knowing where to get condom was negatively associated with unsafe sex behavior. Those who knew where to get condom were about 0.3 times more likely to practice unsafe sex compared to those who did not. Refusal to have sex without a condom was also negatively associated with unsafe sex. Fishermen who refused to have sex without a condom were about 0.1 times more likely to engage in unsafe sex compared to those did not. A negative association was also observed between discussion to use

condom and unsafe sex. Fishermen who discussed to use condom were about 0.3 times more likely to practice unsafe sex compared to those did not.

Availability of sources of HIV/AIDS information and Condom

Most of the respondents received HIV/AIDS information and knew where they could get condoms. The main source of information on HIV/AIDS was Non-Government Organization (NGO). Drug store, shop, hospital/health center and clinic were common sources to get condoms. Receiving information regarding HIV/AIDS and known sources of condom was statistically associated with safe sex with sex workers; p-value<0.005. These results were consistent with the previous studies among migrant fishermen in Ranong (Paw, 2006).

Knowledge on and attitude towards HIV/AIDS and condom use

About half of the respondents had medium knowledge on HIV/AIDS and condom use. The mean knowledge score for total respondents was 0.6941, which was about the same score of knowledge of previous study in Ranong 0.6887), as reported by Paw (2006), but slightly difference from those done among Myanmar migrant in Mahachai by Thu, (0.6243) and Myanmar migrant worker in Bangkok by Zaw, (0.6507). The difference could be the different in occupation and methodology used for the studies.

There was no statistically significant association between knowledge on HIV/AIDS, condom use and practice of safe sex behavior with sex workers. The study confirmed the finding of the studies among Myanmar migrant in Mahachai and Myanmar migrant fishermen in Ranong.

Although 83.9% of the respondents knew that use of condom can prevent HIV/AIDS transmission, this knowledge would not affect condom use. According to

Behavior Theory of Health Belief Model by Rosenstock and later expended by Becker, there are other variables such as perceived susceptibility, severity, barriers, benefit, efficacy, threat, cue to action, and demographic and socio-psychological variables needed to perform behavior. While access to information was associated with safe sex, the knowledge was not. This discrepancy was not easy to explain and qualitative research may shed more light. For instance is the access to information liked to attitude development or skill building and not to access to knowledge, why?

Although more than 70% of the respondents had knowledge level on HIV/AIDS and condom use was medium to high, around 65% had misconceptions of AIDS occur only with men how have sex with men, only when having sex with sex workers, Around 40 % of them had misconceptions that we could prevent HIV/AIDS by taking antibiotics regularly, wash reproductive organs with antiseptic solution after sex every time, doing physical regularly and eat more meat, fish or vegetables. This indicated that receiving information of HIV/AIDS alone was not enough to obtain correct knowledge. The content information should be reviewed and adjusted to provide correct knowledge for Myanmar migrant fishermen.

The majority of the respondents had neutral attitude towards HIV/AIDS and condom use. There was statistically significant association between negative attitude towards HIV/AIDS, condom use and unsafe sex behaviors with sex workers; p-value 0.001. The study revealed the same result as reported by Thu (2004).

Risk behavior facilitating HIV/AIDS infection

There was no statistically significant association between peer influence, drunkenness and unsafe sex with sex workers. However, from the univariate analysis,

it showed that there was high percentage of risk behavior among the respondents who usually got drunk, invited by their friends to go visit sex workers, and had visited sex workers when they were drunk.

The results found in a study among Cambodia fishermen in Phnom Penh (2000) was that over 80% of HIV+ fishermen believed that consistent condom use was protective against HIV transmission, yet only 48% of the respondents had always used condom when they had sex with sex workers, and it was similar to other results found in study among Myanmar migrant fisher men in Ranong 40% by (Ohnmar, 1999), 33.9% by (Hu, 2004), and 44.6% by (Paw, 2006). In this study, over 80% of the respondents knew that consistent condom use was protective against HIV transmission, and the condoms use of who admitted having sex with sex workers was 70.7% which was much higher than the other studies. This different rate of condom use could be due to the activities of NGO, free distribution of condoms from Thai government agencies, and the enforcement for sex workers to use condom with their clients.

The result showed that injected narcotic drug was difference compared to the last study 8.6%, (Paw, 2006) to 3.3% from this study. There was statistically significant association between injected narcotic drugs and unsafe with sex workers p-value 0.006. It was obvious that those who injected drugs did not practice safe injection because two-third of them shared needle with other injecting drugs users.

