FACTORS RELATED TO HEALTH-RELATED QUALITY OF LIFE AMONG ADULT MYANMAR MIGRANT WORKERS AT CHIANG RAI REGIONAL HOSPITAL AND PIROM CLINIC IN MUANG DISTRICT, CHIANG RAI PROVINCE, THAILAND: A CROSS-SECTIONAL STUDY

Ms. Malulie Tongprasert

A Thesis submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Public Health Program in Public Health
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ปัจจัยที่มีความสัมพันธ์ต่อคุณภาพชีวิตทางด้านสุขภาพของแรงงานผู้อพยพชาวพม่าวัยทำงาน ที่โรงพยาบาลเชียงรายประชานุเคราะห์ และคลินิกภิรมย์ เขตอำเภอเมือง จังหวัดเชียงราย ประเทศไทย: การศึกษาภาคตัดขวาง

นางสาวมลุลี ทองประเสริฐ

วิทยานิพนธ์นี้เป็นส่วนนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต
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มลุลีทองประเสริฐ: ปัจจัยที่มีความสัมพันธ์ต่อคุณภาพชีวิตทางด้านสุขภาพของแรงงานผู้อพยพชาวพม่าวัยทำงาน ที่โรงพยาบาลเชียงรายประชานุเคราะห์ และคลินิกภิรมย์ เขตอำเภอเมือง จังหวัดเชียงราย ประเทศไทย: การศึกษาภาคตัดขวาง (FACTORS RELATED TO HEALTH-RELATED QUALITY OF LIFE AMONG ADULT MYANMAR MIGRANT WORKERS AT CHIANG RAI REGIONAL HOSPITAL AND PIROM CLINIC IN MUANG DISTRICT, CHIANG RAI PROVINCE, THAILAND: A CROSS-SECTIONAL STUDY) อาจารย์ที่ปรึกษาวิทยานิพนธ์หลัก: อ. ดร.ประเทือง หงสรานากร, 150 หน้า

การศึกษาภาคตัดขวางในแรงงานผู้อพยพชาวพม่าวัยทำงานจำนวน 401 รายที่มีอายุระหว่าง 18-59 ปีด้วยการสุ่มตัวอย่างแบบเจาะจงที่โรงพยาบาลเชียงรายประชานุเคราะห์ และคลินิกภิรมย์ ซึ่งตั้งอยู่เขตอำเภอเมือง จังหวัดเชียงราย ประเทศไทย ระหว่างวันที่ 8-20 กุมภาพันธ์ 2553 มีวัตถุประสงค์ (1) บรรยายลักษณะทางประชากร ประวัติการทำงาน การเข้าถึงบริการสุขภาพ และการรับรู้ตามแบบจำลองความเชื่อด้านสุขภาพของกลุ่มตัวอย่าง และ (2) เพื่อประเมินคุณภาพชีวิตที่เกี่ยวกับสุขภาพของกลุ่มตัวอย่าง กลุ่มตัวอย่างตอบแบบสอบถามด้วยการสัมภาษณ์เป็นรายบุคคลด้วยข้อคำถามเกี่ยวกับลักษณะทางประชากร ประวัติการทำงาน การเข้าถึงบริการด้านสุขภาพที่เกี่ยวข้องกับแบบสอบถามเรื่องการรับรู้ด้านสุขภาพ และแบบสอบถามเรื่องคุณภาพชีวิตขององค์การอนามัยโลก สถิติเชิงพรรณาที่ใช้ ได้แก่ ความถี่ ร้อยละ และส่วนเบี่ยงเบนมาตรฐาน และการใช้ Chi-square test เพื่อตรวจดูความสัมพันธ์ระหว่างตัวแปรอิสระและคุณภาพชีวิตที่เกี่ยวกับสุขภาพ

ผลการศึกษาพบว่ากลุ่มตัวอย่างส่วนใหญ่เป็นหญิงอายุระหว่าง 18-29 ปี ผู้ไม่ได้รับการศึกษาในโรงเรียน และไม่สามารถอ่านภาษาไทยหรือภาษาพม่า เป็นผู้ทำงานในประเทศไทยด้วยเวลา 1 ปีถึง 1ปีครึ่ง โดยมักทำงานในอุตสาหกรรมที่เป็นงานบริการในพื้นที่หรือบริการด้านอาหาร กลุ่มตัวอย่างมีรายได้ระหว่าง 2,000-3,999 บาทต่อเดือน และต้องเดินทางประมาณ 2-3 กิโลเมตรเพื่อไปยังสถานบริการสุขภาพที่ตนเลือก โดยต้องใช้เวลารอรับการรักษานานกว่า 30 นาที ข้อร้องบ่นส่วนใหญ่เป็นเรื่องของการไม่มีล่ามจำนวนพอเพียงและแบบฟอร์มในภาษาที่ไม่คุ้นเคย ผลการวิจัยยังพบว่า มากกว่าครึ่งของกลุ่มตัวอย่าง (ร้อยละ 56.0) มีคุณภาพชีวิตในระดับปานกลาง ขณะที่ร้อยละ 43.8 อยู่ในระดับสูงและอีกร้อยละ 0.2 อยู่ในระดับต่ำ ปัจจัยที่มีผลต่อระดับคุณภาพชีวิตที่สูง คือ การรับรู้ของบุคคลเกี่ยวกับแบบจำลองความเชื่อด้านสุขภาพ โดยเฉพาะในส่วนของสุขภาพปัจจุบัน ความอ่อนแอ การต้านทานความเจ็บป่วย สุขภาพในอนาคต ตลอดจนความกังวลและความห่วงใยเรื่องสุขภาพ เป็นที่แนะนำว่า โรงพยาบาลและคลินิกควรจัดให้มีจำนวนแบบฟอร์มในภาษาถิ่นต่างๆ และมีจำนวนล่ามที่พอเพียงเพื่ออำนวยความสะดวกแก่กลุ่มแรงงานผู้อพยพ นอกจากนี้ ช่วงเวลาของการรอรับการรักษาควรลดลงเพื่อเพิ่มจำนวนผู้ป่วยในแต่ละวันด้วยเป้าหมายในการปรับปรุงคุณภาพชีวิตเกี่ยวกับสุขภาพแก่แรงงานผู้อพยพ

สาขาวิชา สาธารณสุขศาสตร์ ลายมือชื่อนิสิต .....

ปีการศึกษา 2552 ลายมือ อ.ที่ปรึกษาวิทยานิพนธ์หลัก .....

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KEY WORDS : ADULT/ MYANMAR MIGRANT WORKERS/ HEALTH-RELATED QUALITY OF LIFE/ HEALTH PERCEPTIONS QUESTIONNAIRE/ CHIANG RAI

MALULIE TONGPRASERT: FACTORS RELATED TO HEALTH-RELATED QUALITY OF LIFE AMONG ADULT MYANMAR MIGRANT WORKERS AT CHIANG RAI REGIONAL HOSPITAL AND PIROM CLINIC IN MUANG DISTRICT, CHIANG RAI PROVINCE, THAILAND: A CROSS-SECTIONAL STUDY. THESIS ADVISOR: PRATHURNG HONGSRANAGON, Ph.D., 150 pp.

A cross sectional study, conducted among 401 adult Myanmar migrants between the ages of 18 and 59 years old selected through purposive sampling, was undertaken at Chiang Rai Regional Hospital and Pirom Clinic, located in Muang District, Chiang Rai Province, Thailand beginning from February 8th-20th, 2010. The objectives of this study were: (1) To describe the socio-demographic characteristics, work history, accessibility to health care, and perception related to the Health Belief Model among adult Myanmar migrant workers and (2) To assess the health- related quality of life of adult Myanmar migrant workers. Participants were interviewed through face-to-face interviews guided by a questionnaire comprised of questions regarding socio-demography, work history, accessibility to health care in conjunction with the Health Perceptions Questionnaire (HPQ) and the World Health Organization Quality of Life Survey (WHOQOL-BREF). Frequency, percentage, and standard deviation were utilized for the analysis of the descriptive statistics, whereas the chi-squared test was employed to examine the association between the independent variables and health-related quality of life (HRQoL).

Respondents consisted mostly of Myanmar women between the ages of 18 and 29 years old, most of who had never received any formal education and were unable to read Thai or Burmese. In addition to having worked in Thailand from between one year and one and a half years, working primarily in industries such as domestic services or food services, they earn between 2,000 and 3,999 baht per month. Most participants travel anywhere between two to three kilometers to reach their preferred health care facility and encountered a wait time of more than thirty minutes. The majority claimed that there was an inadequate amount of translators and forms in different languages. The results demonstrate that more than half of the participants (56.0%) demonstrated a moderate level quality of life, followed by high (43.8%) and low (0.2%). The data revealed that the factor that appeared to be the most associated with a higher quality of life level was individual perception related to the Health Belief Model, most notably within domains of current health, susceptibility and resistance to illness, future health, and worry and concern regarding health.

Hospitals and clinics should provide an adequate number of forms in other dialects and translators in order to facilitate care given to migrant patients. In addition, wait time should be decreased in order to increase the number of patients seen per day with the objective of improving health-related quality of life for migrants.

Field of Study : Public Health Student's Signature: .....
Academic Year : 2009 Advisor's Signature: .....

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"Our lessons come from the journey, not the destination"

As this year comes to a close, I sit and reflect upon the amazing journey that I have taken and this very quote comes to mind. I think about the countless hours pouring over statistics notes, the late nights revising my thesis for the n^{th} time, but I also remember the numerous moments spent collaborating with my colleagues, the time spent uncovering new and fascinating facts. Through this time of discovery, hard work, and growth, I have many people to thank that have helped me along the way.

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LIST OF ABBREVIATIONS

CHD	Coronary Heart Disease
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
HPQ	Health Perceptions Questionnaire
HRT	Hormone Replacement Therapy
HRQoL	Health- related Quality of life
QoL	Quality of Life
SCI	Spinal Cord Injury
SF	Short Form
WHO	World Health Organization
WHOQoL	World Health Organization’s Quality of Life
WHOQOL-BREF	World Health Organization’s Quality of Life (Short form)

CHAPTER I
INTRODUCTION

1.1 Background and Rationale

Migration is a complex social phenomenon that has occurred throughout the course of human history; however, as the result of the global Diaspora in recent years, it has become one of the leading issues characterizing the 21st century. While there are many economic, social, political, and personal reasons that can account for this dramatic shift, more people currently live outside their country of birth than ever before, affecting numerous aspects of societal life (Department of Economic and Social Affairs, 2008). With the introduction and diffusion of different cultures, languages, religions, and beliefs, people around the world have recognized and adapted to this international phenomenon known as migration.

Migration is defined as the crossing of either a political or administrative border for a minimum period of time; however, there is no universal manifestation of it. Instead, it can take many forms including legal migration, illegal migration, irregular migration, refugees, and labor migration and have collectively contributed to the increase in international migration (UNESCO, 2005). In 2008, the International Organization for Migration (IOM) estimated that there were more than 200 million people who live outside of their outside of their country of birth, accounting for an unprecedented 3 percent of the world population (IOM, 2008). Furthermore, if this trend continues, the IOM predicted that by the year 2050, there would be 257 million migrants worldwide

(IOM, 2005). Thus, migration is an issue that undoubtedly deserves to be placed on the global agenda.

Countries worldwide have received migrants from many walks of life. One of the countries that has experienced a particularly overwhelming number of migrants is Thailand. Over the past decade, Thailand has attracted an increasing amount of migrant workers, specifically from Myanmar, Laos, and Cambodia (IOM, 2008). Although, it is difficult to approximate the number of migrants who are currently residing in Thailand, the IOM estimated that in 2008 there were upwards of one million low-skilled or unskilled workers present (IOM, 2005).

The rapid movement into Thailand has become so overwhelming that the Royal Thai Government has attempted to create a formal registry of all migrants. In July 2004, the Minister of Interior of Thailand registered approximately 1,280,000 migrants from Cambodia, the Lao People Democratic Republic, and Myanmar alone (MOI, 2004; Huguet, J and Punpuing, S., 2005). This increase in migrants has undeniably and inherently changed the nature of Thai society from one that has been primarily ethnically, culturally, and religiously homogenous to a menagerie of nationalities and ethnic groups.

In addition, migrant workers who come to Thailand typically work in industries such as fishery, agriculture, manufacturing, construction, and the service sector, the majority of which requires significant manual labor and both physically and mentally demanding (UNESCO, 1995). As such, this has shown to have deleterious effects on the health of migrants, resulting in increased health care utilization rates in Thailand, yet exacerbated by limited resources (Pannarunothai and Mills, 1998).

Consequently, with the increased demand in the health care system, Thai hospitals are faced with a severe overload of patients, many times reaching maximum capacity, forced to turn patients away due to insufficient resources. This phenomenon has led to a shift in the health care system as patient demographics and needs continue to change. As more patients with different beliefs, cultures, and languages are seeking health care services, modifications must be made to the health care system in order to ensure equal access to care for all patients.

This pattern of migration has been occurring in many Thai cities, especially in those where communities of migrants are already present. One of these cities is Chiang Rai, a rural city in Northern Thailand known primarily for its agrarian society. Located close to the Thai-Myanmar border, migrants in Chiang Rai are typically from Myanmar, Laos, and Cambodia not only due to its close proximity, but also, due to its constant demand for land laborers (Sapawikul, 1999). In 2005, UNESCO estimated that there were 32, 479 migrants from these three neighboring countries in Chiang Rai alone (Ministry of the Interior, 2004; UNESCO, 2005).

Thus, Chiang Rai has become one of the main destinations that migrants flock to, where employment opportunities are plentiful, and where the cost of living is relatively inexpensive. As a result, health care facilities are inundated by the flood of patients, causing significant problems for multiple parties. Hospitals not only face a shortage of resources, but also, cultural barriers in treating foreign patients. Subsequently, migrants are not able to access the care they need. In addition, due to the large magnitude of migrants at public health care facilities and lack of available space, Thais themselves are

finding it increasingly difficult to obtain care and resort to seeking medical attention at private health facilities where they incur higher costs for comparable care from public facilities.

It is evident that this Diaspora has spawned a host of new barriers in health care access at all levels, potentially compromising the health of multiple populations. The concept of health itself has four main components as outlined by the World Health Organization: (1) genetics, (2) environment, (3) access to care, and (4) personal behavior (WHO, 1993). Given this, migrants are at a particular disadvantage in comparison to the native population especially when it comes to health. In fact, the health conditions of migrants, especially for those considered "irregular" migrants are considerably lower than the native population in part due to limited or no access to perinatal care, vital immunizations, and poor living conditions (IOM, 2009; IOM 2009b).

Furthermore, there are other factors that severely compromise the health outcomes of migrants. For instance, migrants tend to encounter financial hardship as they are economically compelled to accept low-paying jobs, lowering their ability to afford care. This is not only associated with a negative health outcome, but also, contributes to a higher risk of mental health issues such as stress and low self-esteem as the result of difficult cultural integration, invariably leads to a diminished health-related quality of life (IOM, 2005).

The World Health Organization (WHO) defines quality of life as an, "individual's perception of their position in life in the context of the culture and the value systems in which they live and in relation to their goals, expectations, standards, and concerns"

(WHO, 1993). As personal behavior is the key determinant of health (WHO, 2009), diminished health care usage cannot be examined solely based on external factors such as economic hardship, but personal belief related to health must be considered. Thus, this study utilized the Health Belief Model (HBM) as a proxy to evaluate the person health beliefs of adult Myanmar migrant workers to determine whether it influenced their subsequent health-related quality of life.

In order to conduct a comprehensive study of adult Myanmar migrants, it is necessary to include participants from different social settings. This particular research was undertaken in two settings in order to access different patient demographics. The first place of these places was Chiang Rai Regional Hospital, which was established in 1937 with a core objective of creating lasting networks with other health-related organizations and promoting good health for the society as a whole. As the only public hospital within Muang District, Chiang Rai Province, it receives an unprecedented amount of patients. The second site was Pirom Clinic, a primary care level health service which serves a large migrant population and provides care to many Myanmar patients. One of the main objectives of this study was to gain a varied perspective of patient demographic by sampling two different types of health care facilities.

Thus, given Chiang Rai's proximal location to the Myanmar border, examining its health care system and assessing both external and internal barriers to care that migrants are confronted with as a marginalized population in two different contexts allowed for a highly relevant evaluation of the factors that affect the health-related quality of life among adult Myanmar migrants in Muang District, Chiang Rai Province, Thailand.

1.2 Research Questions

(1) What are the socio-demographic characteristics among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

(2) What is the work history among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

(3) What is the nature of accessibility to health services among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

(4) What are the perceived severity, barriers, risks, and benefits towards health care for adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

(5) What is the health-related quality of life of adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

(6) What is the association between socio-demographics characteristics and health-related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

(7) What is the relationship between the work history and health-related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

(8) What is the association between accessibility to health care and health-related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

(9) What is the relationship between perceptions related to the Health Belief Model and health- related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand?

1.3 Objectives

1.3.1 General Objective

To assess the health-related quality of life of Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand

1.3.2 Specific Objective

(1) To explicate the socio-demographic characteristics of adult Myanmar migrants living in Muang District, Chiang Rai Province, Thailand.

(2) To assess the work history among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand.

(3) To describe the nature of accessibility to health services among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand.

(4) To assess the perceived severity and barriers towards health care adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand.

(5) To indicate the health-related quality of life of adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand

(6) To determine an association between socio-demographics characteristics and health-related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand.

(7) To ascertain a relationship between work history and health-related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand.

(8) To determine an association between accessibility of care and health-related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand.

(9) To ascertain a relationship between perception related to the Health Belief Model and health- related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand

1.4 Conceptual Framework

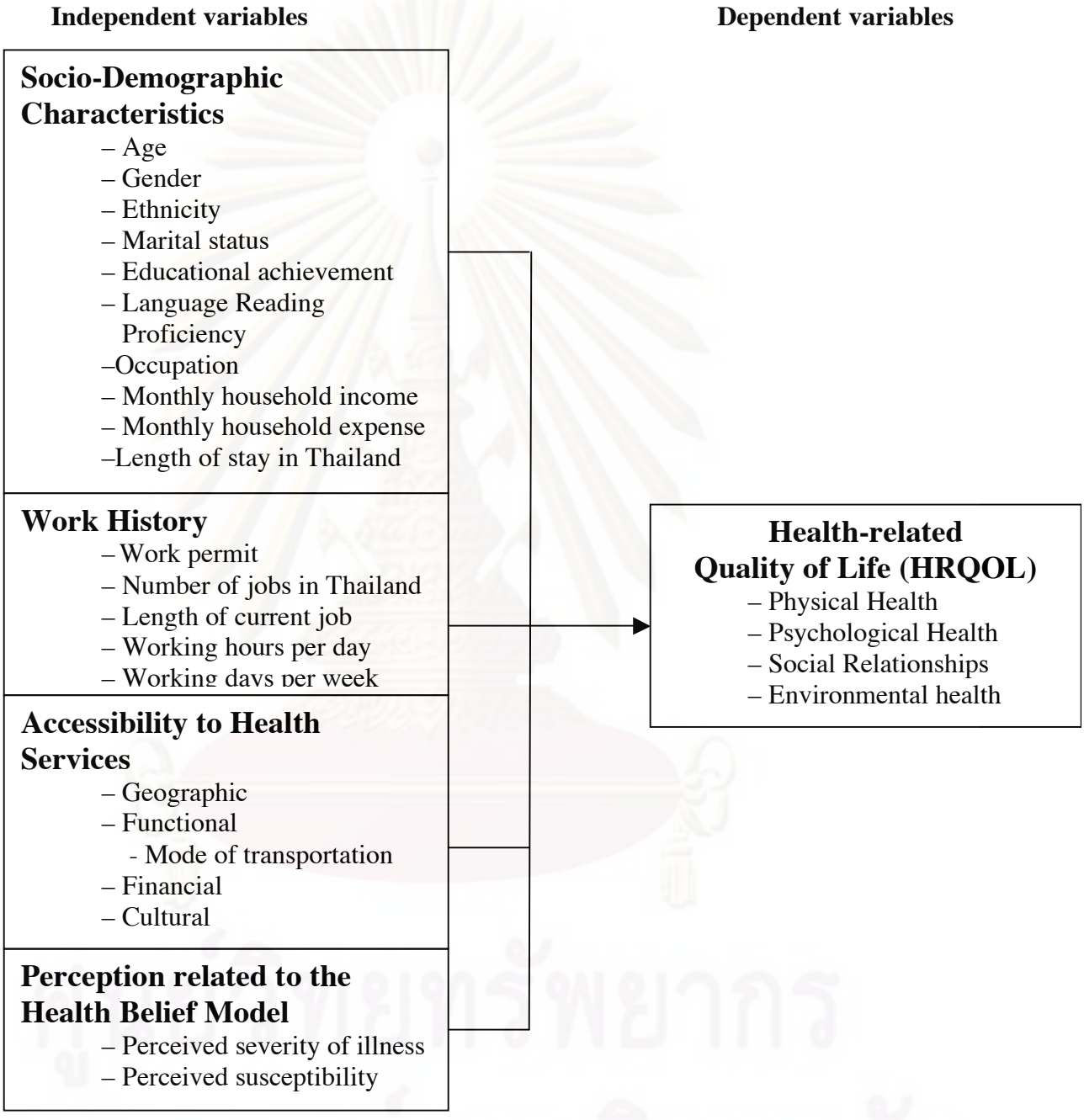

Figure 1 Conceptual Framework

1.5 Operational Definitions

1.5.1 Migrant: A migrant worker is "a person, who is to be engaged, is engaged or has been engaged in a remunerated activity in a State of which he or she is not a national" (United Nations, 1990). For the purposes of this study, adult Myanmar migrant workers are being studied; however, it must be recognized that the term "Myanmar" is an extremely broad term that encompasses numerous hill tribes including, but are not limited to: Karen, Hmong, Shan, Kashine, Mon, Rakhine, and more. Whereas the majority of Myanmar migrant workers that come to Thailand belong to one of the various hill tribes, but they are categorized under the umbrella term "Myanmar."