Sexual behaviors of the fishermen with casual partners

The minority (18%) of the respondents had casual sexual partners. 1.6% of them ever had male casual partners and (16.6%) of them ever had female casual partners. These finding were consistent with the finding from focus group discussion.

This could be due to the fact that there were many sex services in the community and fishermen found it easier to have sex with sex worker than casual partners. The respondents usually stayed as a group and the common place where having sex with casual partners was hotel.

The result showed sexual risk behavior of the respondents who had casual partners. Among those who admitted having casual partners, more than 80% of them had had two or more male partner; more than 90% had had two or more female partners. The interesting finding was the condom use among those who admitted having sex with sex worker was 70.7% while only 40.9% of who admitted having sex with casual sexual partners. This result indicated that the condom use among those who had sex with casual partners was low. From the qualitative research, the results showed that the condoms were provided by sex workers when a client would like to have sex with them. The clients (fishermen) were not allowed to have sex if they refused to use it. The sexual activities among casual partners involved mutual agreement, trust each other and make them feel safe, could happen where there was no available of condoms or when they did not carry along condom with them. These reasons could be why the condom use of fishermen was high with sex workers and low with causal sexual partners.

The respondents had good intention to use condom with casual partners. More than 70% will surely use condom if they will accept or pay money, gift or favor for sexual intercourse in the future. However, the actual used was 40.9%. The theory of reasoned action by (Fishbein & Ajzen: 1975, 1980), can explain why the intention does not go along with the actual practice. According to this theory, a person's intention to perform a specific behavior is a function of two factors: 1) attitude

(positive or negative) toward the behavior and 2) the influence of the social environment (general subjective norms) on the behavior.

Life skills for prevention of HIV/AIDS transmission

In this study, it was obvious that having life skills such as refusing undesired sex, refusing pressure to use drug, refusing to have sex without condom and discussing to use condom was enabling factors for safe sex with sex workers among fishermen. In bivariate analysis, all these variables were statically associated with safe sex practice p-value <0.005. The study showed that more than 80% had knowledge on correct condom use. Less than 50% did not have knowledge on checking the size of the condoms on the packets. This was not a big concern because majority of condoms available in Thailand are of smaller size (49mm). It does not matter if the size is small because the condom does not break easily if it used with a larger sex organs. The condoms can slip off more easily if sex organ is small.

The majority of them had used condom. It was evident that they did not use condom correctly because 4.5% always had experience of condom broke during sex and 0.7 always had experience of condom slipped off during sex. It was very unlikely that 4.5% of the respondents had experience of the condom broke every time. This could be the problem with understanding the question or data collection. Again, a qualitative research would help for better understanding of why condom always broke during sex.

5.2 CONCLUSION AND RECOMMENDATION

The results of the study showed that higher income respondents and longer duration of stay in Thailand were statistically associated with unsafe sex behaviors with sex workers. This result is a guide for any organization that providing health promotion to direct their service to these particular groups of Myanmar migrant fishermen in Ranong.

In this study, it was obvious that receiving information regarding HIV/AIDS was statistically associated with safe sex behaviors. Provision of HIV/AIDS information from different sources will mold safe sex practice of the respondents. Knowing sources of condom was a reason that influences safe sex behaviors of the respondents in this study. It suggests that availability of sources of condom is very important. Sufficient availability of condom from different sources plus free condoms distribution from hospital/health centers and NGOs is very important.

Promotion program of condom use among fishermen is necessary because the results indicated that condom usage among those who had sex with sex workers was 70% and casual sexual partner was 41%.

Thai government agencies with support from NGO and CBO should revive the '100% condom use' programme among Myanmar migrant fishermen to achieve 100% condom use at every commercial sex encounter in Ranong. It is recommended to Myanmar migrant fishermen that correct and consistent use of condom when having sex with sex workers and casual partners is very important for HIV/AIDS prevention.

The results showed that there was no statistically significant association between knowledge of respondents and condom use. It is obvious that improving knowledge alone would not be enough to change one's practice. As discussed by

Norwood (1996), apart from knowledge, personal needs and value are important to change attitude and this may change a person practice. There was statistically significant association between negative attitude and unsafe sex behaviors of the respondents. As theory of reasoned action by (Fishbein & Ajzen: 1975, 1980) explained, a person's intention to perform a specific behavior is a function of two factors: 1) attitude (positive or negative) toward the behavior and 2) the influence of the social environment (general subjective norms) on the behavior. Therefore, the influence of the social environment such as peer education program will help change attitude.

This study suggests that there is still a need to provide information, education and communication of migrant fishermen to correct their misconception. NGO or Thai government agencies that dealing with Myanmar migrant fishermen should develop educational materials emphasizing on particular part of knowledge such as AIDS occur only with men how have sex with men, only when having sex with sex worker, taking antibiotics regularly, wash reproductive organs with antiseptic solution after sex every time, doing physical regularly and eat more meat, fish or vegetables can prevent HIV/AIDS. This is because around 40% and above thought that these were true. These misconceptions can lead to the spread of the disease among the respondents, their community and Thai population as well.

Although usage of injected narcotic drug was 3.3%, among these respondents around 67% shared a needle with someone for drugs injection. Given the finding of ‘injecting drugs’ behavior among this groups of fishermen, relevant Thai government agencies and NGO are dealing with migrants should introduce needle exchange

programs where drug users can obtain clean needles and associated injection equipment at little or no cost.

Thai health education agencies and NGOs should cooperate in providing health education and raising awareness of regular check up program aiming for the fishermen to bear in mind that they are high risk of contracting the disease. Further more; NGOs should provide teaching life skills such refuse to have sex without condoms and discuss to use condom to the fishermen was vital point for prevention of HIV transmission. The bar owners should raise awareness and enforce condoms usage; this in turn would be of grate benefit to their workers and clients. Further qualitative research using in-depth interview to gain better understanding of condom use problems such as brakeage and slippage should be done and why access to HIV/AIDS information associated with safe sex, but not with the knowledge.

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APPENDICES

APPENDIX A. **INFORMED CONSENT FORM**

Dear Participant,

The objective of the survey is to find out the factors associated with unsafe sex behavior for prevention of HIV/AIDS transmission among Myanmar migrant fishermen in Ranong, Thailand.

Your name and ID will not be recorded. You are free to participate and withdraw at any time. If you participate, the answer you give in this survey has no effect on your migrant status or any other aspect in your life.

Your answers will not be presented individually but as a whole group of participants. Although there is no direct benefit for you in participating to this research the result of this survey will be useful for the health promotion and education program for the further migrant fishermen from Myanmar in Thailand.

I have understood the objectives and benefit of this survey and I am willing to participate in this study with my own decision.

Participant Signature _____
Interviewer Signature _____

Thank you very much for your participation.

APPENDIX B: **QUESTIONNAIRE**

I. Socio-demographic Characteristics

1. What is your age? _____ years.

2. What is your marital status?
(2.1) Single □ (2.2) Married □ (2.3) Divorced □ (2.4) Widowed □

3. What is your education?
(3.1) Primary school □ (3.2) Middle school□ (3.3) High school □
(3.4) University □ (3.5) other □ (please specify) _____

4. What is your ethnicity?
(4.1) Barma □ (4.2) Karen □ (4.3) Mon □ (4.4) Shan □
(4.5) Other □ (please specify) _____

5. What is your religion?
(5.1) Buddhism □ (5.2) Christian □ (5.3) Islam □
(5.4) Other □ (please specify) _____

6. What is your income per month (Baht)?
(6.1) Less than 3,000 □ (6.2) 3,001-4,000 □ (6.3) 4,001-5,000 □
(6.4) more than 5,000

7. How long have you been in Thailand?
(7.1) 10 years and above □ (7.2) 5 to 9 years □
(7.3) 1 to 4 years □ (7.4) Less than 1 year □

8. Number of times you returned to Myanmar.
(8.1) 6months one time □ (8.2) 1 year one time □
(8.3) 2 or more year one time □ (8.4) Never go home □

II. Source of information on HIV/AIDS and Availability of condoms

9. Did you get any information regarding HIV/AIDS?
(9.1) Yes □ (9.2) No □ If NO, skip to number 11.

10. If yes, from what sources did you get? (can fill more than one)
(10.1) Thai TV □ (10.2) Thai Radio □ (10.3) Thai Magazine □
(10.4) Thai Newspaper □ (10.5) Myanmar TV □ (10.6) Myanmar Radio □
(10.7) Myanmar Magazine □ (10.8) Myanmar Newspaper □ (10.9) Family □
(10.10) NGOs □ (10.11) Other □ (please specify) _____

11. Do you know where you can get condom?
(10.1) Yes □ (10.2) No □ (10.3) Do not know □
If No, skip to number 13.

12. If yes, which places you can get it? (can fill more than one)
(12.1) Shop □ (12.2) Drug store □ (12.3)) Hospital/Health center □
(12.4) Clinic □ (12.5) Vending machine □
(12.6) Other □ (please specify) _____

III. Knowledge about HIV/AIDS and condom!

Please answer the following statements with true or false.