1.5.2 Adult: This study defines adults as males and females between the ages of 18 to 59, which differs from WHO's definition on adult as "individuals from 15-59 years old" as focusing on those above the age of 18 years old will facilitate the data collection step by avoiding obtaining parental consent.

1.5.3 Accessibility of health services: is defined by the following four determinants:

(1) Geographical accessibility: is the transportation, travel time, physical distance from where an individual lives to the primary care facility at which the individual receives care. This distance is measured not only in terms of distance, but also in terms of ease of accessibility and travel time.

(2) **Functional accessibility:** is the process and method of managing of care for those who seek it. It can also be defined in terms of delivery of services.

(3) **Financial accessibility:** is the payment for services. The amount of payment is the fee an individual incurs to receive care in relation to his ability to pay. Financial access also refers to the cost-benefit analysis in terms of time and money spent in order to gain access to care

(4) **Cultural accessibility:** is the appropriateness in delivery of care as it relates to the cultural patterns and beliefs of the individual seeking care.

1.5.4 Health insurance for migrant workers

The most common financing source available to them is the Compulsory Migrant Health Insurance (CMHI). CMHI was first introduced in 1997 after a resolution passed by the cabinet allowing the Ministry of Public Health to provide a maximum of 500 baht per person per year on health care; however, this health scheme was only available to registered migrants. Later in 2001, another resolution was approved requiring all registered migrant that received assistance from this fund to obtain a physical check-up, forcing them to incur a cost of 300 baht and an annual membership fee of 1,200 baht in exchange for paying a flat co-payment rate of 30 baht per visit. As the fees associated with obtaining health insurance are relatively expensive in relation to the meager benefits that migrants can reap from this health insurance scheme, the number of people utilizing

this program has decreased due to a diminished number of migrants registering and re-registering with the Ministry of Interior (MOI).

In more recent times, Thailand has provided universal health care for its citizens; however, with limited hospital budgets and the assumption that all Thais are covered by one of the multiple insurance schemes, hospitals have insufficient funds to subsidize health care costs of migrants and instead, must rely on their own revenue to provide services for non-Thais (IOM, 2009b).

1.5.5 Health Belief Model (HBM) is a theoretical framework that was developed in the early 1950s with the objective of predicting health-related behavior (Janz and Becker, 1984). It states that an individual's actions as it pertains to health rests on four factors, which include (a) perceived susceptibility, (b) severity of disease or illness, (c) perceived barriers for preventive action, and (d) perceived ability to perform the action to control the disease or illness (Lim, J. et al 2008). Perceived susceptibility refers to how vulnerable a person feels in term of health whereas perceived severity can be defined as how detrimental an individual believes that the illness is towards his health. The benefits that can be gained by participating in health behavior are recognized as the perceived benefits and may be considered in relation to perceived barriers, which are the hindrances an individual faces in engaging in health behavior (Sheeran and Abraham, 1996).

1.5.6 Health-Related Quality of Life

Health-Related Quality of Life (HRQoL), also referred to as health status, functional status, and quality of life, is a measurement of an individual's satisfaction with oneself on four different indices, which include physical health, psychological health,

social relationships, and environmental factors. HRQoL has been a useful way for measuring the impact of chronic disease and has shown to have many benefits. It provides a framework that can inform patient management as well as baseline information for policy makers. HRQOL is also utilized to assess cross-sectional differences in the quality of life of patients or examine long-term changes. Overall, HRQoL allows many key players in health such as policy-makers and health professionals to identify changes in health status and make changes in the health care system by adapting to the needs of the population.

There are two main approaches to measure quality of life as it relates to health. The first of these instruments is generic in nature as it provides an overall review of health-related quality of life and the second is a specific instrument that focused on issues associated with a specific disease, patient groups, or area of focus (Guyatt, G. et al 1993).

1.5.7 **Independent Variables**

- Age: refers to how old the participant is at the time that the interview is conducted
- Gender: refers to male and female
- Ethnicity: refers to which ethnic group the participant belongs
- Marital status: refers to the civil status of the participant at the time of the interview
- Educational achievement: refers to the level of education that the participant has completed at the time of the interview
- Occupation: refers to the type of employment that the participant holds at

the time of the interview

- Language reading proficiency: The level of proficiency the participant has in reading Thai and Burmese
- Monthly household income: refers to the monetary amount in Thai baht that the participant and his/her immediate family earns in Thailand on a monthly basis
- Monthly household expenditure: refers to the monetary amount in Thai baht that the participant and his/her immediate family expends on a monthly basis.
- Immediate family: refers to the participant, his/her spouse, and their children in Thailand.
- Length of stay in Thailand: refers to amount of time that the participant has spent in Thailand since immigrating from their country of origin
- Mode of transportation: refers to the method that the individual employs to get around on a daily basis
- Work permit: refers to whether the participant has registered with MOI and applied for a work permit in Thailand
- Number of jobs held in Thailand: refers to the number of posts that the individual has held lasting for more than one month in Thailand
- Length of current job: refers to amount of time that the participant has been working at his/her current job
- Working hours per day: refers to the number of hours that the participant spends working in a 24-hour period
- Working days per week: refers to the number of days in a 7-day period

that the participant spends working.

- Accessibility to health care services: refers to the participant's perception of the distance to the nearest health centers (geographic), the hours of operation of health centers (functional), the level of adequate medical technology or health care services (functional), and the adequacy of translation services (cultural), and the cost of services (financial).
- Health Insurance: refers to the insurance card that is given to migrants who are registered by the Royal Thai Government or by employers to receive health care services
- Perceived severity of illness: refers to the participant's perception of how serious the condition is and how severe the effects will be within the last six months
- Perceived susceptibility to illness: refers to how vulnerable an individual perceives they are to illness

1.5.8 Dependent Variable

Health related quality of life: is defined as an individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns (World Health Organization, 1993)

Physical health: refers to a set of attributes that people have or have achieved relating to their ability to perform physical activity (U.S. Department of Health & Human Services, 1996)

Psychological Health: refers not only to the absence of mental disorder, but instead, is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (World Health Organization, 1997)

Social Relationships: refers to as the combination of two factors: (a) social integration, which refers to the existence or number of social relationships, and (b) social network structure, which is the properties that define a set of relationships (House, 1998)

Environmental health: refers to physical, chemical, and biological factors external to a person and how these factors influence behavior. It incorporates examination and control of these factors that may have an impact on health and is geared towards disease prevention and creating environments that are not harmful to health (Pruss- Ostun, A and Corvalan, C., 2006)

CHAPTER II
LITERATURE REVIEW

2.1 Migration

The IOM estimated that more people are living outside their country of birth than ever before. In 2004, approximately 1 out of every 35 people was a migrant with an increasing rate of an estimated 2.9 per cent per year. As a complex issue, migration is influenced by many social, economic, and political factors and catalyzed by globalization, such as demographic trends, economic disparities between developing and developed countries, trade liberalization, social networks, and transnational migration (IOM, 2005). With increased economic turmoil coupled with a rapid population growth rate, more people have moved from their country of origin in search of economic opportunity and political refuge.

In addition, although globalization has not been considered a recent occurence, economic globalization has undeniably increased labor migration internationally (Martin, 2001). As there has been an increased demand for labor in developed countries, it has been unduly met with an unending supply of unskilled labor. Furthermore, with communities of migrants settling in many cities worldwide, it provides a safety net, encouraging migration. Lastly, advancements in technology and communication has allowed people to become more connected globally, allowing for the free flowing movement of information, skills, and most significantly, labor.

As migration is a varied topic, it should be noted that there are different types of migration.

2.1.1 Types of Migration

According to the IOM, there are various types of migration patterns that occur and different ways to define them. These are the main types of migration that occur (IOM, 2004; Sciortino and Punpuing, 2009):

(1) Regular migration refers to the movement of a person or a group to a new place of residence through legal means and possessing valid immigrant visas and a proper documentation

(2) Irregular migration refers to the movement of a person or a group that occurs outside the legal means of the sending and transit to host countries that may include illegal exit, entry, stay, or work in a country.

(3) Forced migration refers to when people are forced from their countries by war, civil conflict, political strife or gross human rights violation

2.1.2 Migration in Asia

As a region that is comprised of an amalgamation of emerging economies, it was influenced by a combination of both industrialization and globalization, yet tethered by widespread poverty and low cost of living, undeniably influencing migration trends. For example, there was a large influx of immigrants from Myanmar to Thailand and from Afghanistan to Pakistan. The majority of migrant workers in Asia were unskilled or low skilled laborers who worked as construction or domestic workers; however the most significant trend was the increased number of “irregular migrants” (Wickramasekera, 2002).

2.1.3 Migration to Thailand

As the result of the unprecedented increase in investment, trade, technology, and tourism, international migration skyrocketed significantly (Sciortino, R., Punpuing, S., 2009; Huguet, R, Punpuing, S., 2008). This number was further influenced by political instability and limited economic growth in neighboring countries, leading to an increase in irregular migration to Thailand (IOM, 2009b); however, the movement of migrants from Myanmar to Thailand rose rapidly in 1959, following political instability in Myanmar. Consequently, these migrants were recognized as displaced persons or refugees of a country embroiled in war, allowing them to obtain work permits or temporary residency (Isarabhakdi, 2004).

In more recent times, Thailand became a key player in international migration serving as a port for receiving and sending migrants as well as a point of transit. As an emerging economy with a burgeoning labor market, Thailand had the dual role of supplying labor and generating a demand for labor, particularly migrants from Laos PDR, Myanmar, and Cambodia (IOM, 2009b).

Due to the influx of migrants, the Royal Thai Government took measures to control irregular migration. In July 2004, the Ministry of Interior (MOI) registered a total of 1,280,000 migrant from neighboring countries and out of this number, 814,000 applied for a work permit with 600,000 of them being from Myanmar and 100,000 from Lao PDR and Cambodia, respectively. (Huguet, J., Punpuing, S. 2005). Out of those who registered for work permits with the MOI, 817,000 also registered to receive health care insurance provided by a governmental scheme.

In addition, in 2004, approximately 93,000 people under the age of 15 registered with the MOI and were allowed to attend Thai school, but it is believed that only a small proportion take advantage of this right. Instead, many of the older children are believed to have been working in the informal sector in an exploitative nature. It was very difficult to approximate the number of irregular and regular migrants, but the IOM estimated that there were an equal amount of unregistered migrants as registered ones. Despite their reasons for migrating to Thailand, there exist undeniable disparities between migrants and the native population in terms of sensitivity to socio-economic status, environmental factors, political instability, and changes in demographics, which directly impacted personal and communal health (IOM, 2009b).

2.1.4 Migration to Chiang Rai

Due to its proximal location to the Myanmar- Thai Border, the majority of the migrants in Chiang Rai were from Myanmar. As aforementioned, UNESCO estimated that there were approximately 32,479 migrants in Chiang Rai with over 90 percent hailing from Myanmar. According to the Department of Employment, Chiang Rai is the fourth leading city to issue work permits to migrants behind Bangkok, Chiang Mai, and Kanchanaburi (Department of Employment, 2004). Similar to the rest of Thailand, it has been difficult to estimate the exact number of migrants that reside in Chiang Rai; however, it is assumed that there were many migrants with irregular movement who remain undetected.

In addition, the migrants that lived in Chiang Rai typically live in pockets as a way to provide each other with social support. They can be nomadic in nature and

typically travel and live in tight-knit groups, working in industries such as agriculture, manufacturing, food services or domestic services.

2.2 Definition of Health

Health has been traditionally defined as the state of complete physical, mental, and social well being, and not merely the absence of disease or infirmity (WHO, 1992); however, this paradigm had shifted from an environmental focus to a human body emphasis and finally to a holistic focus. It was also recognized that health being associated with ecology must be dealt with vis-à-vis "growth, urbanization, consumption, environmental degradation, premature death and disability, and poor health care services" (WHO, 1993).

2.3 Definition of Quality of Life

The concept of "Quality of Life" originated in the post-war era in the United States, used to demonstrate the effect of material goods on the lives of individuals. This understanding was then further expanded to include education, health, and economic growth (Carr and others., 1996). In more modern times, this notion is still very broad and can be conceptualized in a number of ways; however, according to the World Health Organization, it is understood as an individual's perception on their position in life in the context of the culture and value system in which they live and in relation to their goals, expectation, standards, and concerns. The factors that determine quality of life have been

outlined by the Economic and Social Commission for Asia and the Pacific and include the following factors (UNESCAP, 1995):

(1) **Health**: is an essential component that bears weight on the remaining five components as people need to possess a certain level of health in order to function on a day-to-day basis and accomplish basic tasks, which is impaired by disease, illness, and disability.

(2) **Education**: educational attainment is of high importance in terms of quality of life. It is through education that individuals can benefit not only economically, but socially as well.

(3) **Working and living condition:** these two environments are where an individual divides his time between and therefore influences the health- related quality of life that a person possesses.

(4) **Physical environment:** is defined as the surrounding environment that an individual is exposed to, which included sanitation, portable water, and clean air.

(5) **Family life:** the family is the main social and economic nucleus that impacts an individual's life both economically and socially speaking.

(6) **Poverty**: is the inability to meet a person's basic needs and is associated with poorer health status due to an economic inability to purchase goods and services that would improve an individual's health-related quality of life.

Other definitions of health-related quality of life include assessing life expectancy, educational achievement, and the standard of living (United Nations Development Program, 1997). In addition, the Center for Health Promotion at the University of Toronto describes the quality of life as "the degree to which a person enjoys the important possibilities of his/her life", which Is based on three levels: (1) being,
(2) belonging, and (3) becoming, and then further categorized into physical, psychological, and spiritual sub-domains (Raphael and others., 2001).

2.4 Definition of Health- Related Quality of Life (HRQOL)

HRQOL is a measure that allows for the evaluation of an individual's quality of life based on a number of factors that can range from negative occurrences, such as death, to more positive ones that include the role of happiness. It is a multi-faceted tool that examines physical, psychology, and social aspects of health, allowing for a comprehensive assessment of HRQoL (Montondimopoulous and others. 2007). Researchers have realized that there are other facets that affect the lives of individuals other than those that fall within the category of "health." These determinants can include factors such as income, freedom, and the quality of the environment (Guyatt and others., 1993).

In addition, the benefit of using this measurement is that there are two different archetypes used to measure HRQoL:(1) a general version and (2) a disease-specific version, allowing it to be used across a spectrum of diseases and conditions, whereas the generic version was designed to use across a wide variety of population; however, the specific model is solely used for particular interventions or in certain populations with specific diseases.

In this study, the general version was utilized to measure HRQoL, as this objective of this study was not limited to a specific disease or intervention and various instruments can be employed to HRQoL in a general manner.

2.5 Review of studies on Health-Related Quality of Life and Migrants

In 1948, the World Health Organization defined health related quality of life as the culmination of physical, social, psychological, and environmental health. As a marginalized population, migrants faced many barriers to integration and acculturation and begin their stay in host countries at a disadvantage due to a lack of entitlements in their new host countries (Bolini and Siem, 1995). This significantly influences their imminent health status. As migrant workers, they are exposed to difficult working and living conditions, which are undeniably risk factors associated with poorer health. Additionally, they have limited access to health care due to political and cultural barriers that natives do not have to face. Such hindrances include: language barriers, dissimilar and definitions of health, and low educational attainment. Thus, the health status of migrants is typically compromised when compared to that of the native population.

Furthermore, it is not uncommon for migrants to work in their host countries within an illegal context. Migrants provide an unending source of labor for many countries at a low cost, performing unwanted jobs, yet accompanied by its own set of risks and dangers (Casteñada, 2009). It has been shown that there is an undeniable relationship between working conditions, health, and health equity such that the working conditions that migrants face increases their exposure to an array of health hazards (Marmot and Wilkinson, 2007). Overall, migrants encounter many barriers to care that compromises their health related quality of life.

2.5.1 Health- Related Quality of Life of Migrants in Chiang Rai

Similar to migrants elsewhere, migrants in Chiang Rai have a compromised quality of life as it relates to health. In Chiang Rai, Myanmar migrants face many of the same illnesses and sicknesses that most people encounter such as colds, upset stomach, food-born illnesses; however, given the disadvantages that they face in terms of socio-economic status, poor living and working conditions, high levels of stress, it exacerbates their condition, leading to a poorer health-related quality of life.

2.6 HRQoL Instruments

Health- related quality of life can be assessed in a number of ways and several tools have been developed in order to evaluate HRQoL.

2.6.1 Survey on Disparities in Quality of Health Care

This questionnaire was prepared by the Princeton Survey Research Associates International for the Commonwealth Fund, a private foundation that sought to improve health care systems vis-à-vis providing better access, improved quality of care, and increased efficiency for vulnerable populations. The Survey on Disparities in Quality of Health Care was designed in 2001 to identify risk factors that affected an individual's health status in order to assist health care professionals and policymakers understand the issues and deleterious consequences of disparities in health care. This questionnaire examine current health status, health-seeking behavior, as well as quality of care received during the most recent medical visit and in conjunction with questions pertaining to factors that bear consequence on quality of life were included as part of the questionnaire.

2.6.2 Nottingham Health Profile

The Nottingham Health Profile (NHP) was created to measure individual perception of health by examining how people feel during various stages of illness. This questionnaire consisted of 38 items that correlate to six domains including sleep, pain, emotional factors, recreation, social isolation, physical mobility, and energy level. The NHP, although widely used, had several limitations. First, it mainly measures individual perception during more severe stages of illness, which is undeniably more extreme. Second, pain and mobility were confounded and the weighing factors of severity can produce skewed results (Carr and others, 1996).

2.6.3 Short Form 36 (SF-36)

The most common tool used to measure HRQoL is the Medical Outcomes Study 36-item Short Form (Ware et. al 1993). SF-36, a multi-faceted assessment, assessed health status based on the follow domains: Physical Functioning (PF), Role Physical (RP), Bodily Pain (BP), General Health (GH), Vitality (VT), Social Functioning (SF), Role Emotional (RE), and Mental Health (MH). Each of these domains is scored on a 0-100 scale, with 0 being a very poor HRQoL and 100 being the optimal score. Subsequently, these scores are combined to produce two different scores: a Physical Component Summary (PCS) and a Mental Component Summary (MCS) (McDowell, 2006).

2.6.4 Health Perceptions Questionnaire (HPQ)

The National Center for Health Services Research (NCHSR) developed a self-reporting tool known as the Health Perception Questionnaire (HPQ) that was used to measure perception of past, present, and future health, resistance to illness, and attitudes towards sickness (Davies & Ware, 1981). HPQ was created on the basis that personal beliefs inform an individual's perception of health and thereby, subsequent assessments of health status and consisted of 32 items regarding individual perception on the aforementioned six dimensions (McDowell, 2006; Ware and others. 1974; Ware, 1976).

Furthermore, after measuring the reliability and construction scales, the data demonstrated that across age, level of educational attainment, income, and race, suggesting that the data through HPQ is generalizeable. In fact, HPQ had been well-suited in evaluating medical services, studies that were designed to explain health and

illness behaviors, and in assessments of general health status. It had previously been used in large-scale investigations, demonstrating internal consistency, retest reliability, and validity (Karoly and others; 2005; Davies & Ware, 1981).