No.	*Symptoms of AIDS?*	True	False	Do not know
13	Chronic Diarrhoea			
14	Weight loss			
15	Sneezing			
16	Prolong fever			
17	Constipation			
	Knowledge on HIV/AIDS prevention			
18	AIDS occur only among men who have sex with men			
19	AIDS occur only when have sex with sex worker			
20	Having sex without condom only once will not infect a person with HIV			
21	It is possible to contract HIV/AIDS by having sex with a healthy looking person			
22	It is possible to protect oneself against AIDS by vaccination			
23	There is no need to use condom with a steady partner			
24	Having sex with different partners increase the chance of getting HIV			
25	Use of condom can protect HIV/AIDS			

	A person can contract HIV/AIDS:	True	False	Do not know
26	By blood transfusion			
27	From using public toilet			
28	By sharing syringe/needle			
29	By tattooing			
30	From pregnant mother to her baby			
31	During delivery mother to child			
32	By breast feeding mother to child			
33	By men who have sex with men			
34	Having oral sex with wound in the mouth			
35	Having sex without condom with commercial sex workers			
36	From massage, hugging and touching			

Please mention all the ways you know you can protect yourself from getting infected with HIV/AIDS.

No.	Statement	Yes	No	Do not know
37	Living abstinent (not having sex at all)			
38	Use the contraceptive pill			
39	Use condom correctly every time when having sex			
40	Taking antibiotics regularly			
41	Avoid sex with injecting drug user			
42	Avoid injection with needles and syringes that already used on other people			
43	Wash reproductive organs with antiseptic solution after sex every time			
44	Doing physical exercise daily			
45	Stay faithful to one uninfected sex partner who also has no other partner			
46	Eat more meat, fish, or vegetables			

47. Which type of sex has the highest risk to contract HIV infection? Choose one answer only.
(47.1) Vaginal sex □ (47.2) Oral sex □ (47.3) Anal sex □

(47.4) Self-masturbation □ (47.5) Mutual masturbation □

IV. Attitude towards HIV/AIDS and condom use!
Please tick whether you: strongly agree=SA, agree=A, not sure=NS, disagree=DA, or strongly disagree=SD with the following statements:

No.	Statement	SA	A	NS	DA	SD
48	AIDS is a serious health problem among fishermen in Ranong, Thailand					
49	Every person has equal chance to get HIV/AIDS					
50	It is easy to use a condom					
51	Condoms are too expensive to use regularly					
52	A condom is not suitable to use with a regular partner because it will cause them to feel distrusted					
53	One should not have sex if the partner refuses condom use					
54	It is embarrassing to buy condoms					
55	It is easy to talk about condom use with a partner					
56	Use of condom makes sex less enjoyable					
57	I think I do not need to use condoms with sex workers because not all sex workers have HIV/AIDS					

V. Risk behavior facilitating HIV infection!
58. Did you ever get drunk in your life time?
(58.1) Yes □ (58.2) No □ (58.3) Do not want to answer □
If No, skip to question 61

59. If yes, How often?
(59.1) every day □ (59.2) 1-3 times a week □
(59.3) 1-3 times a month □ (59.4) 1-3 times a year □

60. Have you ever gone to the brothel when you are drunk?
(60.1) Yes □ (60.2) No □ (60.3) Do not want to answer □

61. Have your friend ever invited you to go to brother?
(61.1) Yes □ (61.2) No □ (61.3) Do not want to answer □

62. Have you ever had sex with male sex worker?
(62.1) Yes □ (62.2) No □ (62.3) Do not want to answer □

63. Have you ever had sex with female sex workers?
(63.1) Yes □ (63.2) No □ (63.3) Do not want to answer□
If no, skip to number 65.