2.6.5 World Health Organization Health-Related Quality of Life (WHOQOL-100)

As a tool that was developed by the United Nations, the WHOQOL-100 was designed to be used in a multitude of cross-cultural settings; however, there are only certain circumstances where this measurement can be applied (WHO, 1997). These conditions include within medical practices, for improving the doctor-patient relationship, and in assessing the effectiveness of different treatments, in evaluating health care services, in completing research and creating policies. WHOQOL-100 was based upon the WHO definition of HRQoL and was a general, self-administered tool that has been adapted to be used in fifteen other countries worldwide.

WHOQOL was the first tool developed by the WHO to measure HRQoL and comprised of 100 questions that correlate with 6 different domains: (1) Physical Health, (2) Psychological Health, (3) Level of Independence, (4) Social Relationships, (5) Environment, and (6) Spiritual component as further described below.

Domain I Physical Domain

1. Pain and discomfort

This facet explores the unpleasant physical sensations experienced by a person, the extent to which these sensations are distressing and interferes with life.

2. Energy and fatigue

This facet explores the energy, enthusiasm, and endurance a person has to perform the necessary tasks of daily living, including recreation.

3. Sleep and rest

This facet is concerned with how much sleep and rest and problems in this area affect the person's quality of life.

Domain II Psychological Domain

4. Positive feelings

This facet examines how much a person experiences positive feelings of contentment, peace, happiness, hopefulness, joy, and enjoyment of the good things in life.

5. Thinking, learning, memory, and concentration

This facet explores a person's view of his/her thinking, learning, memory, concentration, and ability to make decisions.

6. Self- esteem

This facet examines how people about themselves, both positively and negatively. The aspect of self-esteem is concerned with a person's feeling of self- efficacy, satisfaction with oneself; control is also included in the focus of this facet.

7. Body image and appearance

This facet examines the person's view of his/her body, and whether the appearance of the body is viewed in a positive or negative way.

8. Negative feelings

This facet is concerned with how much a person experiences negative feelings, including despondency, guilt, sadness, tearfulness, despair, nervousness, anxiety and a lack of pleasure in life.

Domain III- Level of Independence

9. Mobility

This facet examines the person's view of his/her ability to get from one place to another, move around the home, or to and from transportation services

10. Activities of daily living

This facet explores a person's ability to perform usual daily living activities, including self-care and appropriate care for property.

11. Dependence on medication or treatment

This facet examines a person's dependence on medication or alternative medicines to support his/her physical and psychological wellbeing.

12. Work capacity

This facet examines a person's use of his/her energy for work. "Work" is defined as any major activity in which the person is engaged.

Domain IV- Social relationships

13. Personal relationships

This facet examines the extent to which people feel the companionship, love and support they desire from the intimate relationships in their life.

14. Practical social support

This facet examines how much a person feels the commitment, approval, and availability of social assistance from family and friends.

15. Sexual activity

This facet is concerned with a person's urge and desire for sex, and the extent to which the person expresses and enjoys his/her sexual desire appropriately.

Domain V- Environment

16. Physical safety and security

This facet examines the person's sense of safety and security from physical harm. A threat to safety or security might arise from any source, such as other people or political oppression.

17. Home environment

This facet examines the principal place where a person lives, and the way that this impacts on the person's life.

18. Financial resources

This facet explores the person's view of his/her financial resources and the extent to which these resources meet the needs for a healthy and stable life style. The focus is on what the person can or cannot afford.

19. Health and social care: available and quality

This facet examines the person's view of the health and social care in the near vicinity.

20. Opportunities for acquiring information and skills

This facet examines a person's opportunity and desire to learn new skills, acquire new knowledge, and feel in touch with what is going on.

21. Participation in, and opportunities for, recreation and leisure

This facet explores a person's ability, opportunities and inclination to participate in leisure time and relaxation.

22. Physical environment

This facet examines the person's view of his/her environment. This includes the noise, pollution, climate, and general esthetics of the environment, and whether this serves to improve or severely affect quality of life.

23. Transport

This facet examines the person's view of how available or easy it is to find and transport services to get around.

Domain VI- Spirituality/ Religion/ Personal Belief

24. Spirituality/ Religion/ Personal beliefs

This facet examines the person's personal beliefs and how these affect quality of life. This may be by helping the person cope with difficulties in his/her life, giving structure to experience, describing meaning to spiritual, and personal questions, and more generally, providing the person with a sense of wellbeing.

Overall Quality of Life and Health

These questions examine the ways in which a person assesses his/her overall quality of life, health, and wellbeing (WHO, 1993).

2.6.6 WHOQOL-BREF

WHO developed a shorter version of the WHOQOL known as WHOQOL-BREF, consisting of 26 items that measures of physical health, psychological health, social relationships, and the surrounding environment when it was determined that the WHOQOL-100 was too lengthy to be used in a community setting. WHOQOL-BREF took one item from each of the 24 domains that constituted WHOQOL and included one that assessed overall quality of life and another that examined general health. Also, the six domains that constituted WHOQOL-100 were reduced to only four, which included: physical health, psychological, social relationships, and environment. The advantage of this tool was that it was significantly shorter, yet allowed for a comprehensive measure of HRQOL (WHO, 1997b). The four domains that encompassed WHOQOL-BREF are outlined as follows:

Domain	Facet incorporated within domain
1. Physical Health	▪ Activities of daily life ▪ Dependence on medicinal substances and medical aids ▪ Energy and fatigue ▪ Mobility ▪ Pain and discomfort ▪ Sleep and rest ▪ Work capacity
2. Psychological	▪ Body image and appearance ▪ Negative feelings ▪ Positive feelings ▪ Self-esteem ▪ Spirituality/religion/personal belief ▪ Thinking, learning, memory and concentration
3. Social relationships	▪ Personal relationships ▪ Social support ▪ Sexual activity
4. Environmental	▪ Financial resources ▪ Freedom, physical safety, and security ▪ Health and social care: accessibility and quality ▪ Home environment ▪ Opportunities for acquiring new information and skills ▪ Participation in and opportunities for recreation/leisure activities ▪ Physical environment (pollution/noise/traffic climate) ▪ Transportation
5. Overall QoL and General Health Facet	

Figure 2 WHOQOL-BREF Model

This measurement tool was chosen as it is the gold standard in assessing HRQOL, and had previously been used in studies in Thailand, demonstrating applicability. Since the composition of the Myanmar culture was similar to that of the Thai culture, it can assumed that this tool can also be generalized to examine HRQOL in Myanmar participants.

2.7 Health Belief Model

The Health Belief Model (HBM) was a conceptual framework created in the early 1950's by a group of social psychologists in the United States Public Health Service in order to explain why there was such a low retention rate in disease prevention program (Glantz et al, 2002; Rosenstock, 1974; Baum et. al 1997). This model was later expanded to create a tool to analyze individual's responses to symptoms (Kirscht, 1974). The Health Belief Model was used to predict perception related to health based on an individual's perception and the assumption that individuals will make an effort to prevent and control a health condition if they foresaw a viable option that would either reduce their susceptibility to the illness or minimize its severity and that their benefits outweighed their anticipated barriers.

This notion is based on six core determinants (Cochburn and others., 1987):

(1) **Perceived susceptibility to a disease or illness**: refers to how vulnerable the patient feels to a particular disease of illness

(2) **Perceived severity of a condition**: refers to how serious an individual believes an illness to be in terms of contracting it or not treating it.

(3) **Perceived barriers to care**: refers to the difficulty in accessing health services and the hindrances in doing the recommended behavior.

(4) **Perceived benefits to care**: refers to the advantages of seeking care

(5) **Cues to action**: refers to the readiness of a person to take an action and can either be complicated or encouraged by other factors such as environment or external factors

(6) **Self-efficacy**: refers to an individual's belief in his ability to successfully execute and action in order to account for changing behavior (Rosenstock, 1974). It is also known as "the conviction that one can successfully execute the behavior required to produce the outcome" (Bandura, 1977).

For the purposes of this study, perceived susceptibility and perceived severity was considered. The following is a graph that explains the various domains of the Health Belief Model (Glanz, K et al, 2002).

Concept	Definition	Application
Perceived Susceptibility	One's opinion of chances of getting a condition	Define population(s) at risk, risk levels; personalize risk based on a person's features or behavior; heightens perceived susceptibility if too low
Perceived Severity	One's opinion of how serious a condition and its consequences are	Specified consequences of the risk and the condition
Perceived Benefits	One's belief in the efficacy of the advised action to reduce risk or seriousness of impact	Define action to take; how, where, when, clarify the positive effects to be expected
Perceived Barriers	One's opinion of the tangible and psychological costs of the advised action	Identify and reduce barriers through reassurance, incentives, and assistance
Cues to Action	Strategies to activate "readiness"	Provide how-to information, promote awareness, reminders
Self-Efficacy	Confidence in one's ability to take action	Provide training guidance in performing action

Figure 3 Health Belief Model Framework

2.8 Accessibility to Health Care Services

Access to health care services can be defined in a number of ways. Aday and Andersen suggest that "it is perhaps most meaningful to consider access in terms of whether those who need care get into the system or not" (Aday and Andersen 1974). In addition, access can be defined as having an adequate amount of health services available

and measured in terms of cost that an individual incurs in obtaining care or benefits he receives (Mooney, 1983). On the other hand, WHO defines equity in health as "reducing unfair and avoidable disparities in health outcomes between groups, and ensuring access to equitable health care on the basis on need" (World Health Organization, 1996a). Thus, it can be seen that in order to evaluate access to health care, we must consider the barriers that an individual faces that may be geographical, functional, economic, or socio-cultural in nature as follows:

(1) **Geographical accessibility:** refers to transportation, travel time, or physical distance that an individual lives to in relation to his preferred health care facility at which he receives care. This distance is measured not only in terms of distance, but also in terms of ease of accessibility and travel time.

(2) **Functional accessibility:** refers to the process and method of managing of care for those who seek it and can also be defined in terms of delivery of services.

(3) **Financial accessibility:** refers to the fee an individual incurs to receive care in relation to his ability to pay. Financial access can also refer to the cost-benefit analysis in terms of time and money spent in order to access care

(4) Cultural accessibility: refers to the appropriateness in delivery of care as it relates to the cultural patterns and beliefs of the individual seeking care.

2.8.1 Accessibility of health care for migrants

According to the IOM, migrants lacked proper access to health care services due to a number of factors, which include: (1) their illegal status, poverty, and distance of their residence; (2) lack of knowledge and understanding of availability of health care services and of their rights to care; (3)language and cultural barriers; (4) nomadic tendencies; (5) lack of assistance from employers towards employees; (6) negative attitudes amongst health care providers towards migrants; and

(7) limited funds and human resources to provide adequate health services to migrants (IOM, 2009b).

2.8.2 Accessibility of health care for Myanmar migrants

Myanmar migrants also encounter the same barriers that other migrants face when it comes to accessibility to health care. In a previous study, it was found that the three main reasons that discouraged Myanmar migrants from accessing health care services include legal status, cost, and communication barriers (Caouette et al, 2000). For

instance, in a study of Myanmar migrants who live in Kanchanaburi Province, it was shown that Myanmar migrants lacked knowledge regarding positive health decisions and due to their illegal status, made it impossible for them to access proper health benefits. In addition, they were unaware of the health resources that were available to them, only to be exacerbated by their inability to communicate in Thai and the lack of translators (Isarabhakdi, 2004).

2.9 Previous studies

In 2009, a study was undertaken to study the effects of socioeconomic inequalities on health by examining the United States and the United Kingdom (McDonough, 2009). Despite improved living and working conditions in both countries, socioeconomic inequalities still prevailed and has shown to be associated to a negative health status as financial means is demonstrated to be positively correlated with increased access to resources, knowledge, prestige, power, and a wider social network (Phelan et al, 2004). In comparison to the United Kingdom, which has a high progressive tax, less unemployment, and a strong trade union, the United States, a country with minimum social welfare programs and a high unemployment rate, showed a lack of material and social resources, which had long-lasting effects on the health of working age populations. The data revealed found that Britons generally have more positive health statuses when compared to Americans.

In another study that was completed in Ireland, researchers attempted to obtain a current profile of the socio-demographic characteristics of Irish individuals who had iatrogenic hepatitis C, a population that has seldom been studied (McKenna, O, 2009). A cross-sectional survey was administered to assess the self-reported health of 290 individuals across Ireland and to explicate their socio-demographic attributes. It was determined that the average time of infection of Hepatitis C was approximately 26 years. 84% of respondents were female and the most common symptoms that they encountered were fatigue and pain. This study provided baseline data of individuals who are afflicted

with iatrogenic Hepatitis C in order to begin to address the changing healthcare needs of this population.

Spinal cord injury (SCI) is any type of lesion on the spinal cord that inhibits the functioning of the central nervous system. In 2009, researchers sought to create an assessment of people living with SCI in Sao Paulo, Brazil (Blanes, L. et al, 2009). A pilot test was conducted by sampling sixty outpatients from four different locations who were afflicted with traumatic paraplegia. They found that the typical profile of a person living with SCI was a single male with an average age of 32.9 years. Of the sixty patients, only 5% had attended college with the most common cause of paralysis being injury from firearm or trauma from car accidents.

Long working conditions are believed to have a negative impact on health. In a study conducted in Yemen, researchers sought to determine the level and the factors that led to feelings of prolonged exhaustion or burnout among doctors in order to assess the correlation between burnout and psychological morbidity (Radman Al-Dubai, 2009). In a cross-sectional study, they surveyed 564 physicians working in four different hospitals in Yemen. The results of the study demonstrate that 356 doctors showed symptoms of high emotional exhaustion, while 20% demonstrated high depersonalization, and 33% felt like they had low personal accomplishment. There was a high prevalence of physician burnout and emotional exhaustion and was related to psychological morbidity.

A cross-sectional study (Di Milia, L., 2009) examining the relationship between obesity, job-related factors and amount of sleep was undertaken following studies that have concluded that there was an association between body mass index (BMI) and

duration of sleep; however, job-related stressors have never previously been considered. A survey of 346 shift and day workers was conducted with a mean age of the sample was approximately 41 years. Furthermore, BMI was higher amongst those who worked during the day and significantly higher for individuals who worked longer hours. In other words, people with a high BMI worked longer hours and slept less than those with a normal BMI. This can be attributed to increased food intake due to stress of longer working hours and less leisure time for exercise.

A study examining the association between coping skills, working hours, and psychological health was conducted among Japanese daytime workers (Otsuka, Y. et al, 2009). A cross-sectional survey was administered to 2,000 workers that assessed the relationship between the aforementioned factors. The results showed that longer working hours were positively correlated with higher levels of fatigue and an inability to focus, whereas increased levels of social support revealed associations with decreased levels of negative feelings, fatigue, and ability to concentrate. The conclusion of this study suggested that by improving an individual's ability to cope through creating networks of social support, it may reduce the negative effects of working long hours.

Researchers conducted a study in British civil servants to determine the effects of chronic job insecurity on health, psychiatric morbidity, physiological measures, and health-related behaviors (Ferrie, J.E., 2002). Using a self-report questionnaire, over 3,000 men and women were surveyed at two different points in time. The results demonstrated that there was higher reported rate of morbidity among individuals who lacked job security; however, those who experienced chronic job insecurity had the highest level of

morbidity. Thus, a loss in job security led to negative impacts on health and psychological well-being.

Using a cross-sectional design, researchers in Australia analyzed the relationship between job insecurity and its subsequent effects on mental and physical well-being (D'Souza, R. and others., 2003). By surveying 1,188 working professional between the ages of 40 and 44 years old, researchers measured the self-reported health of these individuals. They discovered that 23% of respondents claimed that they had severe job strain while 7% reported high job insecurity. The positive correlation between job insecurity and negative health continued even when gender, education, marital status, and major life events were adjusted for concluding that job instability and work-related stress demonstrated a strong association with negative mental and physical well-being.

In 2001, a study evaluating the health care access, utilization, and health status for diabetic patients according to race and ethnicity was conducted. The objective was to determine whether health status is affected by health care access and utilization (Harris, 2001). This research focused on the health care utilization of non-Hispanic Caucasians, Non-Hispanic African- Americans, and Mexican Americans and concluded that there are distinct differences between various races and ethnicities in terms of health care utilization rates and therefore, health status for adults with type II diabetes.

In the United States, Latinos have the highest uninsurance rates among racial groups living in the United States. The objective of this study was to improve access to health care access for this population. Researchers analyzed the racial and ethnic disparities in insurance coverage and access to care of non-citizen immigrants and their

children (Ku, 2001). They found that immigrants and their children severely lack health insurance coverage and had limited access to health care. In addition, they were more likely than other groups to be uninsured and even those who were insured, they have less access to medical care than insured native-born citizens.

Furthermore, another group that has difficulty in access health care services are the elderly, especially those who are also immigrants (Okafor, 2009). This study analyzed the various policies that are enacted in the United States at the local, state, and national level, there had been a trend towards an older age structure, leading to severe impacts on health care policy, necessitating increased awareness, more effective planning, and increasing access to services.

In another research project (Allin ,S. and others., 2010), researchers wanted to evaluate the inequality in health care utilization as a direct result of socioeconomic inequity. This study, conducted in Canada, used a community health survey to assess how unmet needs occur and to determine the relationship between utilization and barriers to care such as waiting times and personal reasons. The researchers determined that the main reason that accounted for unmet needs were most related to personal choice, barriers to care, and lastly, waiting times. In addition, individuals who reported that they faced barriers to accessing health care services face more economic hardship, necessitating a reevaluation of health policy in order to address inequality. Those who experience unmet needs due to long waiting times tended to be more highly educated and used services more frequently than those who did not report unmet need.

Furthermore, by using the Health Belief Model, researchers in Turkey wanted to assess the level of seatbelt wearing (Simsekogru, O. et al, 2007). Although wearing seatbelts while in vehicles has shown to be an effective way to reduce road traffic injuries, many people in Turkey still do not wear them. As this study was aimed at explicating this phenomenon, it was observed that the majority of respondents viewed traffic as very dangerous in Turkey and acknowledge that death from road accidents could have been prevented had the victim been wearing a seatbelt. The perceived benefits of wearing a seatbelt was shown to be the best indicator of seatbelt use in urban settings; however, it was not a strong indicator of seat belt use in rural roads, which may be related to the perceived severity and occurrence of accidents on urban roads.

Another study was done to test the effectiveness and the efficiency of the Health Belief Model (HBM) in predicting testicular self-examination (McClenahan, C. and others., 2006). A questionnaire was administered to undergraduates at a university in the United Kingdom, wherein they utilized an adapted version of HBM. They analyzed the participant's perception of susceptibility to testicular cancer HBM was able to explain 56% of the cases, concluding that self- efficacy was the most important predictor of whether a male would perform a testicular self-examination.

In a study that was conducted in male adolescent students who were determined to be at high-risk for human immunodeficiency virus (HIV) due to risky behavior, two scales of the Health Belief Model (HBM), perceived severity and perceived risk were analyzed to study the association between risk of HIV contraction and intention of abstinence (Iriyama, S. 2006). They conducted a survey in a high school in Katmandu

among 183 males between the ages of 14-19. The results determined that approximately 53% of students agreed with the idea of abstinence and those who perceived higher levels of severity were more likely to agree, while those who had lower levels of perceived susceptibility to acquiring HIV did not. It was concluded that perceived severity was positively correlated with the intention of abstinence and that further studies needed to be conducted to improve health education regarding HIV prevention by using perceived severity as a tool to discourage from risky behavior during sexual intercourse.

In 2002, a study (Ali, N., 2002) was conducted using the Health Belief Model to study the perceived susceptibility and severity of coronary health disease (CHR) in women undergoing Hormone Replacement Therapy (HRT) and those who were not. By analyzing the perceived severity to CHD as well as its perceived seriousness in administering a survey to 178 women, researchers found that the factors that affected participant action was individual perception of the susceptibility of CHD (50.7%), while 19.5 of the variance can be explained by the knowledge of risk factors of CHD, followed by seriousness of CHD, and an overall motivation to achieve better health. Those individuals who were undergoing HRT believed that they had a higher level of susceptibility to CHD than those who were did not undergo HRT. Similarly, those who were taking HRT believed that CHD was more serious than those who did not. Thus, susceptibility to CHD, the perceived seriousness of CHD, knowledge of the risk factors associated with CHD, and a motivation to attain better overall health encouraged women to take preventive measures to protect themselves against acquiring CHD.

In addition, a study was conducted in Hong Kong examined the relationship between local environment and the health-related quality of life of those living in Hong Kong, it was determined that there was a consistent association between neighborhood characteristics and health. It was postulated that living in an economically deprived neighborhood was associated with poorer health and this study sought to address this concept (Portinga et al, 2008; Wong et al, 2009). Through multi-stage sampling, researchers concluded that poor neighborhood conditions are related to poor health and that psychological, social, cultural, and material factors all play a role in this (Mackenbach and Howden-Chapman, 2003).

A study conducted in Sweden was undertaken as researchers become aware of the importance of determining the influence of quality of life on health policy (Burstrom and others., 2001). Through this cross-sectional study, they interviewed approximately 700 people to determine the quality of life of Swedish people with diseases and within various socio-economic groups. They concluded that the quality of life varied between socio-economic groups and diseases among Swedish residents.

Furthermore, in another study conducted in Sweden that sought to compare the self-reported health status and overall health related quality of life in order to explicate how complaints about health, age, gender, marital status, and socio-economic statuses predicted the overall quality of life (Borglin and others., 2004). Through a mail-in questionnaire sampling 469 people between the ages of 75-99, researchers concluded that reports of pain, fatigue, and immobility were highly associated to overall health-related

quality of life. Furthermore, women had a lower health-related quality of life than men and a higher level of self-reported health complains.

In research completed in Spain that sought to assess the health-related quality of life of the immigrant populations following the wave of migration that occurred in 1990, researchers used secondary data from a previous health survey that consisted of socio-demographic characteristics, health, and lifestyle, and the researchers summarized that an immigrant status was undeniably associated with poorer health outcome (Garcia-Gomez, P., 2009). They believed that it was necessary to conduct more studies on immigrants of working age, but acknowledge that the health status might be associated to country of birth and length of stay in Spain.

Furthermore, in 2008, a study was conducted in Samutsakhon, Thailand that studied the health-related quality of life of Myanmar migrant workers with the objective of providing baseline data regarding the accessibility to health care services and its subsequent effect on health-related quality of life (Thein, T., 2008). It was discovered that Myanmar migrant workers moved to Thailand due to push factors from their own country such as poor living and working conditions and the majority of respondents in this cross-sectional survey had a moderate level health-related quality of life.

CHAPTER III
METHODOLOGY

3.1 Research Design

This study was a cross-sectional study designed to assess the health-related quality of life among adult Myanmar migrant workers between the ages of 18-59 as it related to socio-demographic characteristics, work history, current health status, accessibility of health care services, and perception related to the Health Belief Model in Muang District, Chiang Rai Province, Thailand.

3.2 Study Area

This study was conducted in Muang District, Chiang Rai, Thailand, which is located approximately 785 miles North of Bangkok, Thailand.

3.3 Study Period

The study period took place from February 8th and February 20th, 2010.

3.4 Study Population and Research Participants

The study population included adult Myanmar migrant workers between the ages of 18 and 59 years old who had worked in Muang District of Chiang Rai Province, Thailand for at least six months in data collection was undertaken in two settings: Chiang Rai Regional Hospital and Pirom Clinic both located in Muang District, Chiang Rai Province, Thailand.

3.5 Sample Size

3.5.1 Total Sample Size

To determine the appropriate sample size, the following equation known as Cochran's Formula was utilized (Daniel, 2005):

where:

$$n= Z^2pq/ d^2$$

n=sample size

Z= standard value for 95% confidence interval= 1.96

d= acceptable error= 0.05

p= proportion of targeted population who have good quality of life as it pertains to health= 50%= 0.5 (with the assumption of maximum variance)

q= 1- p= 1-0.5=0.5

$$n= Z^2pq/ d^2$$

$$n= (1.96)^2 (0.5)(0.5)/ (0.05)^2= 384$$

Sample size= 384 + 384(.05) = 403

For this study, 384 participants needed to be interviewed; however, the target was 403, to account for any missing cases due to selective attrition. Furthermore, the number of participants from each site is proportional to the migrant population at that particular site.

3.5.2 Site Sample Size

From patients records from the previous year, it was is determined that there was an average of approximately 360 Myanmar migrant patients per month at Pirom Clinic whereas at Chiang Rai Regional Hospital, this amount is approximately 8,100 patients per month, making the total number of patients that are Myanmar migrants 8,460 in total. A sample proportional to size must be interviewed at each site.

Pirom Clinic

To determine the number of patients that must be sampled at Pirom Clinic, given that there were 360 Myanmar migrant patients in one month, it was determined that the percentage of Myanmar migrant that must be sampled at Pirom Clinic is 4.22%, which equals to 17 people in total. Given that the study period was 12 days, approximately 1-2 people were sampled each day.

Chiang Rai Regional Hospital

To determine the number of patients that must be sampled at Chiang Rai Regional Hospital, it was known that there were 8,100 Myanmar migrant patients in one month based on previous hospital records, it was determined that 31 patients per day to obtain a total of 384 Myanmar patients, equating to 95.74% of the sample population. The method that was employed in order to choose which patient would be sampled was systematic random sampling.

3.6 Sampling Technique

A purposive sampling technique was used to collect the sample.

3.6.1 Inclusion criteria consisted of: (1) aged between of 18 and 59 years old, (2) working in Muang district of Chiang Rai for at least six months, and (3) voluntarily took part in the research.

3.6.2 Exclusion criteria of the respondents consisted of: (1) aged less than 18 years old or more than 59 years during the interview, (2) working in Muang District, Chiang Rai for less than six months, and/or (3) those who are unwilling to participate.

3.7 Measurement Tools

Questionnaires included face-to-face interviews that attempted to explicate baseline information regarding patient socio-demographic characteristics, work history, accessibility to health care services, and perception as it relates to the Health Belief Model as well as assess their respective associations with HRQoL. This was accomplished by creating a questionnaire that included the Health Perceptions Questionnaire (HPQ), which was developed by the RAND Corporation and the World Health Organizations' WHOQOL-BREF. The Thesis Proposal Examination Committee of Chulalongkorn University approved the complete questionnaire used in this study. This questionnaire was translated into Burmese and Thai as the sample population was Burmese and the researchers were also proficient in Burmese. To ensure accuracy in translation, the Burmese version was translated back into Thai by another person and then compared to the original Thai version.

3.7.1 Independent Variables

Socio-demographic characteristics included: age, gender, ethnicity, marital status, educational attainment, Thai reading proficiency, Burmese reading proficiency, occupation, monthly household income, monthly household expenditure, and length of stay in Thailand.

Work history included: work permit, number of jobs in Thailand, length of current job, working hours per day, working days per week.

Accessibility to health services was divided into four factors: geographic access (distance to closest health facility, normal health facility visited, difficulty going to health facility, time taken to arrive at health facility, mode of transportation), functional access (opinion on hours of operation, waiting time, opinion on waiting time, crowdedness of health facility, length of appointment time, ease of obtaining prescription), financial access (method of payment, insurance utilization, opinion of medical fees, opinion of prescription drug prices), and cultural access (opinion on satisfaction of explanation given by medical professional, ease of communicating with staff, availability of documents in patient's native language, availability of translator, opinion of cultural sensitivity of medical professional).

Perception related to the Health Belief Model: perceived severity of illness and perceived susceptibility to illness.

3.7.2 Dependent Variables

Health related quality of life included: psychological health, physical health, environmental, and social health. In this study, health-related quality of life was measured using WHOQOL- BREF, which consists of four distinct domains as follows:

(1) Physical health: included activities of daily living, dependence on medical substances and medical aid, mobility, energy and fatigue, pain and discomfort, sleep and rest, and work capacity.

(2) Psychological health: included body image and appearance, negative and positive feelings, self-esteem, spiritual, religious, and personal beliefs, thinking, learning, memory, and concentration

(3) Social health: included personal relationships, social support, and sexual activity

(4) Environmental health: included financial resource, freedom, physical safety and security, health and social care, home environment, opportunity to acquire new information and skills, participation in and opportunity for creation, physical environment and transport.

3.8 Pre-testing

The questionnaire was pre-tested in a clinic in Samutsakhon District, Thailand, where local Myanmar migrants frequent when they are ill. The pre-test was conducted on 30 participants and then analyzed using Cronbach's alpha to test the reliability of the questionnaire. Research assistants were also utilized for this portion and were trained in the same manner as research assistants for the actual data collection.

3.9 Data collection

3.9.1 Researcher and Research Assistants Responsibilities

First, permission to conduct this study in both Chiang Rai Regional Hospital and at Pirom Clinic was obtained from both the hospital administrator and clinic coordinator, respectively through a letter issued by the Deputy Dean of the College of Public Health Sciences of Chulalongkorn University. Data was collected through face-to-face interview guided by the researcher and two research assistants, who are proficient in both Myanmar and Thai. The questionnaires that were administered had been translated into Burmese and Thai by a certified translation service.

Second, the researcher contacted hospital staff by utilizing the snowball affect with the help of a gatekeeper. From there, translators were contacted who were proficient in both Myanmar and Thai. In the four-hour period, the researcher thoroughly explained the components of the questionnaire and the techniques that the research assistants are expected to employ during the face-to-face interviews and research assistances were

made fully aware of the purpose of this study. Additionally, the researcher supervised the research assistants.

Third, when patients are systematically randomly sampled and chosen, the researcher or the research assistant approached them to explain the purpose of the study and the expected benefits, the confidentiality of information, and the format of the interview. Next, they explained cooperation is complete voluntary, that there is no compensation for partaking, and that they can withdraw from the study at any point in time without any negative consequences on their quality of care.

Next, the researcher or the research assistants screened patients to determine patient eligibility for participation. Questions were posed regarding age and length of residency and if the individual met the inclusion criteria, patients were asked if they would like to participate in the study. Lastly, before the interview began, respondents were asked to sign a consent form that acknowledged that they understood and willingly agreed to be part of this study.

Furthermore, all respondents were interviewed face-to-face. If any questions arose during the interview, research assistants were instructed to answer the respondent's question to the best of their ability; however, if a question arose that is beyond their scope of knowledge, then the research assistants were instructed to contact the researcher immediately to resolve any uncertainties and ensured that there was no confusion. In addition, if any issues arose due to certain sensitive items in the structured face-to-face interviews, then the researcher comforted the interviewee by providing suggestions and advice as well as by being a good listener and counselor. Each research assistant was

given a checklist of items that were to be completed based on the respondent's reply. The research assistant was responsible for checking off each item completed after each interview. In addition, each interview was assigned a number and a corresponding research assistant. In the event that there was missing data, the research assistant who conducted the interview was responsible for tracking down the same respondent down and obtaining the missing data whenever possible.

3.9.2 Patient Sampling Process

Patients were systematically randomly sampled based on hospital and clinic registration records, obtained from nurses at both locations after permission was granted by each health facility's administrator or coordinator. In each of the two locations, appointments of Myanmar migrant workers during the period of data collection were screened in advance to filter out those who were not between the ages of 18 and 59 years old. Given that the number of appointments at the hospital was higher than the clinic, patients were sampled proportional to size of the population at each health facility, respectively. Based on this proportion, at each location, the total number of appointments for Myanmar migrant workers on any given day was calculated by dividing by the number of patients that needed to be surveyed in total with the number of days reserved for data collection.

When patients were chosen, the researcher thoroughly explained the components of the questionnaire and the techniques that the research assistants are expected to employ during the face-to-face interviews and research assistances were made fully aware of the purpose of this study. Additionally, the researcher supervised the research

assistants. When patients are systematically randomly sampled and chosen, the researcher or the research assistant approached them to explain the purpose of the study and the expected benefits, the confidentiality of information, and the format of the interview. Next, they explained cooperation is complete voluntary, that there is no compensation for partaking, and that they can withdraw from the study at any point in time without any negative consequences on their quality of care.

3.10 Data Analysis

SPSS v. 17 was used for quantitative data analysis.

Descriptive statistics were used including: frequency, percentage, mean, and standard deviation were calculated for participant socio-demographic characteristics working history, accessibility to health care services, perception related to Health Belief Model, and health-related quality of life.

Inferential statistics were used including: chi-squared test to compare the mean between two different populations and to establish an association pertaining to the following factors: socio-demographic factors, work history, accessibility to health services, perception related to the Health Belief Model, and health-related quality of care, respectively. Each analysis was compared a statistically significant p-value of 0.05.

3.11 Scoring

The 26 questions of the WHOQOL- BREF, the scores ranged between 26 and 130 points. The QoL was then calculated by dividing the scores into three groups (WHO, 1996b):

QOL Domain	Low	Moderate	High
1. Physical Health	7-16	17-26	27-35
2. Psychological	6-14	15-22	23-30
3. Social relationships	3-7	8-11	12-15
4. Environment	8-18	19-29	30-40
5. Overall QoL & General Health	2-4	5-7	8-10
TOTAL SCORES	**26-60**	**61-85**	**86-130**

Figure 4 QoL Scoring Scale

Thus, the higher the overall score within each domain, the higher the overall health-related quality of life. For the purpose of this study, the low and moderate categories have been combined to make a “low/moderate” category.

In regards to HPQ, each of the 32 questions correlates to one of the following six domains: prior health, current health, health outlook, resistance/ and susceptibility to illness, health worry and concern, and sickness orientation. Scores for each domain were summed and compared with the total score possible for that particular subscale. The higher the score obtained for each subscale, the more positively the participant rates his or her health in that particular domain and then a total HPQ was then calculated (Ware, J. and others., 1978).

The variables included in this study, with the exception of Health-Related Quality of Life and perception related to Health Belief Model, are categorical data and thus do not require scoring. In addition, the scoring for WHOQOL-BREF as well as for HPQ was

analyzed independently; however, for the purposes of this questionnaire they will be considered simultaneously. As such, scores obtained for HRQoL were divided into low, medium, high categories as outlined in the WHOQOL-BREF scoring guide of the WHO and were compared by examining HPQ scores to assess whether a correlation existed between HRQoL and perceptions related to the Health Belief Model.

3.12 Ethical Considerations

Prior to conducting any research that involved human subjects, approval from the Ethical Review Committee of Chulalongkorn University was obtained to ensure that this study did not knowingly present any danger to participants nor did it violate any of their human rights.

Furthermore, before face-to-face interview questionnaire, the researcher and the research assistants were instructed to give clear and concise information regarding the purpose of the study. In addition, all potential participants were informed that participation was completely voluntary and they could withdraw from the study at any time, which would not have had any adverse effects on them or their subsequent care. To confirm that they understood and were willing to participant, they were asked to sign a consent form in acknowledgement.

The welfare and the safety of the participant were protected in this study. The information that the participant provides was highly confidential and was only used for the purpose of this study. In addition, the results from this study were presented on a

large-scale basis, thus, no one participant was be used as an example. Also, no identifying information was gathered, protecting the anonymity of the participant.

3.13 Limitations

First, this project focused on two different health care facilities in Muang District, Chiang Rai, which were selected due to its high Myanmar migrant population, and may be representative of the entire Myanmar migrant population in Chiang Rai. Furthermore, these two health care facilities were both located in Muang District, which has a higher density of health care facilities, which presupposed that the health conditions of those who with more limited access may differ. Third, as the research focused on those who came to seek medical attention, it suggested that they came with an existing compromised level of health, meaning that the results of this study may be slightly skewed.

Also, as the majority of patients were sampled from Chiang Rai Regional Hospital, it is more likely that they receive care there, which alters the data obtained regarding location of care. In addition, the target population was limited to adult Myanmar migrant workers, which means that the findings cannot be generalized for other age groups. The demographic group was restricted to those who could either speak Myanmar or Thai, which means that Myanmar migrants that spoke other dialects were excluded from the study. Individuals who could not communicate proficiently in Burmese or Thai were not allowed to participate, but those who did not meet the inclusion criteria, may also be the population that had an especially poor health related quality of life. In terms of study period, due to time constraints, the researcher could not

avoid seasonal variation and was not able to compare Myanmar workers in different cities and quality of care from various health care facilities.

3.14 Expected Benefits and Application

This study was expected to provide information regarding the socio-demographic factors, work history, accessibility to health services, perception related to the health belief model amongst adult Myanmar migrant workers in Muang District in Chiang Rai Province, Thailand and its association to their health-related quality of life. From the results obtained from this study, government and non-government sectors in Chiang Rai were expected to use this information in order to understand both the internal and external factors that adult Myanmar migrants face in receiving health care to mitigate these hindrances and improve their overall health-related quality of life. In the long run, once modifications are made to the health care system, Muang district can serve as an example for other districts to improve the health-related quality of life of all migrants.

CHAPTER IV
RESULTS

This study was undertaken in Muang District, Chiang Rai Province, Thailand between the dates of February 8th and February 20th, 2010. There were a total of 401 adult Myanmar Migrant workers who were interviewed at two different health care facilities, Chiang Rai Regional Hospital and Pirom Clinic, both located in Muang District, Chiang Rai Province, Thailand. Baseline data was obtained regarding participant socio-demographic characteristics, work history, accessibility to health care services, and perception related to the Health Belief Model. Furthermore, associations were analyzed between these factors and HRQoL to understand their influence among adult Myanmar migrant workers.

4.1. Quantitative results

The quantitative results were based on the socio-demographic characteristics, work history, accessibility to health care, and perception related to the Health Belief Model. Consequently, correlations between socio-demographic characteristics, work history, accessibility to health care, and perception related to the Health Belief Model and the health-related quality of life among adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand were made.

4.1.1 Socio-demographic characteristics of respondents

From the results, it was found that the majority of respondents were females (56.9%) between the ages of eighteen to twenty-eight years old and accounted for a total of 48.4% of the sample population. Approximately 55.9% of respondents were of the

Myanmar ethnicity and 64.1% of all respondents were married. Most respondents had never attended school (51.6%). Approximately 82% of participants were not able to read Thai and 53.9% while were not able to read Burmese.

The data demonstrated that 43.4% of respondents earn an income of between 2,000 to 3,999 baht and have monthly expenses of approximately the same amount (52.6%). Amongst the participants, most of them held jobs in industries such as domestic services (52.5%). Most of the participants in this study had resided in Thailand for over four years (46.6%).

Table 4.1: Socio-Demographic Characteristics of Respondents

Socio- demographic Characteristic	Frequency	Percentage
Age		
18-28	194	48.4
29-38	115	28.7
39-48	58	14.5
49-59	34	8.5
Gender		
Male	173	43.1
Female	228	56.9
Ethnicity		
Myanmar	224	55.9
Rakine	122	30.4
Other (Mon, Thai Yai)	55	13.7
Marital Status		
Married	257	64.1
Single	130	32.4
Other (Divorced, Widowed)	6	1.5

Education		
None	207	51.8
Basic	101	26.2
Middle	67	16.8
Higher	25	6.3
Thai Reading Ability		
None	329	82.3
Basic	40	10.0
Proficient	24	6.0
Fluent	7	1.7
Burmese Reading Ability		
None	216	53.9
Basic	76	19.0
Proficient	57	14.2
Fluent	52	13.0
Monthly Income (in Thai Baht)		
Less than 1,999	15	3.7
2,000-3,999	174	43.4
4,000-5,999	158	39.4
More than 6000	53	13.2
Monthly Expenses (in Thai Baht)		
Less than 1,999	91	22.7
2,000-3,999	230	57.4
4,000-5,999	73	18.2
More than 6,000	6	1.5
Occupation		
Domestic Services	156	52.5
Construction	110	37.0
Agriculture	80	26.9
Food services	55	18.5
Length of Stay		
6 months-2 years	67	16.7
2 years- 3 years	88	21.9
3 years- 4 years	58	14.5
More than 4 years	187	46.6

Variables		QOL	
Work Permit	Low/Mod	High	Fisher Exact
Yes	35	214	.100
No	18	65	

4.1.2 Work History

The data revealed that the majority of participant held work permits (70%), typically holding one job over the past six months (89%); however, having worked at the same job anywhere between one year to one and half years (30.7%). Respondents claimed that they worked approximately six to twelve hours per day (71.3%) seven days per week (59.1%).

Table 4.2 Work History of Respondents

Socio- Demographic Characteristics n=401		
Characteristic	Frequency	Percentage
Work Permit		
Yes	249	70
No	105	30
Number of jobs		
0-1	357	89.0
1-2	32	8.0
3+	11	3.0
Length of Work		
6 months-1 year	116	28.9
1 year- 1.5 years	123	30.7
1.5 years- 2 years	47	11.7
More than 2 years	115	28.7
Hours worked per day		
1-5 hours	13	3.3
6-12 hours	286	71.3
13-18 hours	87	21.7
More than 18 hours	15	3.7
Days worked per week		
1-2 days	5	1.2
3-4 days	32	8.0
5-6 days	127	31.7
7 days	237	59.1

4.1.3 Accessibility to health care

When focusing on accessibility to health care, 28.4% of respondents traveled between two to three kilometers to arrive at the health care center at which they received care typically traveling by motorcycle (50.8%). 57.6% of respondents claimed that the hours of operation at their preferred health care were convenient; however, a majority of them waited over thirty minutes before they were seen by a health care professional (42.4%). More than half claimed that they possess health care insurance (61.8%) and of those, 48.9% claimed that the government provided this social service. With regards to the price of care, 68.4% of participants believed that the cost of care was inexpensive; however, at the healthcare facilities, 41.6% claimed that was an inadequate number of translators available (42.3%) and a lack of forms available in the language that they spoke (41.6%).