64. If yes, do you use condom when you have sex with sex worker?
(64.1) always □ (64.2) often □ (64.3)sometimes □ (64.4)never □

65. *Did you use to inject narcotic drug in your life time?*
(65.1) Yes □ (65.2) No □ (65.3) Do not want to answer□
If no, skip to question 67.

66. If yes, have you ever shared a needle with someone for drug injection?
(66.1) Yes (66.2) No (66.3) Do not want to answer

67**.** Did you ever have any **casual sexual partners**? (*a casual partner is somebody you have sex with only, **without paying or without having a relationship.***
(67.1) Yes □
(67.2) No □
[Skip to 72 if the answer is (2)]

68. If yes, where did you have sex?
(68.1) hotel □ (68.2) home□ (68.3) other please specify _____

69. What is the total number of casual sexual partners you had during your lifetime?
(69.1) Male number of casual partners _____
(69.2) Female number of casual partners _____

70. In the past six months, on average, how often did you have **sexual intercourse** with your casual partners? (*sexual intercourse means that the penis was entered in the vagina or anus)*
Number of times _____

71. When you have sex with casual partner, how often did you use a condom (from the beginning to the end)?
(71.1) Always □
(71.2) Almost always □
(71.3) Half of the time □
(71.4) Some of the time □
(71.5) Never □

72. If in future you have sexual intercourse with a casual sexual partner, do you intend to use a condom?
(72.1) For sure □
(72.2) Very likely □
(72.3) Fifty-fifty □
(72.4) Not likely □
(72.5) Surely not □

73. Did you ever **accept money, gifts or favors (example monthly rent, paid for drink, help to find a job, paid for children school fees)** for sex (intercourse)?
(73.1) No □
(73.2) Yes, money □
(73.3) Yes, gifts or favors □ (specify)_____ *[Skip to 75 if the answer is (1)]*

74. When you had sexual intercourse, how often did you use condoms (from the beginning to the end)?
(74.1) Always □
(74.2) Almost always□
(74.3) Half of the time □
(74.4) Some of the time □
(74.5) Never □

75. If in future you accept money, gifts or favors for sexual intercourse, do you intend to use a condom?
(75.1) For sure □
(75.2) Very likely □
(75.3) Fifty-fifty □
(75.4) Not likely □
(75.5) Surely not □

76. Did you ever **pay money, gifts or favors** for sexual intercourse?
(76.1) No □
(76.2) Yes, money □
(76.3) Yes, gifts or favors □ (specify)_____
[*Skip to **80** if the answer is (1)]*

77. How many times have you paid money, gifts or favors for sex in your life time?
Total number of times _____

78. With how many different partners was this?
Total number of partners _____

79. When you had sexual intercourse during those occasions, how often did you use condoms (from the beginning to the end)?
(79.1) Always □
(79.2) Almost always □
(79.3) Half of the time □
(79.4) Some of the time □
(79.5) Never □

80. If in future you pay money, gifts or favors for sexual intercourse, do you intend to use a condom?
(80. 1) For sure □ (80. 2) Very likely □ (80. 3) Fifty-fifty □
(80. 4) Not likely □ (80. 5) Surely not □

VI. Life skills: **Please give answers that represent your situations in regard with the following Statements:**
81. Refuse undesired sex!
(81.1) Always□ (81.2). Sometimes□ (81.3). Never□

82. Resist pressure to use drugs!
(82. 1). Always□ (82. 2). Sometimes□ (82. 3). Never□

83. Refuse to have sex without condom!
(83.1) Always□ (83.2). Sometimes□ (83.3). Never□

84. Discuss to use condom during sex?
(84.1). Always□ (84.2). Sometimes□ (84.3). Never□

85. What do you do if you partner refuse to use condom?
(85.1) Avoid sex □
(85.2) Negotiate to use □
(85.3) Have sex without condom □
(85.4) Other □, please specify _____.

86. What do you do when are stressed? (can answer more than one)
(86.1) Seek trusted person for help □
(86.2) Seek friend for drinking □
(86.3) Drink alcohol alone□
(86.4) Take drug alone □ e.g. methamphetamines *(yaa baa)* or other drugs
(86.5) Other □, please specify _____.