Table 4.3: Accessibility to Health Care

Variable	Frequency	Percentage
Location		
Hospital	274	68.3
Community Health Center	50	12.5
Private Clinic	47	11.7
Drug Store	24	6.0
Other (Tumbol)	5	1.5
Distance		
Less than 2 kilometers	80	20.0
2-3 kilometers	114	28.4
3-5 kilometers	96	23.7
More than 5 kilometers	112	27.9
Transport		
Motorcycle	203	50.8
Walk	110	27.5
Bus	50	12.5
Other (Car, Bicycle)	37	9.0

Hours of Operation		
Very Convenient	45	11.3
Convenient	231	58.0
Inconvenient	97	24.4
Very inconvenient	25	6.3
Waiting		
Less than 10 minutes	61	15.3
10-20 minutes	67	16.8
20-30 minutes	101	25.3
More than 30 minutes	170	42.6
Health Insurance		
Yes	247	61.7
No	154	38.3
Health insurance Provided by		
Thai government	196	75.4
Employer	60	23.1
Others (Self)	4	1.5
Adequate amount of translators		
No	169	42.2
Yes	58	14.5
Don't Know if Available	58	14.5
None Available	115	28.8
Adequate amount of forms		
No	167	41.8
Yes	87	21.8
Don't Know if Available	99	24.7
Refused to answer	47	11.7

4.1.4 **Perception Related to the Health Belief Model**

Respondents were questioned about their perceptions related to the Health Belief Model utilizing the Health Perception Questionnaire (HPQ) as a measurement tool. From the results, it can be seen that most participants rate their health in a fairly positive manner. When examining the overall HPQ score, while considering all six domains that comprise this measurement tool, it could be seen that out of a possible score of 130, the average HPQ score of respondents was 106 as shown below.

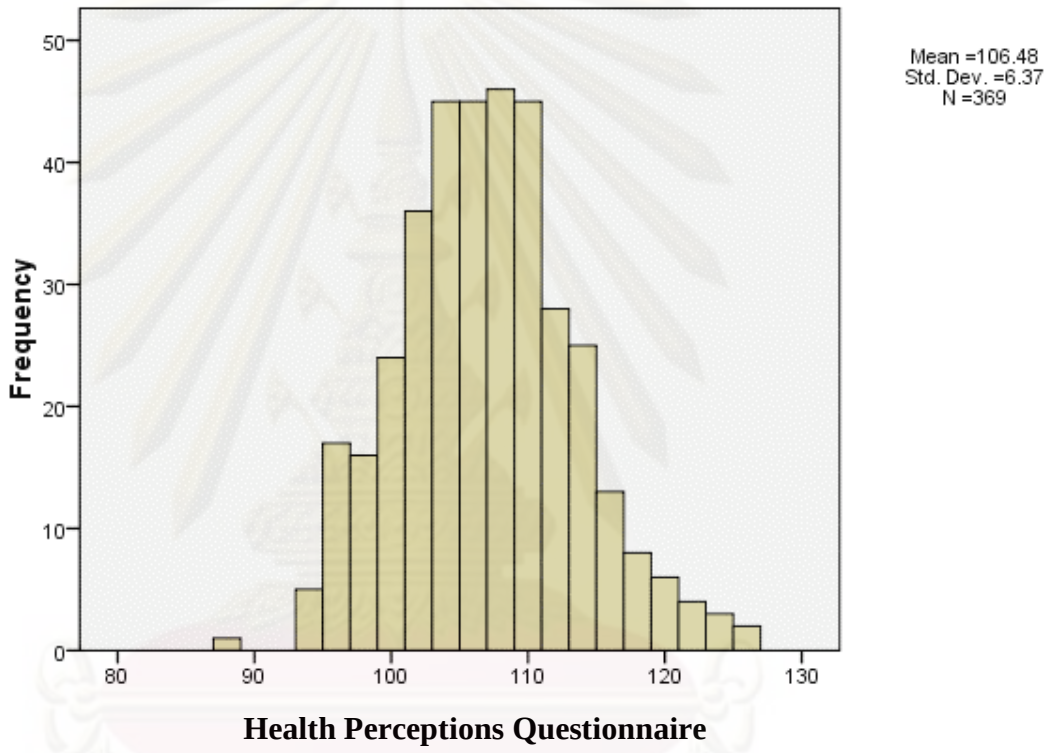

Figure 5 Health Perception Questionnaire Scores

According to the data, health care provider informed patients that they were in good current health (45.4%) and the majority of respondents tried to prevent sickness from interfering in their daily lives (53.6%) and believed that for the most part that they themselves were in relatively good health (40.6%). When it came to having poor health in the future, most people answered “mostly false” or “don’t know”, 33.7% and 29.1%,

respectively. Almost one-half of respondents answered that they worried about their health (42.9%), but that they believed that other people became ill more frequently (47.7%). Over a third of participants said that they did not despise visiting a health care professional to receive services.

Practically half of respondents replied that they currently felt ill (48.6%), but believed that in the future, their health will be better than others. On the other hand, 228 of the subjects said that they had never felt so sick to the point of death. Almost 40% of respondents claimed that they worried about their health more than other people and the largest group of participants mentioned that they tried to carry on as usual regardless of illness (64.4%). Although 194 of the people believed that their body was mostly able to resist illness, a majority admitted that getting sick periodically was a normal part of life (42.2%). When examining respondent health in comparison to the health of others, participants believed that for the most part, their health would not decline in the future (43.1%).

An equal amount of respondents chose “definitely true” or “mostly true” in response to the statement declaring that they had never been ill for a long period of time (38.6% and 40%, respectively). In response to the question that asked whether others were more concerned about their health in comparison to the participant, the respondents believed this to be mostly untrue. When ill, a little more than less of the respondents stated that they mostly keep to themselves (48.9%).

When examining current health, over half said that, rated their health positively and expected to live healthy lives (52% and 48.3%, respectively). 187 participants stated

that their health was a concern to their lives. Furthermore, the majority claimed that getting sick was a normal part of life (40.6%) and were feeling somewhat badly (49.4%).

Almost third of the participants did not mind seeing a doctor (29.1%) while more than a third have said that they definitely had never been ill for a long period of time (38.3%). 51.6% of respondents believed that they were not easily susceptible to illnesses.

In addition, 182 participants answered “definitely false” when asked if doctors said that they were in poor health and practically two-thirds of respondents said that when they are feeling sick, they try to fight it (62%). The largest group of participants believed that they felt better now than they ever have before (39.9%). Finally, among the subjects, 189 said that they were “a little” concerned about their health in the past 3 months. Detailed results can be found in Appendix D.

4.1.5 Health- Related Quality of Life of Adult Myanmar Migrant Workers

When considering the quality of life among adult Myanmar migrant workers utilizing the WHOQOL-BREF, the responses of participants must be considered according to the six domains that comprise quality of life and then later calculated to obtain the overall quality of life.

Approximately 159 of the participants considered their quality of life to be neither good nor bad (39.7%) and furthermore, almost one-half were satisfied with their health (41.1%). The largest group claimed that they did not let pain interfere with their lives (33.7%), 145 participants said that they do not need medicine to function on a daily basis, that they enjoyed life “very much” (48.1%) and that their lives were considerably meaningful. In addition, the majority stated that they were able to concentrate well

(44.9%).

In terms of environmental factors, participants felt both “very much” safe in their daily lives and believed that their environment was healthy (47.9% and 45.6%, respectively). A little more than half of participants stated that they had enough energy for everyday life (52.6%), and were very satisfied with their physical appearance (48.6%). They felt that they moderately enough money to meet their needs (33%) while 33.9% claimed to have enough information available to them. Conversely, a majority said that they had minimal time for leisure activities.

In regards to getting around, most considered that they ability to travel around was relatively well (55.9%). Furthermore, more than half (60.3%) were satisfied with the amount of sleep that they got each night and similarly, were satisfied with their own ability to perform daily living activities and their work capacity (52.6% and 62.8%, respectively). Among the participants, 224 said that they were satisfied with their overall ability.

Consequently, while more than half of participants were satisfied with their personal relationships (53.1%), 46.9% were satisfied with their sex lives and 53.9% with the support they received from their friends. In addition, the majority of people were satisfied with both their living conditions as well as their access to health care services (53.3% and 57.9% respectively). The largest group of respondents claimed that they were pleased with the mode of transportation that they currently are using (37.7%). Lastly, 37.7% of all participants said that they rarely had negative feelings in the past four weeks. Detailed responses can be found in Appendix E.

The results of this portion of the questionnaire were then analyzed according to the four respective domains that comprise the overall QoL score and then divided into three categories: (1) low (2) moderate and (3) high. It can be seen from Table 4.3, that when examining the domain of physical health, the majority of respondents demonstrated a high level of physical health as well as a high level of psychological and social health. On the other hand, in regards to environmental health and overall health, 67.6% and 56.1% of patients revealed only a moderate level of health. Lastly, in regards to overall QoL, when combining the scores from these six domains, 56% of participants have a moderate level of QoL , followed by high (43.8%) and low (0.2%).

Table 4.4: Number and percentages of respondents by level of health-related quality of life measured by WHOQOL-BREF (n=401)

Quality of life score	Number	Percentage
Physical Health Domain		
Low	1	.2
Moderate	175	43.6
High	209	52.1
Psychological Health Domain		
Low	2	0.05
Moderate	163	43.9
High	207	55.6
Environmental Health Domain		
Low	7	1.7
Moderate	271	67.6
High	87	21.7
Social Health Domain		
Low	14	0.04
Moderate	164	43.6
High	198	52.7
Overall Assessment and General Health Facet		
Low	25	6.2
Moderate	225	56.1
High	149	37.3
Level of Total QoL		
Low	2	0.2
Moderate	185	56.0
High	146	43.8

4.2 Relationship with HRQoL Score

In order to examine the relationship between various factors such as socio-demographic characteristics, work history, accessibility to health care services, and perceptions related to the Health Belief Model (HBM), chi-squared tests was utilized.

4.2.1 Relationship between Socio-demographic characteristics and HRQoL Score

In this study, the relationship between health-related quality and age groups, ethnicity, marital status, educational attainment, Thai reading ability, Burmese reading ability, income, expenses, length of stay in Thailand was analyzed against participants' HRQoL score.

The results, which can be found in Table 4.4, demonstrate that when looking at age, that there were no statistically significant relationships between age and health-related quality of life. In addition, analysis showed that when examining ethnicity, the relationship between these two variables was not statistically significant either the same can be said in assessing the relationship between marital status, education, Thai reading ability, and Burmese reading ability, Thai reading ability, income, expenses, length of stay in Thailand as the results did not demonstrate any statistically significant relationship with HRQoL.

Table 4.5: Relationship between health-related quality of life score and respondents' characteristics analyzed by chi-squared test (n=401)

Variables	QOL				
Age (Years)	Low/ Mod n(%)	High n(%)	Chi-squared	df	p-value
18-28	23(14.7%)	133(85.3%)	1.387	3	.771
29-38	14(14.7%)	83(85.6%)			
39-48	9(19.1%)	38(80.9%)			
49-59	7(21.2%)	26(78.8%)			
Ethnicity					
Rakine	17(16%)	89(84%)	1.492	2	.474
Myanmar	26(14.4%)	155(85.6%)			
Other	10(21.7%)	36(78l3%)			
Marital Status				2	.698
Single	15(13.8%)	94(86.2%)	.719		
Married	37(17.3%)	177(82.7%)			
Divorced	1(20%)	4(80%)			
Education					
None	33(19.4%)	139(80.6%)	5.427	3	.143
Basic	12(13.8%)	75(86.2%)			
Middle	4(7.1%)	52(92.9%)			
Higher	4(21.1%)	15(78.9%)			
Burmese Reading					
None	32(17.9%)	147(82.1%)	5.365	3	.147
Basic	7(11.5%)	54(88.5%)			
Proficient	11(22%)	39(78%)			
Fluent	3(7%)	40(93%)			
Income					
0-1999	2(15.4%)	11(84.6%)	2.590	3	.459
2000-3999	28(19.3%)	117(80.7%)			
4000-5999	16(12.2%)	115(87.8%)			
≥ 6000	7(16.3%)	36(83.7%)			
Expenses					
0-1999	14(17.9%)	64(82.1%)	5.816	3	.121
2000-3999	33(17.1%)	160(82.9%)			
4000-5999	4(7.1%)	52(92.9%)			
≥ 6000	2(40%)	3(60%)			
Length of stay					
6 months- 2 year	5(8.6%)	53(91.4%)	2.988	3	.394
2 years- 3 years	13(18.6%)	57(81.4%)			
3 years- 4 years	8(18.6%)	35(81.4%)			
≥ 4 years	27(16.8%)	134(83.2%)			

Table 4.5: (Continued) Relationship between health-related quality of life score and respondents' characteristics analyzed by chi-squared test (n=401)

Variable	QOL				
Occupation					
Agriculture	13(19.1%)	55(80.9%)	5.147	3	.161
Construction	15(17.0%)	73(83%)			
Domestic Services	14(10.8%)	116(89.2%)			
Food Services	11 (23.4%)	36 (76.6%)			
Thai Reading Ability	Low/Mod	High	Fisher's Exact		
None	4	226	.241		
Some	6	54			

When analyzing whether the relationship between gender and level of QoL demonstrated statistical significance. The Fisher- Exact test demonstrated that the level of QoL between males and females did not show a relationship of statistical significance as shown in Table 4.5.

Table 4.6: Relationship between health-related quality of life score and respondents' socio-demographic characteristics analyzed by chi-squared test

Variables	QOL		
Gender	Low/ Moderate	High	Fisher Exact
Male	71	76	.100
Female	116	69	

4.2.2 Work History and HRQoL

The chi-squared test was also utilized to assess the correlation between respondent work history and the health-related quality of life. From Table 4.6, it can be seen that regardless of the number of jobs held in Thailand, the length of time spent

working at their current job, number of hours spent working per day, and number of days working per week, they did not demonstrate a statistically significant relationship with HRQoL.

Table 4.7: Relationship between work history and health- related quality of life analyzed by chi-squared test

Variables	QOL				
Number of Jobs	Low/Mod	High	Fisher Exact		
1	45	253	.228		
More than 1	8	27			
Variables	Low/Mod (n%)	High(n%)	Chi-squared	df	p-value
Length of work					
6 months-1 year	15(16.3%)	77(83.7%)	2.272	3	.518
1 year- 2 years	13(12.7%)	89(87.3%)			
2 years- 3 years	9(23.1%)	30(76.9%)			
4+ years	16(16.0%)	84 (84%)			
Hours per day					
1-10 hours	43(17.6%)	202(82.4%)	2.074	2	.355
11-15 hours	9(12.2%)	65(87.8%)			
15+ hours	1(7.1%)	13(92.9%)			
Days per week	Low/Mod	High	Fisher Exact		
1-6	25	113	.336		
7	28	169			

Furthermore, when examining the relationship between the possession of a work permit and QoL by utilizing the Fisher Exact test, it was revealed that the relationship between these two variables did not demonstrate statistical significance as shown in Table 4.8.

Table 4.8: Relationship between work history and health-related quality of life analyzed by chi-squared test

Variables	QOL		
Work Permit	Low/Mod	High	Fisher Exact
Yes	35	214	.100
No	18	65	

4.2.3 Accessibility to Health Care Services and HRQoL

The relationship between accessibility to health care services and HRQoL was also analyzed as part of this study. By examining the distance to a health care facility, mode of transportation, convenience in terms of the hours of operation, length of time spent waiting to see a health care professional, the adequacy in terms of the number of translators and forms in different languages and dialects, the relationship between the aforementioned factors and HRQoL was assessed.

It can be seen in Table 4.8, that the association between the location where respondents received care, the distance to a health center, waiting time, the availability of translators, and the availability of forms in different languages with HRQoL, did not demonstrate statistical significance.

Table 4.9: Relationship between accessibility to health care services and HRQoL

Variables	QOL				
Where do you get care?	Low/ Mod	High	Chi-		
Hospital	n(%)	n(%)	squared	df	p-value
Private Clinic	3(14.3%)	18(85.7%)			
CHC	7(16.7%)	35(83.3%)	1.195	4	.879
Drug Store	5(13.9%)	31(86.1%)			
Other (Tumbol)	38(16.6%)	191(83.4%)			
Distance to care					
< 2 kilometers	9(14.1%)	55(85.9%)	3.644	3	.303
2-3 kilometers	21(21.9%)	75(78.1%)			
4-5 kilometers	10(12.7%)	69(87.3%)			
>5 kilometers	13(13.8%)	81(86.2%)			
Transport					
Walk	12(13.2%)	79(86.8%)	1.504	3	.681
Motorcycle	28(16.7%)	140(83.3%)			
Bus	9(19.6%)	37(80.4%)			
Other	3(11.1%)	24(88.9%)			
Hours of operation					
Very convenient	5(13.5%)	32(86.5%)	4.664	3	.198
Convenient	26(13.1%)	172(86.9%)			
Inconvenient	18(23.1%)	60(76.9%)			
Very inconvenient	2(11.1%)	16(88.9%)			
Wait time					
10 minutes	4(1.2%)	43(91.5%)	2.441	3	.486
10-20 minutes	9(15.5%)	49(84.5%)			
20-30 minutes	13(15.9%)	69(84.1%)			
30+ minutes	26(18.1%)	118(81.9%)			
Translators					
Yes	5(11.9%)	37(88.1%)	4.918	3	.178
No	27(18.8%)	117(81.3%)			
Don’t know	3(6.3%)	45(93.8%)			
Refused to reply	17(17.3%)	81(82.7%)			
Form availability					
Yes	12(17.4%)	57(82.6%)	1.642	3	.650
No	17(12.7%)	117(87.3%)			
Don’t know	15(17%)	73(83%)			
None available	8(19.5%)	33(80.5%)			

Furthermore, when assessing the relationship between health- related quality of life and the accessibility to health care, specifically examining the possession of health insurance and the cost of care, it was seen that when compared to health-related quality of life, neither of these variables demonstrated statistical significance

Table 4.10: Relationship between health-related quality of life score and accessibility to health care analyzed by chi- squared

Variables	QOL		
Health Insurance	Low/ Mod	High	Fisher Exact
Yes	31	181	.351
No	22	97	
Price Care			
Yes	20	84	.334
No	33	194	

4.2.4 Perception related to Health Behavior Model and Health- Related Quality of Life

Part of this study sought to analyze the relationship between participant perceptions related to the Health Belief Model and their subsequent HRQoL. Questions were centered on the dimensions of prior health, current health, health outlook, resistance and susceptibility to illness, health worry and concern, and sickness orientation to assess how respondents perceived their health within these various domains.

From the findings, it can be said that there was a highly statistically significant relationship between the participant perceptions that doctors stated that they are in excellent health and their relative QoL. Also, there appeared to be statistically significant relationship between participants who believed that they were less susceptible to illness

in comparison to others and QoL.

In addition, when examining current health of participants and whether they felt better now than they have in the past, the findings revealed a highly statistically significant association between the variables within this category and a participant's level of QoL. Furthermore, the relationship between whether respondents believe that they were somewhat ill and their respective level of QoL was shown to be highly statistically significant ($p<0.01$), which can be seen in Appendix F.

When assessing whether participants perceived themselves to be as healthy as others, if they had been feeling badly lately, and if doctors said that they were in poor health, it was revealed that there was a statistically significant relationship with HRQoL ($p<0.01$). Similarly, upon examining whether participants kept to themselves when they were sick, if they perceived their own health to be excellent expected good health in the future, if they believed that they felt as good now as they ever have, and level of concern their health was over the past three months, all five of these variables when compared with QoL, demonstrated statistical significance ($p<0.05$). The detailed results from this portion of the study can be found in Appendix F.

4.2.5 Components of HRQoL

As a variable, HRQoL can be divided into four categories: physical health, psychological health, social relationships, and environmental health. In this study, these four domains were compared again each of the independent variables using the chi-squared test to examine whether a statistically significant relationship existed. According to the results, it can be seen that overall, the independent variables are not correlated with

the different domains of HRQoL on a statistically significant level; however, by examining each of the independent variables and separately comparing each of the four domain that comprises HRQoL, the results revealed that there is an association between age and physical health. In addition, the data showed that there was a relationship between location of the health care center and physical health ($p<0.05$). Further details can be found in Appendix G.

CHAPTER V
CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

5.1 Conclusion

This study was undertaken with the hopes of obtaining baseline data for the health-related quality of life for adult Myanmar migrant workers who were currently working in Muang District, Chiang Rai Province, Thailand and to examine the factors that influenced HRQoL. The results demonstrated that the majority of the participants have a moderate level of health-related quality of life (56%), followed by a high level quality of life (43.8%), and finally a low quality of life (0.02%).

In addition, data revealed that respondents were typically females between the ages of 18-28 years old, who were of the Myanmar ethnicity and lacked any sort of formal education. As such, they are unable to read Thai and Burmese and typically work within the domestic services industry. In regards to work history, results demonstrated that the majority of participants possessed work permits and had held the same job from between one to one and a half years. Furthermore, they typically worked from six to twelve hours per day, seven days a week. When considering accessibility to health care, patients claimed that they traveled between two to three kilometers to arrive at their preferred health care facility and found that although the hours of operation to be convenient, most respondents had to wait more than thirty minutes before being seen by a health care professional.

In addition, they claimed that there was an inadequate amount of translators and forms available in different languages. Also, when examining perceptions related to the

Health Belief Model, the data revealed that participants viewed their health rather positively.

Furthermore, when the data was analyzed using chi-squared test, it was shown that factors related to socio-demographic characteristics, work history, and accessibility to health care services did not demonstrate an association with HRQoL on a statistically significant level. On the other hand, the factor that highly influenced HRQoL, demonstrating statistical significance was most notably, perceptions about current health. In addition, when each independent variable was compared with the domains that comprised HRQoL, it was shown that age and location were associated with physical health on a statistical significant level ($p<0.05$).

Overall findings suggested that the health-related quality of life of migrants in Chiang Rai were typically higher than those living in regions where previous studies have been conducted such as Samutsakhon Province and Phangnga Province (Thein, 2008; Ti, 2007); however improvements still must be made in order to control the spread of communicable diseases, increase the information available to migrants in a culturally sensitive manner, and create policy that facilitates migrants obtaining health insurance in order to improve the overall health-related quality of life among adult Myanmar migrants.

5.2 Discussion

This research was a cross-sectional study examining the relationship between factors such as socio-demography, work history, accessibility to health care services, and

perceptions related to the Health Belief Model as it related the health-related quality of life amongst adult Myanmar migrant workers residing in Muang District, Chiang Rai Province, Thailand by utilizing the standard WHOQOL-BREF alongside HPQ as a tools of measurement.

5.2.1 Socio- Demographic characteristics and HRQoL

This study demonstrated that the mean age range of the participants is 18-28, which corresponded with the results of a 2007 study stated that nearly two-thirds of migrants who are residing in Thailand are less than 30 years of age (Bryant & Rukumnuaykit, 2007). With a p-value of 0.771, it demonstrated that there was no statistically significant association between quality of life and age. A study that was completed in 2008, assessed the health-related quality of life of Myanmar migrants in Samutsakhon Province, also revealed that there was no correlation between these two variables (Thein, 2008).

In this study, the percentage of male and females was 43.1% to 58.9%, respectively, which contradicted a study conducted in Ranong Province, Thailand that sought to examine the health seeking characteristics among Myanmar migrants. In this study, over half of the population was male; however, this disaccord could be attributed to the dissimilar gender distribution between the North and the South of Thailand. Whereas in the south, the majority of the jobs are centered on fishing, jobs that required more physical strength in Northern Thailand, there is a diversified job market with jobs that more women can do such as working in agriculture or domestic services (Aung, 2009). When comparing the relationship between gender and HRQoL, although females

had a higher-level quality of life, there was no statistically significant relationship between these two variables ($p>0.05$). In fact, this is consistent with research that was conducted, examining the acculturation process of Vietnamese migrants in Finland. Findings demonstrated that there was essentially no difference on overall quality of life between males and females (Liebkind, 1996; Jehodo, 2001).

In terms of ethnicity, this study demonstrated that 55.9% of the study population was Myanmar, while 30.4% were Rakine. A study that was completed in Chiang Rai Province that assessed the behavioral factors related to the contraction of malaria among Myanmar migrants demonstrated a similar demographic breakdown where the majority of participants were Myanmar (Chaveepojnkamjorn and Pichainarong, 2005). Although in this study, the association between ethnicity and HRQoL did not demonstrate statistical significance, in another study conducted in Singapore in 2005 comparing ethnic differences in the quality of life among adolescents of various ethnicities living in the region, the results demonstrated with statistical significance that there is in fact a difference in terms of QoL depending on ethnicity even when adjusting for socio-economic differences (Ng et al, 2005); however, this can be attributed to a highly diverse ethnic demography in Singapore.

Among the respondents, 32.4% were single while 64.1% were married. In a study conducted by Bryant & Rukumnuaykit, they stated that married people account for the majority amongst migrant workers in Thailand. The relationship between marital status and HRQoL did not show statistical significance, which was inconsistent with a study that was conducted in Samutsakhon Province, wherein married respondents demonstrated

a higher QoL at a statistically significant level (Thein, 2008).

In regards to education, results concluded that over half (51.6%) had never attended school before, followed by 25.2% who have received a basic education. There is no statistically significant relationship between education and HRQoL ($p>0.05$). The majority of respondents could not read Thai or Burmese (82% and 53.9%, respectively), which is similar to a study that focused on the health related quality of life of Myanmar migrant workers in Phangnga Province utilizing the Medical Outcomes 12- item Short Form Health Survey (SF-12) as a measurement tool. This research stated that there is no relationship between quality of life and Burmese language skills (Ti, 2007). In terms of the reading ability there was no statistically significant relationship between Burmese reading ability or Thai reading ability and HRQoL, respectively.

Furthermore, while the income of the majority of respondents was between 2,000-3,999 baht, the relationship between income and HRQoL was not statistically significant ($p>0.05$). Although this contradicts the results from a study undertaken by Zhang in 2009, stating that those who have a higher income have the financial means to meet their needs (Zhang and others., 2009), it is in accordance with an aforementioned study that was conducted in 2007 in Phangnga province, where results also did not demonstrate a statistically significant relationship between income and QoL (Ti, 2007).

The results demonstrated that the majority of the respondents worked in trades such as domestic services, but it did not show that HRQoL varied dramatically depending on occupation on a statistically significant level. This is consistent with the International Organization for Migration that claims that in 2004, the majority of Myanmar migrants

worked in trades other than agriculture, construction, and in private households (IOM, 2005).

Most of the respondents have lived in Thailand between two to three years, which when examined, did not show a statistically significant relationship between length of stay in Thailand and their level of HRQoL; however, research has shown that the longer a person resides in Thailand, the more well-adjusted they tend to be and thus, the higher quality of life they will possess (IOM, 2005).

5.2.2 Work History and HRQoL

When examining the work history of participants to assess how it relates to health-related quality of life, variables such as number of jobs held in Thailand, the length of time spent working at current jobs, the number of hours worked on a daily basis, the number of days worked per week, as well as the possession of a work permit were considered

Amongst the 401 respondents, nearly 300 have worked only one job in the past six months. In a study that was conducted in Malaysia that examined the relationship between psychosocial work factors and the health-related quality of life in male automotive workers found that job insecurity was associated with all domains of HRQoL (Edimansyah, B. et al, 2007). As the participants of the current study have only held one job over the past six months and a majority having worked at their current job between one to two years demonstrates a certain level of job security. Undeniably, the study that took place in Malaysia was only conducted on males and cannot be generalized towards females.

The results reveal that the majority of participants worked between 6 to 10 hours per day; however, these findings did not demonstrate a statistically significant relationship with HRQoL, which was in accordance with a study that was conducted in China, examining the health status and the movement of migrants from rural to urban cities in China that suggested that migrants typically worked 10 hours per day (Li and others., 2006). On the other hand, in the current research, the majority of participants worked seven days per week, whereas Li's findings demonstrated that the migrants typically working five days per week, regardless of the type of occupation they were in.

More than half the respondents claimed to have a work permit; however, according to the results, the possession of a work permit did not affect HRQoL in a statistically significant manner. This contradicts a study that was conducted in Ranong Province that examined the health behaviors of migrants, revealing that the majority of the migrants in that study were unregistered (Aung, T. et al, 2009). On the other hand, when examining statistical data, it was in accordance with a study completed by the IOM, which estimated that there were between 1.2 and 2.3 million unregistered workers residing in Thailand in 2004 (IOM, 2005).

5.2.3 Accessibility to Care and HRQoL

Accessibility to health care is comprised of various factors that included the location where participants received care, the distance to their health care center, mode of transportation, the level of convenience of the hours of operations, wait time, adequacy in the number of translators, and the adequacy of forms in various languages.

In terms of transportation within Thailand, 50.6% relied on motorcycles as their

main form of transportation. On the other hand, there was no statistically significant relationship between mode of transportation and HRQoL ($p>0.05$), demonstrating that the usage of the various forms of transportation is unrelated to HRQoL on a statistically significant level.

Approximately 25% of respondents had to travel between two to three kilometers to reach the health care center at which they typically received care. The results revealed that the relationship between distance and HRQoL was not statistically significant ($p>0.05$). According to a report by UNESCO, the far distance that individuals must travel to receive care can create a hindrance in the accessibility of health care services, especially for migrants who work exceeding only hours (Khruemanee, 2007).

In terms of examining how convenient the hours of operation were in comparison to its effects on HRQoL, it can be seen that there were no statistically significant associations, contracting a study conducted by the National Center for Health Statistics (Estrada, A. et al, 1990), wherein researchers examined the health care utilization barriers that Mexican Americans in the United States faced. The results reveal that long wait times was the second most common barrier to health care utilization, a barrier that almost 60% of respondents encountered. In addition, when examining the relationship between access to medical care and health-related quality of life, a research project conducted by the University of California, Los Angeles School of Medicine, specifically studying those who were low- income afflicted with human immunodeficiency virus, determined that with poorer access to care, which included longer wait time, correlated with a lower health- related quality of life (Cunningham and others. 1995). It must be taken into

consideration that the two health care facilities in this study were open outside of normal government hours. Thus, it was conceivable that between Chiang Rai Regional Hospital and Pirom Clinic, the hours of operation were very convenient for participants.

The majority of respondents claimed that the price care was inexpensive, which must be considered alongside the possession of health insurance, which over half the participants possessed. They claimed that their health insurance was provided by the Thai government, implying that they paid thirty baht per visit contradicted the results found in a study conducted in Ranong Province wherein participants stated that consultation fees were expensive (Aung, 2009); however, the majority of those participants did not possess health insurance, either provided by the government or otherwise. Furthermore, the current research was in agreement with another study that examined the association between socioeconomic status, health insurance coverage, and health-related quality of life in men with prostate cancer. Researchers at the University of Washington School of Medicine suggested that there was no statistically significant relationship between health insurance and HRQoL at baseline, and instead, only demonstrated significant over time (Penson, 2001).

Consequently, focusing on the adequacy of translators and forms of various dialects and languages spoken, it can be seen that for the most part, there was an insufficient number of translators and forms in varied languages, which did not demonstrate a statistically significant relationship with HRQoL. Another research project that focused on the relationship between language proficiency and morbidity from asthma among adults living in the inner cities, showed with statistical significance ($p<0.05$) that

there was an association between language proficiency and lower quality of life scores (Wivnivesky, 2009). It can be suggested that patients who cannot read Thai will typically come with someone who can or will find somebody at the health care facility who can speak the same dialect.

5.2.4 Health Perception Questionnaire and HRQoL

In the current research, it was seen that certain variables, notably questions related to current health and subsequently, resistance to illness, whether participants kept to themselves while sick, expected good health, and had a prolonged illness, all demonstrated statistical significance in relation to HRQoL ($p<0.05$).

Although studies that assessed the relationship between health perception and HRQoL had previously been undertaken, such a study using HPQ as a tool of measurement had not. As HPQ and WHOQOL-BREF have not been used in conjunction, studies that have used HPQ itself have demonstrated that HPQ is in fact a valid tool with the ability to predict future health behavior. For instance, in a study that was undertaken that utilized HPQ to predict mothers' adherence to a diet for their obese children. The findings demonstrated that HBM was indeed a helpful tool in explaining as well as predicting whether a mother will stick to the diet regimen as well as go to follow-up appointments with a health care professional (Becker, M. et al, 1977).

In a case control study that compared the quality of life in women with post-menopausal osteoporosis and those afflicted with other diseases, researchers saw that women who were affected by osteoporosis perceived it to be a severe disease with undesirable effects towards their well-being (Bianchi and others., 2005). This perception

demonstrated negative effects on their health-related quality of life with 41% of the women reporting a reduced quality of life. Although this study was conducted on women who already had a specific illness, it can be seen that the negative perception of health was suggested to be linked to a diminished quality of life.

5.2.5 Health-related Quality of Life of adult Myanmar migrant workers

Among the 401 adult Myanmar migrant workers in Muang District, Chiang Rai Province, Thailand that participated in this study, 56% had a moderate quality of life, followed by 43.8% with a high quality of life, and finally, 0.2% with a low quality of life. This is in accordance with other studies that have been conducted in Thailand. The first one is a similar study conducted in Samutsakhon Province, Thailand that also utilized WHOQOL-BREF to assess the accessibility and health-related quality of life among adult Myanmar workers demonstrated that 94% of respondents had a moderate level of health-related quality of life (Thein, 2008). In addition, anther study was conducted in Phangnga Province, Thailand that evaluated the health-related quality of life among Myanmar migrant workers using Short Form-12 and revealed that one-third of migrants believed that they were in good health (Ti, 2007).

5.3 Recommendations

In order to improve the health- related quality of life of adult Myanmar migrants, the following recommendations are offered:

(1) Hospitals and health clinics should provide an adequate number of forms in other dialects and translators in order to facilitate care given to foreign patients. By having forms and information in the language that the population uses, this will improve the communication between both parties and will better ensure that patients understand the diagnosis as well as the health care provider's recommendations thereby increasing access to care.

(2) Waiting time from registration until the respondents meet the health care provider is quite long and should be decreased as many people spend the majority of their time waiting to be seen by a medical professional. By limiting wait time, this will increase the number of patients that can be seen on any given day as well as reduce the direct cost and indirect costs incurred by patients.

(3) Although WHOQOL-BREF has been utilized in a number of populations to assess the health-related quality of life, for more conservative-minded populations, the wording should be changed, especially when referring to the satisfaction of one's sex life.

Further longitudinal studies that assess the health-related quality of life are necessary to obtain an accurate understanding of the trend in regards to quality of life among migrants and to evaluate the effects that socio-demographic characteristics, work history, accessibility to health care services, and perception related to the Health Belief Model bear on health-related quality of life. Consequently, the appropriate changes can be made to ensure that the health of migrants and Thais alike is protected and continues to be a priority, guaranteeing health as a universal right and promoting a positive quality of life for all.

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APPENDICES

APPENDIX A
Participant Information Sheet

Title of research project: "FACTORS RELATED TO HEALTH-RELATED QUALITY OF LIFE AMONG ADULT MYANMAR MIGRANT WORKERS AT CHIANG RAI REGIONAL HOSPITAL AND PIROM CLINIC IN MUANG DISTRICT, CHIANG RAI PROVINCE, THAILAND: A CROSS-SECTIONAL STUDY"

Principle researcher's name	Malulie Tongprasert
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1. You are being invited to take part in a research project. Before you decide to participate it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and do not hesitate to ask if anything is unclear or if you would like more information.
2. This research project involves interviewing participants about different factors that include basic information, working history, health care accessibility, and personal health belief in order to see what the quality of life in terms of health is.
3. Objective (s) of the project: To see how different aspects of life such as basic socio-demographic factors, working history, health care accessibility, and personal health belief affect the health-related quality of life for Myanmar migrants in Muang District, Chiang Rai Province, Thailand.

4. Participants who are invited to take part in the study are Myanmar migrants between the ages of 18 and 59, have been living in Thailand for at least 6 months, are able to speak and/or read either Myanmar or Thai, and are willing to participate in this study. The people that may decide to not participate in this study include migrants below the age of 18 or above the age of 59, who have lived in Thailand for less than 6 months, are not able to speak and/or read Myanmar or Thai, and do not want to participate in the study. This study requires a minimum of 430 participants. You have been invited to be a part of this study because you are an adult Myanmar migrant worker who have been visiting this health facility as OPD patients, are randomly selected and have the necessary qualification(s) that this study requires as aforementioned.
5. The researcher or her assistants will explain to you what the purpose of the questionnaire is and will ask you the questions from it in this health care facility and will answer any questions about the questionnaire that you may have. This will take about 30-45 minutes to complete.
6. All information about the questionnaire will be given before the interview begins so you may decide if you would like to participate.
   6.1 The researcher or the research assistant will provide you with all the necessary information by verbally explaining the purpose of this study and to ask for help in taking part of the study.
   6.2 The questionnaire is available in Myanmar and will be professionally translated to Thai by a professional, but the questionnaire will asked

verbally in Thai or in Burmese depending on the ease of the participant. If you are unable to read or do not speak either of these languages, then it will not be possible for you to participate, but we thank you for your interest.

6.3 Furthermore, all information obtained is confidential and will not be shared. It will not be used against you in any way and will only be used for the purposes of this study and no identifying information will be collected. By signing the consent form, it means that you are willing to participate in this study and that you fit the criteria stated. You are free to withdraw from the study at any point in time, without giving a reason while receiving the same health care services.

7. If once approached by the research assistant and it is determined that you do not meet the inclusion criteria, which includes being between the ages of 18 and 59 years old, have been living in Muang district of Chiang Rai for at least six months, and are willing to be a participant in this study, then unfortunately, your responses cannot be included in this study as it may alter the results of the study. If you need advice, please do not hesitate to contact that researcher who will answer any questions or concerns you have.
8. Not applicable as participants will only be seen once.
9. Not applicable as participants will only be seen once.
10. There is no associated risk for the patient in this study in terms of giving out personal information as this study is not concerned with the legal context

within which you are residing in Chiang Rai. All information will be kept confidential and not reported. The benefit of the project is that it will give a better picture of the quality of life of migrants in terms of health and the problems that Myanmar migrants face when it comes to health. Also, it will give the hospital and the government ideas about how to improve this.

11. Participation in this study is voluntary and you have the right to deny and/or withdraw from the study at any time they want and without giving any reason. This will not have bad impact on you and you will still receive the same services as normal.
12. Not applicable as participants will only be seen once
13. Any information that is directly related to you will be kept confidential and will not be told to anyone. The information in the results will be reported as a total picture and no one participant will be used as an example nor will any identifying information about you be used.
14. Participation in this study is completely voluntary and there is no compensation for completing the questionnaire. All cooperation is highly appreciated.
15. If the researcher does not follow or treat the participant according to all these items, participants can report the incidence to the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (ECCU). Institute Building 2, 4th Floor, Soi

Chulalongkorn 62, Phyathai Rd., Bangkok 10330, Thailand, Tel: 0-2218-8147

Fax: 0-2218-8147 E-mail: eccu@chula.ac.th.

APPENDIX B
Informed Consent Form

I who have signed here below agree to participate in this research project

Title "FACTORS RELATED TO HEALTH-RELATED QUALITY OF LIFE AMONG ADULT MYANMAR MIGRANT WORKERS AT CHIANG RAI REGIONAL HOSPITAL AND PIROM CLINIC IN MUANG DISTRICT, CHIANG RAI PROVINCE, THAILAND: A CROSS-SECTIONAL STUDY"

Principle researcher's name Malulie Tongprasert

Contact address 7/1 Soi Sri Bumpen Sathorn Toongmahamek Praram 4 Bangkok, Thailand 10120

Telephone 086-570-6415

I have been informed about rationale and objective(s) of the project, what I will be engaged with in details, risk/harm and benefit of this project. The researcher has explained to me and I **clearly understand with satisfaction.**

I willingly **agree** to participate in this project and consent the researcher to conduct a face-to-face interview once for approximately 30 minutes.

I have **the right** to withdraw from this research project at any time as I wish with no need to **give any reason**. This withdrawal **will not have any negative impact upon me (eg: still receive the usual services).**

Researcher has guaranteed that procedure(s) acted upon me would be exactly the same as indicated in the information. Any of my personal information will be **kept confidential.** Results of the study will be reported as total picture. Any of personal information which could be able to identify me will not appear in the report.