87. What do you do when you think you have STI (sexually transmitted infection)? (can answer more than one)
(87. 1) Buy street medication □
(87. 2) Go to see doctor □
(87. 3) Buy medication at pharmacy. □
(87. 4) Take traditional medication□
(87. 5) Other, please specify _____

Functional skills on condom use: **Please give answers that represent your condom use situation or knowledge.**

88. I put condoms on after starting sexual intercourse
(88.1) Always □ (88.2). Sometimes □ (88.3). Never □

89. I removed condoms before ending sex
(89. 1) Always □ (89. 2). Sometimes □ (89. 3). Never □

90. I squeeze air at the tip of the condom before using it.
(90.1) Always □ (90.2). Sometimes□ (90.3). Never □

91. I put the condom on the penis inside-out
(91.1) Always □ (91.2). Sometimes□ (91.3). Never □

92. I check for the size of the condom on the packet.
(92.1). Always □ (92.2). Sometimes□ (92.3). Never □

93. Have you ever used condom in your life time?
(93.1). Yes □ (93.2). No. □ If the answer is No, stop here.

94. The condom I put on broke during sex.
(92. 1) Always □ 92. (2). Sometimes □ (92. 3). Never □

95. The condom slipped off during sex.
(95.1). Always □ (95..2). Sometimes □ (95..3). Never □

APPENDIX C: GUIDELINES QUESTIONS FOR FOCUS GROUP DISCUSSION AND IN-DEPTH INTERVIEW

Focus group discussion guide:

Factors associated with unsafe sex behaviors for prevention of HIV/IDS transmission among Myanmar migrant fishermen in Ranong, Thailand.

I. Introduction

1. Explain the purpose of focus group
2. Obtain oral informed consent
3. Discuss confidentiality and ask the commitment of the participants not to share the exchanges during the discussion with others.

II. Warm up questions

Begin with small talks e.g. how participants got here, whether they enjoy their lives here, whether they enjoy their occupation, activities during free time, if the weather is bothering them? etc.

III. Study design and logistics

1. Reiterate background of the study: HIV/ADS, alcohol and drug use situation.

2. HIV/AIDS, STI, alcohol and drug use situation in Ranong among them.

Probe: What is the group's opinion on the situation, how serious it is, and what needs to be done about it?

3. Willingness to participate in the study.

Probe: Whether they feel a study like this is necessary? Why and why not? Whether fishermen would be willing to participate in it? What makes them interested or not interested in the study?

4.Availability of information for HIV/AIDS prevention

Probe: How do they get information regarding to HIV/AIDS information. Where they can get health services? How do they think about health service?

5. Acceptability of asking questions about sexual behaviors, preferences and drug use? Give the group some sample questions regarding sexual behavior and drug use.

Probe: How does the group feel about asking these kinds of questions? How reliable would the answers be? Would people lie about it?

6. Acceptability of discussing sex, drug and alcohol use and sexual preference.

Probe: How does the group feel about talking openly about sex, drug use, STI HIV/AIDS and sexual partners?

IV. Sexual behavior and drug use

1 Probe Ask group about whether migrant fishermen are aware of HIV, STI, drugs and their risks or not?

Males' Sexual behavior

6. How common is it for fishermen to have sex? How acceptable is it?
7. How do they negotiate for sex (e.g. do they pay money or other gifts for sex? What are the percentages of those who pay money?)
8. Do they receive money or other gifts for sex? What are the percentages?

Do they have casual partner? *(A casual partner is somebody a fisherman has sex with only, without pay* money, gifts or favors *or has sex with by paying* money, gifts or favors.

9. Is there same sex behavior (men who have sex with men) among fishermen? What are the percentages?
10. How do they think about condom use?
11. What about condom use? How frequent, with whom (*sex workers, casual partner, etc*).

Drug use

8. How common is drug use among Myanmar migrant fishermen? How acceptable is it?
9. What are the percentage using drugs?
10. What kinds of drugs are being used? (*local names of drugs* others) What are the percentages?
11. Where are the drugs being used? (At home, workplace, disco, pub, etc)
12. How do you think each of these drugs can make you feel?
13. What are the drugs used for? (to lose weight, to work, for fun, etc)
14. How expensive is each of these drugs.
15. Where do the drugs come from? Who is selling the drugs (generally, type of people, not names)?

V. Closing the discussion

We have talked a lot about HIV/AIDS, sex and drugs and their role in the life of Myanmar migrant fishermen in this province. Many of you have spoken out frankly and honestly. This is very helpful to us and I thank you for doing so. We would like to remind you however about the confidentiality of what we have discussed. Please keep all the information to yourself and speak about our conversation only in general terms. Please don't quote or identify anybody personally.

Before we finish, do you have any questions?