If I am not treated as indicated in the information sheet, I can report to the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (ECCU). Institute Building 2, 4 Floor, Soi Chulalongkorn 62, Phyathai Rd., Bangkok 10330, Thailand, Tel: 0-2218-8147 Fax: 0-2218-8147 E-mail: eccu@chula.ac.th,

I also have received a copy of information sheet and informed consent form

Sign ……..……
(Malulie Tongprasert)
Researcher

Sign ……..……
(……..……)
Participant

Sign ……..……
(……..……)
Witness

APPENDIX C

Structured interview on "FACTORS RELATED TO HEALTH-RELATED QUALITY OF LIFE AMONG ADULT MYANMAR MIGRANT WORKERS AT CHIANG RAI REGIONAL HOSPITAL AND PIROM CLINIC IN MUANG DISTRICT, CHIANG RAI PROVINCE, THAILAND: A CROSS-SECTIONAL STUDY"

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I. BASIC INFORMATION

Please mark (x) the answer that best suits you

1. Age		2. Gender	
3. Ethnicity	☐ Mon ☐ Rakine ☐ Myanmar ☐ Other _____		
4. Marital Status	☐ Single ☐ Married ☐ Divorced ☐ Widowed		
5. Educational Attainment	☐ No education ☐ Basic education (Grade 1-4) ☐ Middle education (Grade 5-8) ☐ Higer education (Grade 9 and above)		
6. Language Reading Proficiency	**Thai:** ☐ Fluent ☐ Proficient ☐ Basic knowledge ☐ None **Burmese:** ☐ Fluent ☐ Proficient ☐ Basic knowledge ☐ None **Other (Please specify):**_____ ☐ Fluent ☐ Proficient ☐ Basic knowledge ☐ None		
7. Monthly Household Income (in Thai baht)			
8. Monthly Household Expenditure (in Thai baht)			
9. What is your occupation?	☐ Agriculture ☐ Construction ☐ Other Please specify: _____		
10. What is your length of stay in Thailand?	_____ Years _____Months		
11. What is your main form of transportation?	☐ Car ☐ Bus ☐ Motorcycle ☐ Walking ☐ Other Please specify:_____		

II. WORKING HISTORY

12. Do you currently possess a work permit?	☐ Yes ☐ No
13. How many jobs have you held in Thailand in the past 6 months that have lasted for more than 1 month?	
14. How long have been working at your current job?	____ years _____ months
15. On average, in one day, how many hours do you work at your current job?	_____ hours
16. On average, in one week, how many days do you work?	_____ days

III. ACCESSIBILITY TO HEALTH CARE SERVICES AND HEALTH PERCEPTION QUESTIONNAIRE (HPQ)

17. When you or your family members get ill, where do you go to get care?	☐ Hospital ☐ Private Clinic ☐ Community Health Center ☐ Drug store ☐ Other Please specify: _____
18. Approximately how far is it from your home to the health care facility where you usually receive care?	☐ Less than 2 kilometers ☐ 2-3 kilometers ☐ 3-5 kilometers ☐ More than 5 kilometers
19. How convenient are the hours of operation for you?	☐ Very convenient ☐ Convenient ☐ Inconvenient ☐ Very inconvenient
20. How long do you usually wait to meet the health care service personnel at the health care facility from the time you have registered?	☐ 10 minutes ☐ 10-20 minutes ☐ 20-30 minutes ☐ More than 30 minutes
21. Do you have health insurance?	☐ Yes ☐ No
***** If you answered YES to Question 21, please proceed to Question 22***** ***** If you answered NO to Question 21, please skip to Question 23*****	
22. Who is your health insurance provided by?	☐ Thai government ☐ Employer ☐ Other Please specify:_____
23. Is the price for care at the health care facility expensive?	☐ Yes ☐ No

24. Are there an adequate number of translators at the health care facility at which you receive care?	☐ Yes ☐ No ☐ Don't know ☐ None available
25. Are there forms in the language in which you speak at the health care facility where you receive care?	☐ Yes ☐ No ☐ Don't know ☐ Refused to reply

	Definitely true 5	**Mostly true 4**	**Don't know 3**	**Mostly false 2**	**Definitely false 1**
26. According to the doctors you've seen, your health is now excellent					
27. You try to avoid letting illness interfere with your life					
28. You seem to get sick a little easier than other people					
29. You feel better now than you ever have before					
30. You will probably be sick a lot in the future					
31. You never worry about your health					
32. Most people get sick a little easier than you do					
33. You don't like to go in the doctor					
34. You are somewhat ill					
35. In the future, you expect to have better health than other people you know					
36. You were so sick once you thought you might die					
37.You're not as healthy now as you used to be					
38. You worry about your health more than other people worry about their health					
39. When you are sick, you try to just keep going as usual					
40. Your body seems to resist illness very well					
41. Getting sick once in a while is a part of your life					

	Definitely true 5	**Mostly true 4**	**Don't know 3**	**Mostly false 2**	**Definitely false 1**
42. Your health is as good as anybody you know					
43. You think your health will be worse in the future than it is now					
44. You've never had an illness that lasted a long period of time					
45. Others seem more concerned about their health than you are about your health					
46. When you're sick, you try to keep to yourself					
47. Your health is excellent					
48. You expect to have a very health life					
49. Your health is a concern to your life					
50. You accept that sometimes you are just going to be sick					
51. You have been feeling bad lately					
52. It doesn't bother you to go to a doctor					
53. You have never been seriously ill					
54. When there is something going around, you usually catch it					
55. Doctors say that you are in poor health					
56. When your think you are getting sick, you fight it					
57. You feel about as good now as you ever have					
58. During the past 3 months, your health has worried or concerned you: (Please circle your response) A great deal……1 Somewhat……2 A little……..3 Not at all……..4					

V. HEALTH-RELATED QUALITY OF LIFE (WHOQOL-BREF)

Instructions: The following questions ask you how you feel about your quality of life, health, or other areas of your life. Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one. Please keep in mind your standards, hopes, pleasures, and concerns. We ask that you think about your life **in the last four weeks**.

Ranking Scale

Very poor means very frequent, long lasting, and severe sickness in the last four weeks
Poor means relatively frequent and somewhat long-lasting and severe sickness in the last four weeks
Neither poor nor good means sickness of moderate frequency, duration, and severity in the last four weeks
Good means not much sickness, not very long lasting, and not very severe in the last four weeks
Very good means slight or no sickness, very short-term, and not severe at all in the last four weeks

Satisfaction Scale

Very dissatisfied means that you were highly displeased in the last four weeks
Dissatisfied means that you were moderately displeased in the last four weeks
Neither poor nor good means that you felt neutral in the last four weeks
Satisfied means that you were moderately pleased in the four weeks
Very satisfied means that you were highly pleased in the last four weeks

Extent Scale

Not at all means that this has had no importance to you in the last four weeks
A little means that is has been of slight importance to you in the last four weeks
A moderate amount means that it has been somewhat important to you in the last four weeks
Very much means that it has been quite important to you in the last four weeks
An extreme amount means that it has been very important to you in the last four weeks

	Very Poor	Poor	Neither poor nor good	Good	Very Good
59. How would you rate your quality of life					

	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
60. How satisfied are you with your overall health?					

	Not at all	A little	A moderate amount	Very much	An extreme amount
61. To what extent do you feel that physical pain prevents you from doing what you need to do?					
62. How much do you need any medical treatment to function in your daily life?					
63. How much do you enjoy life?					
64. To what extent do you feel your life is meaningful?					
65. How well are you able to concentrate?					
66. How safe do you feel in your daily life?					
67. How healthy is your physical environment?					

The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

	Not at all	A little	Moderately	Mostly	Completely
68 Do you feel like you have enough energy for everyday life?					
69. Are you able to accept your bodily appearance?					
70. Have you enough money to meet your needs?					
71. How available to you is the information that you need in your day-to-day life?					
72. To what extent do you have the opportunity for leisure activities?					

	Very poor	Poor	Neither good nor bad	Good	Very good
73. How well are you able to get around?					
	Very Dissatisfied	Dis-Satisfied	Neither	Satisfied	Very satisfied
74. How satisfied are you with your sleep?					
75. How satisfied are you with your ability to perform your daily living activities?					
76. How satisfied are you with your capacity for work?					
77. How satisfied are you with your abilities?					
78. How satisfied are you with your personal relationships?					
79. How satisfied are you with your sex life?					
80. How satisfied are you with the support you get from your friends?					
81. How satisfied are you with the conditions of your living place?					
82. How satisfied are you with your access to health services?					
83. How satisfied are you with your transport?					
	Very Dissatisfied	Dis-Satisfied	Neither	Satisfied	Very satisfied
84. How often do you have negative feelings, such as blue mood, despair, anxiety, depression?					

THANK YOU FOR PARTICIPATING IN THIS SURVEY!

APPENDIX D – PERCEPTION RELATED TO HEALTH BELIEF MODEL TABLES

Table D- Number and Percentages of respondents based on HPQ (n=401)

Variable	Frequency	Percentage
According to the doctors you've seen, your health is not excellent		
Definitely False	6	2.5
Mostly False	39	7.3
Neither true or false	43	20.7
Mostly True	148	35.9
Definitely True	175	43.6
You try to avoid letting illness interfere with your life		
Definitely False	5	1.2
Mostly False	26	6.5
Neither true or false	36	9.0
Mostly True	222	55.4
Definitely True	112	27.9
You seem to get sick a little easier than other people		
Definitely False	66	16.5
Mostly False	129	32.2
Neither true or false	76	19.0
Mostly True	99	24.7
Definitely True	30	7.5
You feel better now than you ever have before		
Definitely False	10	2.5
Mostly False	66	16.5
Neither true or false	54	13.5
Mostly True	129	42.1
Definitely True	102	25.4
You will probably be sick a lot in the future		
Definitely False	63	15.4
Mostly False	139	34.7
Neither true or false	108	26.9
Mostly True	64	16.0
Definitely True	19	4.7

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Table D- (Continued) Number and Percentages of respondents based on HPQ (n=401)

Variable	Frequency	Percentage
You never worry about your health		
Definitely False	99	24.7
Mostly False	169	42.1
Neither true or false	34	8.5
Mostly True	72	18.0
Definitely True	25	6.2
Most people get sick a little easier than you do		
Definitely False	27	6.7
Mostly False	88	21.9
Neither true or false	61	15.2
Mostly True	180	44.9
Definitely True	39	9.7
You don't like to go to the doctor		
Definitely False	68	17.0
Mostly False	98	24.4
Neither true or false	15	3.7
Mostly True	143	35.7
Definitely True	75	18.7
You are somewhat ill		
Definitely False	180	44.9
Mostly False	140	34.9
Neither true or false	16	4.0
Mostly True	51	12.7
Definitely True	11	2.7
In the future, you expect to have better health than other people you know		
Definitely False	17	4.2
Mostly False	50	12.5
Neither true or false	114	28.4
Mostly True	182	45.4
Definitely True	36	9.0

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Table D- (Continued) Number and Percentages of respondents based on HPQ (n=401)

Variable	Frequency	Percentage
You were so sick once you thought you might die		
Definitely False	246	61.3
Mostly False	93	23.2
Neither true or false	26	6.5
Mostly True	24	6.0
Definitely True	7	1.7
You're not as healthy now as you used to be		
Definitely False	91	22.7
Mostly False	139	34.7
Neither true or false	72	18.9
Mostly True	74	18.5
Definitely True	23	5.7
You worry about your health more than other people worry about their health		
Definitely False	17	4.2
Mostly False	122	30.4
Neither true or false	65	16.2
Mostly True	149	37.2
Definitely True	45	11.2
When you are sick, you try to keep going as usual		
Definitely False	7	1.7
Mostly False	2	10.5
Neither true or false	12	3.0
Mostly True	250	62.3
Definitely True	87	21.7
Your body seems to resist illness well		
Definitely False	10	2.5
Mostly False	44	11.0
Neither true or false	31	7.7
Mostly True	215	53.6
Definitely True	98	24.4

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Table D- (Continued) Number and Percentages of respondents based on HPQ (n=401)

Variable	Frequency	Percentage
Getting sick once in a while is a part of your life		
Definitely False	51	12.7
Mostly False	107	26.8
Neither true or false	16	4.0
Mostly True	179	44.9
Definitely True	46	11.5
Your health is as good as anybody you know		
Definitely False	5	1.2
Mostly False	47	11.7
Neither true or false	53	13.2
Mostly True	213	53.1
Definitely True	80	20.0
You think your health will be worse in the future than it is now		
Definitely False	30	7.5
Mostly False	173	43.1
Neither true or false	138	34.4
Mostly True	51	12.7
Definitely True	7	1.7
You've never had an illness that lasted a long period of time		
Definitely False	13	3.2
Mostly False	74	18.5
Neither true or false	6	1.5
Mostly True	154	38.4
Definitely True	150	37.4
Others seem more concern about their health than you are about yours		
Definitely False	22	5.6
Mostly False	208	51.9
Neither true or false	74	18.5
Mostly True	74	18.5
Definitely True	21	5.2

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Table D- (Continued) Number and Percentages of respondents based on HPQ (n=401)

Variable	Frequency	Percentage
When you're sick, you try to keep to yourself		
Definitely False	18	4.5
Mostly False	65	16.2
Neither true or false	12	3.0
Mostly True	196	48.9
Definitely True	107	26.7
Your health is excellent		
Definitely False	7	1.7
Mostly False	26	6.5
Neither true or false	32	8.0
Mostly True	206	51.4
Definitely True	125	31.2
You expect to have a very healthy life		
Definitely False	2	.5
Mostly False	25	6.2
Neither true or false	60	15.0
Mostly True	203	50.6
Definitely True	106	28.4
Your health is a concern to your life		
Definitely False	2	.5
Mostly False	18	4.5
Neither true or false	10	2.5
Mostly True	228	56.9
Definitely True	140	34.9
You accept that sometimes you are just going to be sick		
Definitely False	35	8.7
Mostly False	106	26.4
Neither true or false	19	4.7
Mostly True	175	43.6
Definitely True	63	15.7

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Table D- (Continued) Number and Percentages of respondents based on HPQ (n=401)

Variable	Frequency	Percentage
You have been feeling bad lately		
Definitely False	112	27.9
Mostly False	198	49.4
Neither true or false	10	2.5
Mostly True	59	14.7
Definitely True	18	4.5
It doesn't bother you to go to a doctor		
Definitely False	56	14.0
Mostly False	109	27.2
Neither true or false	9	2.2
Mostly True	123	30.7
Definitely True	102	25.4
You have never been seriously ill		
Definitely False	29	7.2
Mostly False	86	21.2
Neither true or false	3	.7
Mostly True	138	34.4
Definitely True	142	35.4
When there is something going around, you usually catch it		
Definitely False	95	23.7
Mostly False	209	52.1
Neither true or false	21	5.2
Mostly True	61	15.2
Definitely True	12	3.0
Doctors say that you are in poor health		
Definitely False	199	49.6
Mostly False	122	30.4
Neither true or false	28	7.0
Mostly True	36	9.0
Definitely True	11	2.7

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Table D- (Continued) Number and Percentages of respondents based on HPQ (n=401)

Variable	Frequency	Percentage
Doctors say that you are in poor health		
Definitely False	199	49.6
Mostly False	122	30.4
Neither true or false	28	7.0
Mostly True	36	9.0
Definitely True	11	2.7
When you think you are getting sick, you fight it		
Definitely False	10	2.5
Mostly False	15	3.7
Neither true or false	169	42.1
Mostly True	121	30.2
Definitely True	83	20.7
You feel about as good now as you ever have		
Definitely False	4	1.0
Mostly False	32	8.0
Neither true or false	160	39.9
Mostly True	105	26.2
Definitely True	97	24.2
During the past three months, your health has worried or concerned you		
A great deal	50	10.0
Somewhat	327	54.1
A little	111	27.7
Not at all	2	6.5

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APPENDIX E – QUALITY OF LIFE TABLES

Table E- (Continued) Number and percentage of respondents by level of health-related quality of life measured by WHOQOL-BREF (n=401)

Variable	Frequency	Percentage
How would you rate your quality of life		
Very dissatisfied	16	4.0
Dissatisfied	40	10.0
Neither	159	39.7
Satisfied	12	30.9
Very Satisfied	81	15.2
How satisfied are you with your overall health		
Very dissatisfied	8	2.0
Dissatisfied	24	6.0
Neither	143	35.7
Satisfied	165	41.1
Very Satisfied	59	14.7
To what extent do you feel that physical pain prevents you from doing what you need to?		
Not at all	135	33.7
A little	114	28.4
A moderate amount	96	23.9
Very much	36	9.0
An extreme amount	19	4.7
How much do you need any medical treatment to function in your daily life?		
Not at all	145	36.2
A little	117	29.2
A moderate amount	62	15.5
Very much	50	12.5
An extreme amount	24	6.0
How much do you enjoy life?		
Not at all	4	1.0
A little	37	9.2
A moderate amount	96	23.9
Very much	213	53.1
An extreme amount	49	12.2

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Table E- (Continued) Number and percentage of respondents by level of health-related quality of life measured by WHOQOL-BREF (n=401)

Variable	Frequency	Percentage
To what extent do you feel your life is meaningful?		
Not at all	5	1.2
A little	26	6.5
A moderate amount	118	29.4
Very much	193	48.1
An extreme amount	55	13.7
How well are you able to concentrate?		
Not at all	8	2.0
A little	35	8.7
A moderate amount	133	33.2
Very much	180	44.9
An extreme amount	37	9.2
How safe do you feel in your daily life?		
Not at all	9	2.2
A little	18	4.5
A moderate amount	105	26.2
Very much	192	47.9
An extreme amount	72	18.0
How healthy is your physical environment		
Not at all	4	1.0
A little	28	7.0
A moderate amount	11	28.4
Very much	183	45.6
An extreme amount	88	17.0
Do you feel like you have enough energy for everyday life?		
Not at all	4	1.0
A little	17	4.2
A moderate amount	99	24.7
Very much	211	52.6
An extreme amount	63	15.7

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Table E- (Continued) Number and percentage of respondents by level of health-related quality of life measured by WHOQOL-BREF (n=401)

Variable	Frequency	Percentage
Are you able to accept your bodily appearance?		
Not at all	3	.7
A little	25	6.2
A moderate amount	100	24.9
Very much	195	48.6
An extreme amount	74	18.5
Do you have enough money to meet your needs?		
Not at all	61	15.2
A little	69	17.2
A moderate amount	134	33.
Very much	99	24.7
An extreme amount	33	8.2
How available to you is the information you need in your day-to-day life?		
Not at all	15	3.7
A little	73	18.2
A moderate amount	132	32.9
Very much	136	33.9
An extreme amount	33	8.2
To what extent do you have the opportunity for leisure activities?		
Not at all	154	38.4
A little	260	39.9
A moderate amount	53	13.2
Very much	24	6.9
An extreme amount	5	1.2
How well are you able to get around?		
Very poor	3	.7
Poor	33	8.2
Neither poor nor good	94	23.4
Good	224	55.9
Very good	44	11.0

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Table E- (Continued) Number and percentage of respondents by level of health-related quality of life measured by WHOQOL-BREF (n=401)

Variable	Frequency	Percentage
How well are you able to get around?		
Very poor	3	.7
Poor	33	8.2
Neither poor nor good	94	23.4
Good	224	55.9
Very good	44	11.0
How satisfied are you with your sleep?		
Very dissatisfied	8	2.0
Dissatisfied	16	4.0
Neither satisfied nor dissatisfied	69	17.2
Satisfied	22	60.3
Very satisfied	65	16.2
How satisfied are you with your ability to perform your daily activities		
Very dissatisfied	2	.5
Dissatisfied	15	3.7
Neither satisfied nor dissatisfied	95	23.7
Satisfied	211	52.6
Very satisfied	72	18.0
How satisfied are you with your capacity for work?		
Very dissatisfied	2	.5
Dissatisfied	16	4.0
Neither satisfied nor dissatisfied	61	15.2
Satisfied	252	62.8
Very satisfied	67	16.7
How satisfied are you with your abilities?		
Very dissatisfied	2	.5
Dissatisfied	13	3.2
Neither satisfied nor dissatisfied	70	17.5
Satisfied	224	55.9
Very satisfied	78	19.5

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Table E- (Continued) Number and percentage of respondents by level of health-related quality of life measured by WHOQOL-BREF (n=401)

Variable	Frequency	Percentage
How satisfied are you with your personal relationship?		
Very dissatisfied	8	2.0
Dissatisfied	20	5.0
Neither satisfied nor dissatisfied	81	20.2
Satisfied	213	53.1
Very satisfied	67	16.7
How satisfied are you with your sex life?		
Very dissatisfied	9	2.2
Dissatisfied	15	3.7
Neither satisfied nor dissatisfied	98	24.
Satisfied	188	46.9
Very satisfied	75	18.7
How satisfied are you with the support you get from your friends?		
Very dissatisfied	16	4.0
Dissatisfied	17	4.2
Neither satisfied nor dissatisfied	86	21.4
Satisfied	216	53.9
Very satisfied	60	15.0
How satisfied are you with the conditions of your living place?		
Very dissatisfied	3	.7
Dissatisfied	23	5.7
Neither satisfied nor dissatisfied	97	24.2
Satisfied	213	53.1
Very satisfied	62	15.5
How satisfied are you with your access to health care?		
Very dissatisfied	3	.7
Dissatisfied	16	4.0
Neither satisfied nor dissatisfied	94	23.4
Satisfied	232	57.9
Very satisfied	51	12.7

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Table E- (Continued) Number and percentage of respondents by level of health-related quality of life measured by WHOQOL-BREF (n=401)

Variable	Frequency	Percentage
How satisfied are you with your transport		
Very dissatisfied	6	1.5
Dissatisfied	28	7.0
Neither satisfied nor dissatisfied	145	36.2
Satisfied	151	37.7
Very satisfied	59	14.7
How often do you have negative feelings?		
Very dissatisfied	2	.5
Dissatisfied	11	2.7
Neither satisfied nor dissatisfied	51	12.7
Satisfied	181	45.1
Very satisfied	151	37.7

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APPENDIX F—CHI-SQUARED TEST OF QUALITY OF LIFE AND HPQ

Table F- (Continued) Chi- squared test comparing the relationship between HPQ and HRQoL

Variables	QOL				
According to the doctors you've seen, your health is not excellent	Low/ Mod n(%)	High n(%)	Chi-squared	df	p-value
Definitely False	5(83.3%)	1(16.7%)			
Mostly False	6(22.2%)	21(77.8%)	26.964	4	.000***
Neither true or false	10(26.3%)	28(77.8%)			
Mostly True	15(11.8%)	112(88.2%)			
Definitely True	17(12.6%)	118(87.4%)			
You try to avoid letting illness interfere with your life					
Definitely False	0(0%)	2(100%)			
Mostly False	4(17.4%)	19(82.6%)	.838	4	.933
Neither true or false	6(20%)	24(80%)			
Mostly True	29(15.6%)	157(84.4%)			
Definitely True 6 months-1 year	14(15.2%)	78(84.8%)			
You seem to get sick a little easier than other people					
Definitely False	4(7.8%)	47(92.2%)			
Mostly False	23(20.9%)	87(79.1%)	9.99	4	.041*
Neither true or false	13(21%)	49(79%)			
Mostly True	7(8.4%)	76(91.6%)			
Definitely True	6(22.2%)	21(77.8%)			
You feel better now than you ever have before					
Definitely False	2(20%)	8(80%)	9.921	4	0.042*
Mostly False	17(29.3%)	41(70.7%)			
Neither true or false	7(14.6%)	41(85.4%)			
Mostly True	17(12.5%)	119(87.5%)			
Definitely True	10(12.3%)	10(87.7%)			
You will probably be sick a lot in the future					
Definitely False	7(13.7%)	44(86.3%)	8.380	4	0.079
Mostly False	14(12.5%)	98(87.5%)			
Neither true or false	18(20.2%)	71(79.8%)			
Mostly True	6(10.7%)	50(89.3%)			
Definitely True	6(35.3%)	11(64.7%)			

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Table F- (Continued) Chi- squared test comparing the relationship between HPQ and HRQoL

Variables	QOL				
	Low/ Mod n(%)	High n(%)	Chi-squared	df	p-value
You never worry about your health					
Definitely False	13(15.5%)	71(84.5%)	3.285	4	.511
Mostly False	25(17.7%)	116(82.3%)			
Neither true or false	6(22.2%)	21(77.8%)			
Mostly True	6(9.8%)	55(90.2%)			
Definitely True	2(10.5%)	17(89.5%)			
Most people get sick a little easier than you do					
Definitely False	4(19%)	17(81%)	11.726	4	0.02*
Mostly False	13(17.8%)	60(82.2%)			
Neither true or false	11(22%)	39(78%)			
Mostly True	14(9.1%)	140(90.9%)			
Definitely True	9(30%)	21(70%)			
You don't like to go to the doctor					
Definitely False	10(18.5%)	44(81.5%)	4.390	4	.356
Mostly False	17(20.5%)	66(79.5%)			
Neither true or false	3(23.1%)	10(76.9%)			
Mostly True	16(13.1%)	106(86.9%)			
Definitely True	6(10%)	54(90%)			
You are somewhat ill					
Definitely False	18(12.2%)	130(87.8%)	20.019	4	.000***
Mostly False	16(14%)	98(86%)			
Neither true or false	5(38.5%)	8(61.5%)			
Mostly True	8(16.3%)	41(83.7%)			
Definitely True	5(62.5%)	3(37.5%)			
You expect to have better health than others					
Definitely False	4(28.6%)	10(71.4%)			
Mostly False	11(25%)	33(75%)	6.713	4	.152
Neither true or false	16(16.5%)	81(83.5%)			
Mostly True	17(11.6%)	130(86.4%)			
Definitely True	4(13.3%)	130(88.4%)			

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Table F- (Continued) Chi- squared test comparing the relationship between HPQ and HRQoL

Variables	QOL				
	Low/ Mod n(%)	High n(%)	Chi-squared	df	p-value
You were so sick once you thought you might die					
Definitely False	28(13.7%)	176(86.3%)	5.193	4	.268
Mostly False	14(17.9%)	64(82.1%)			
Neither true or false	4(18.2%)	18(81.8%)			
Mostly True	6(30%)	14(70%)			
Definitely True	0(0%)	6(100%)			
You're not as healthy now as you used to be					
Definitely False	12(15.8%)	64(84.2%)	5.896	4	.207
Mostly False	16(13.9%)	99(86.1%)			
Neither true or false	13(21.7%)	47(78.3%)			
Mostly True	6(10%)	54(90%)			
Definitely True	6(28.6%)	15(71.4%)			
You worry about your health more than others					
Definitely False	2(14.3%)	12(85.7%)	9.235	4	.100
Mostly False	15(16.1%)	78(83.9%)			
Neither true or false	8(14%)	49(86%)			
Mostly True	17(13.2%)	112(86.8%)			
Definitely True	10(26.3%)	28(73.7%)			
When you are sick, you try to keep going					
Definitely False	2(33.3%)	4(66.7%)	8.653	4	.124
Mostly False	4(11.8%)	30(88.2%)			
Neither true or false	3(25%)	9(75%)			
Mostly True	34(16.5%)	172(83.5%)			
Definitely True	9(12.2%)	65(87.8%)			
Your body seems to resist illness well					
Definitely False	2(22.2%)	7(77.8%)	2.139	4	.710
Mostly False	7(18.4%)	31(81.6%)			
Neither true or false	6(22.2%)	21(77.8%)			
Mostly True	27(15.4%)	148(84.6%)			
Definitely True	10(12.2%)	72(87.8%)			

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Table F- (Continued) Chi- squared test comparing the relationship between HPQ and HRQoL

Variables	QOL				
	Low/ Mod n(%)	High n(%)	Chi-squared	df	p-value
Getting sick once in a while is a part of your life					
Definitely False	3(7.9%)	35(92.1%)			
Mostly False	13(14.9%)	74(85.1%)	6.254	4	.181
Neither true or false	5(35.7%)	9(64.3%)			
Mostly True	24(15.5%)	131(84.5%)			
Definitely True	7(18.4%)	31(81.6%)			
Your health is as good as anybody you know					
Definitely False	3(60%)	2(40%)	14.454	4	.006
Mostly False	11(26.2%)	31(73.8%)			
Neither true or false	9(19.6%)	37(80.4%)			
Mostly True	21(12.1%)	153(87.9%)			
Definitely True	7(10.9%)	57(89.1%)			
You think your health will be worse in the future than s now					
Definitely False	4(16.7%)	20(83.3%)	3.379	4	.496
Mostly False	20(14.6%)	117(85.4%)			
Neither true or false	16(13.2%)	105(86.8%)			
Mostly True	11(24.4%)	34(75.6%)			
Definitely True	1(20%)	4(80%)			
You've never had an illness that lasted long					
Definitely False	2(18.2%)	9(81.8%)	5.054	4	.282
Mostly False	14(23.3%)	46(76.7%)			
Neither true or false	1(16.7%)	5(83.3%)			
Mostly True	20(16.1%)	104(83.9%)			
Definitely True	14(10.9%)	115(89.1%)			
Others seem more concern about their health than you are about yours					
Definitely False	4(20%)	16(80%)	3.836	4	.429
Mostly False	21(12%)	154(88%)			
Neither true or false	13(20.6%)	50(79.4%)			
Mostly True	11(19%)	47(81%)			
Definitely True	3(18.8%)	13(81.3%)			

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Table F- (Continued) Chi- squared test comparing the relationship between HPQ and HRQoL

Variables	QOL				
	Low/ Mod n(%)	High n(%)	Chi-squared	df	p-value
When you're sick, you try to keep to yourself					
Definitely False	6(33.3%)	12(66.7%)	16.715	4	.005**
Mostly False	12(23.5%)	39(76.5%)			
Neither true or false	2(16.7%)	10(83.3%)			
Mostly True	24(15.3%)	133(84.7%)			
Definitely True	7(7.5%)	86(92.5%)			
Your health is excellent					
Definitely False	6(85.7%)	1(14.3%)	29.556	4	.000**
Mostly False	5(20%)	20(80%)			
Neither true or false	6(21.4%)	22(78.6%)			
Mostly True	22(13.5%)	141(86.5%)			
Definitely True	12(11.2%)	95(88.8%)			
You expect to have a very healthy life					
Definitely False	1(50%)	1(50%)	9.652	4	.047*
Mostly False	8(34.8%)	15(65.2%)			
Neither true or false	9(17%)	44(83%)			
Mostly True	22(13.2%)	145(86.8%)			
Definitely True	11(12.8%)	75(87.2%)			
Your health is a concern to your life					
Definitely False	0(0%)	1(100%)	.954	4	.917
Mostly False	2(14.3%)	12(85.7%)			
Neither true or false	1(12.5%)	7(87.5%)			
Mostly True	33(17.2%)	159(92.8%)			
Definitely True	16(13.7%)	101(86.3%)			
You accept that sometimes you are just going to be sick					
Definitely False	1(3.8%)	25(96.2%)	8.716	4	.085
Mostly False	9(10.5%)	77(89.5%)			
Neither true or false	5(27.8%)	13(72.2%)			
Mostly True	28(19.6%)	115(80.4%)			
Definitely True	9(15.3%)	50(84.7%)			

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Table F- (Continued) Chi- squared test comparing the relationship between HPQ and HRQoL

Variables	QOL				
	Low/ Mod n(%)	High n(%)	Chi-squared	df	p-value
You have been feeling bad lately					
Definitely False	13(14.9%)	74(85.1%)	24.482	4	.000**
Mostly False	19(11.1%)	152(88.9%)			
Neither true or false	4(50%)	4(50%)			
Mostly True	9(17.6%)	42(82.4%)			
Definitely True	6(46.2%)	7(53.8%)			
It doesn't bother you to go to a doctor					
Definitely False	5(10.6%)	42(89.4%)	8.630	4	.071
Mostly False	14(16.3%)	72(83.7%)			
Neither true or false	4(44.4%)	5(55.6%)			
Mostly True	12(11.8%)	90(88.2%)			
Definitely True	17(19.3%)	71(80.7%)			
You have never been seriously ill					
Definitely False	5(23.8%)	16(76.2%)	16.317	4	.006
Mostly False	10(14.5%)	59(85.5%)			
Neither true or false	2(66.7%)	1(33.3%)			
Mostly True	22(18.8%)	95(81.2%)			
Definitely True	12(9.9%)	109(90.1%)			
When there is something going around, you usually catch it					
Definitely False	8(10.3%)	70(89.7%)	2.922	4	.571
Mostly False	31(18.1%)	140(81.9%)			
Neither true or false	3(16.7%)	15(83.3%)			
Mostly True	8(15.1%)	45(84.9%)			
Definitely True	1(9.1%)	10(90.9%)			
Doctors say that you are in poor health					
Definitely False	20(12%)	146(88%)	12.121	4	.016*
Mostly False	14(13.9%)	87(86.1%)			
Neither true or false	7(29.2%)	17(70.8%)			
Mostly True	7(23.3%)	23(76.7%)			
Definitely True	4(44.4%)	5(55.6%)			

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Table F- (Continued) Chi- squared test comparing the relationship between HPQ and HRQoL

Variables	QOL				
	Low/ Mod n(%)	High n(%)	Chi-squared	df	p-value
When you think you are getting sick, you fight it					
Definitely False	2(22.2%)	7(77.8%)	6.383	4	.271
Mostly False	3(23.1%)	10(76.9%)			
Neither true or false	14(10.1%)	125(89.9%)			
Mostly True	19(18.3%)	85(81.7%)			
Definitely True	14(21.2%)	52(78.8%)			
You feel about as good now as you ever have					
Definitely False	4(100%)	0(0%)	21.928	4	.000**
Mostly False	4(13.8%)	25(86.2%)			
Neither true or false	20(15.5%)	109(84.5%)			
Mostly True	12(14.3%)	72(85.7%)			
Definitely True	12(14%)	74(86%)			
During the past three months, your health has worried or concerned you					
A great deal	4(11.8%)	30(88.2%)	10.672	3	.014*
Somewhat	20(11.2%)	159(88.8%)			
A little	28(24.6%)	86(75.4%)			
Not at all	0(0%)	4(100%)			

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APPENDIX G
QUALITY OF LIFE BY DOMAIN

Table G- Quality of Life by Domain (n=401)

Variable	Chi-squared	df	p-value
Age			
Physical Health	16.63	6	.011*
Psychological Health	4.79	6	.571
Social Relationships	1.920	6	.927
Environmental Health	7.286	6	.287
Ethnicity			
Physical Health	2.428	4	.658
Psychological Health	3.798	4	.434
Social Relationships	6.846	4	.144
Environmental Health	3.015	4	.555
Marital Status			
Physical Health	2.636	4	.621
Psychological Health	4.104	4	.392
Social Relationships	1.393	4	.845
Environmental Health	4.745	4	.314
Education			
Physical Health	8.316	6	.216
Psychological Health	7.766	6	.256
Social Relationships	4.270	6	.640
Environmental Health	2.392	6	.880
Thai Reading			
Physical Health	6.443	6	.375
Psychological Health	3.623	6	.728
Social Relationships	4.202	6	.649
Environmental Health	6.521	6	.367

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Table G- (Continued) Quality of Life by Domain (n=401)

Variable	Chi-squared	df	p-value
Burmese Reading			
Physical Health	6.495	6	.370
Psychological Health	5.388	6	.495
Social Relationships	11.638	6	.071
Environmental Health	5.388	6	.495
Income			
Physical Health	4.345	6	.630
Psychological Health	2.860	6	.826
Social Relationships	3.125	6	.793
Environmental Health	4.345	6	.070
Expense			
Physical Health	11.099	6	.085
Psychological Health	5.127	6	.528
Social Relationships	5.868	6	.438
Environmental Health	5.688	6	.459
Occupation			
Physical Health	7.744	6	.257
Psychological Health	11.630	6	.071
Social Relationships	9.998	6	.125
Environmental Health	3.487	6	.786
Length of Stay			
Physical Health	7.739	6	.258
Psychological Health	3.157	6	.406
Social Relationships	8.808	6	.185
Environmental Health	12.073	6	.060
Transport			
Physical Health	6.998	6	.321
Psychological Health	7.125	6	.309
Social Relationships	7.775	6	.255
Environmental Health	7.125	6	.238

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Table G- (Continued) Quality of Life by Domain (n=401)

Variable	Chi-squared	df	p-value
Number of jobs			
Physical Health	1.720	4	.797
Psychological Health	1.752	4	.781
Social Relationships	1.139	4	.888
Environmental Health	1.720	4	.787
Length of Work			
Physical Health	11.730	6	.067
Psychological Health	2.828	6	.830
Social Relationships	3.680	6	.720
Environmental Health	11.360	6	.078
Hours work			
Physical Health	5.493	6	.482
Psychological Health	1.715	6	.944
Social Relationships	5.640	6	.465
Environmental Health	5.493	6	.842
Days worked			
Physical Health	.741	6	.690
Psychological Health	1.422	6	.491
Social Relationships	.215	2	.898
Environmental Health	6.442	2	.040
Location			
Physical Health	18.351	8	.019*
Psychological Health	12.575	8	.127
Social Relationships	4.448	8	.815
Environmental Health	8.064	8	.427
Distance			
Physical Health	3.336	6	.766
Psychological Health	6.010	6	.422
Social Relationships	5.484	6	.483
Environmental Health	10.108	6	.120

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Table G- (Continued) Quality of Life by Domain (n=401)

Variable	Chi-squared	df	p-value
Hours of Operation			
Physical Health	2.841	3	.417
Psychological Health	16.404	6	.012
Social Relationships	2.740	6	.841
Environmental Health	2.841	3	.061
Wait time			
Physical Health	10.503	6	.105
Psychological Health	3.609	6	.729
Social Relationships	11.201	6	.082
Environmental Health	6.867	6	.333
Insurance From			
Physical Health	1.362	2	.506
Psychological Health	4.254	4	.373
Social Relationships	5.650	4	.227
Environmental Health	1.186	4	.880
Adequate Translator			
Physical Health	8.502	6	.204
Psychological Health	5.852	6	.440
Social Relationships	5.916	6	.433
Environmental Health	8.502	6	.166
Adequate Forms			
Physical Health	8.256	6	.220
Psychological Health	4.984	6	.546
Social Relationships	10.729	6	.097
Environmental Health	4.535	6	.074
HPQ			
Physical Health	1.009	4	.908
Psychological Health	1.337	4	.848
Social Relationships	1.331	4	.856
Environmental Health	3.584	4	.465

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APPENDIX H
BUDGET

Item No.	Activity	Unit	Price (Baht)	Unit (Number)	Total Budget (Baht)
1	**Pre-testing**				
	Photocopying	Questionnaire	7	30	210
	Stationary	Set	400/set	1	400
2	**Data collection**				
	Photocopy Questionnaire	Questionnaire	0.6/page	7 x 400	1,680
	Training of interviewers	Assistant	200/day	2 prs/1 day	400
	Interviews per diem	Assistant	200/day	2 prs/30 days	12,000
	Transportation cost	Trip/day	100/day	2 prs/30 days	6,000
	DATA COLLECTION PROCEDURE			**SUBTOTAL**	**20,690**
3	**Document Printing**				
	Paper and printing	Page	5/page	800 pages	4,000
	Photocopy	Page	0.5/page	12x400	2,400
	Stationary	Set	400/set	1	400
	Binding Paper (Exam)	Set	150/set	6	900
	Binding Paper (Submit)	Set	200/set	6	1,200
	THESIS COMPLETION PROCESS			**SUBTOTAL**	**8,900**
	GRAND TOTAL				**29,590**

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APPENDIX I
TIME SCHEDULE

Project Procedure	Time Frame (Month)									
	Aug 09	Sept 09	Oct 09	Nov 09	Dec 09	Jan 10	Feb 10	Mar 10	Apr 10	May 10
1. Literature Review										
2. Writing Thesis Proposal										
3. Submission for Proposal Exam										
4. Proposal exam										
5. Ethical Consideration from Chulalongkorn University (CPHS)										
6. Pretest Questionnaire										
7. Field preparation and data collection										
8. Data analysis										
9. Thesis and article writing										
10. Final thesis exam										
11. Submission of article for publication										
12. Submission of thesis										

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CURRICULUM VITAE

Name : Ms. Malulie Tongprasert

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Place of Birth : San Francisco, California, USA

Educational Achievement : **University of California, Davis**
Bachelors of Arts
Double Major: Anthropology and Sociology
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Universidad Carlos III de Madrid
University of California Study Abroad Program:
Hispanic Studies
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University of California Study Abroad Program:
Language and Culture Program
September 2008- December 2008

Experience : **Sexual Health Intern**
Health, Education and Promotion, Davis California
September 2007- June 2008

Peer Counselor
The House, Davis California
March 2007- June 2008

Vice- President
U.C. Davis Public Health Club, Davis California
August 2007- June 2008

Other Activities/ Honors : Prytanean Women's Honor Society
Golden Key International Honour Society
Phi Kappa Phi Honor Society
2008 Undergraduate Achievement Award
2007 Community Service Award
Dean's Honor List