We would like to thank you for taking time to participate in this discussion.

APPENDIX D: TOTAL KNOWLEDGE SCORE TABLE

Total knowledge score of the respondents

Total Score	Frequency	Percentage
3	1	.3
6	1	.3
10	1	.3
11	3	.8
12	6	1.6
13	9	2.5
14	6	1.6
15	12	3.3
16	14	3.8
17	11	3.0
18	13	3.5
19	11	3.0
20	17	4.6
21	12	3.3
22	13	3.5
23	17	4.6
24	33	9.0
25	22	6.0
26	23	6.3
27	36	9.8
28	34	9.3
29	29	7.9
30	20	5.4
31	10	2.7
32	9	2.5
33	4	1.1
Total	367	100.0

APPENDIX E: KNOWLEDGE AND ATTITUDE CLASSIFICATION

The range of the knowledge score was 3-33. The score varied from 1-34 points and all individual answers were summed up for total scores. The knowledge was classified into 3 levels as follows: Bloom's cut off point, 60%-80%

High level (80-100%)	28-34 scores
Moderate level (60-80%)	21-27 scores
Low level (Less than 59%)	1-20 scores

Knowledge Level of the Respondents

Knowledge level	Frequency	Percent
Low Knowledge	105	28.6
Moderate Knowledge	156	42.5
High Knowledge	106	28.9
Total	367	100.0

Attitude Level of the Respondents

Attitude Level	Frequency	Percent
Low Attitude	44	12.0
Neutral Attitude	265	72.2
High Attitude	58	15.8
Total	367	100.0

The scores varied from 1 to 50 and all individual answers were summed up for total scores. The range score of the attitude was 25-50. The scores were classified into 3 levels (Positive Attitude, Neutral Attitude, and Negative Attitude).

Positive Attitude	41-50 scores
Neutral Attitude	31-40 scores
Negative Attitude	1-30 scores

APPENDIX F: TOTAL ATTITUDE SCORE

Total Attitude Score of the Respondents

Total score	Frequency	Percent
25	1	.3
26	5	1.4
27	3	.8
28	9	2.5
29	8	2.2
30	18	4.9
31	5	1.4
32	19	5.2
33	21	5.7
34	32	8.7
35	33	9.0
36	16	4.4
37	16	4.4
38	67	18.3
39	24	6.5
40	32	8.7
41	20	5.4
42	12	3.3
43	7	1.9
44	6	1.6
45	5	1.4
46	5	1.4
49	2	.5
50	1	.3
Total	367	100.0

APPENDIX G: SCHEDULE OF ACTIVITIES

Activities	Time Frame (month)								
	Sep08	Oct08	Nov08	Dec08	Jan09	Feb09	Mar09	Apr09	May09
1.Consulting advisor	→	→	→	→	→	→	→	→	→
2. Literature review	→	→							
3. Writing Proposal		→	→						
4. Submission for proposal exam			→						
5. Take proposal exam				→					
6. Submit to Ethical committee				→	→				
7. Pretest instrument					→				
8. Data collection						→			
9. Data analysis							→		
10. Article writing									
11. Thesis writing							→	→	
12. Final defense								→	
13. Submission of thesis									→

APPENDIX H: ESTIMATED BUDGET

No.	Items	Unit	Unit Number	Price (in Thai Baht)	Total Budget
1	Pre-testing in Mahachai				
	-Transport	Times	4	150	600
	-Respondents	Person	30	30	900
	-Photostat	Page	300	0.5	150
	-Accommodation	Room	2	500	1,000
2	Data Collection				
	-Transport	Times	2	800	1,600
	-Respondents	Person	367	20	7,340
	-Photostat	Page	2000	0.5	1,000
	-Interviewer per diem	Person	20*4	200	16,000
	-Accommodation	Room	20	500	10,000
3	Preparation and completion of the thesis paper			5,000	5,000
	TOTAL				43,590

APPENDIX I: MAP OF RANONG

CURRICULUM VITAE

Name	: Mr. K. Maler Htoo
Date of Birth	: June 12, 1977
Place of Birth	: Moehnyin, Myanmar
Educational Achievement	: B.N.S (Bachelor of Nursing Sciences), 2006 Assumption University, Thailand
Work Experience	: ECD/IE Teacher Trainer, NGO (WEAVE) Women Education for Advancement and Empowerment, Mae Hong Son, Thailand.