FACTORS INDUCING ANXIETY AND DEPRESSION AMONG ADULT MYANMAR MIGRANT WORKERS: A CASE STUDY IN RATCHABURI PROVINCE, THAILAND

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A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Public Health Program in Public Health
College of Public Health Sciences
Chulalongkorn University
Academic Year 2010

Thesis Title	FACTORS INDUCING ANXIETY AND DEPRESSION AMONG ADULT MYANMAR MIGRANT WORKERS: A CASE STUDY IN RATCHABURI PROVINCE, THAILAND
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Field of Study	Public Health
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Accepted by The College of Public Health Sciences, Chulalongkorn University, in Partial Fulfillment of the Requirements for the Master"s Degree.

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##5379124053: สาธารณสุขศาสตร์

คำสำคัญ ความวิตกกังวลและความซึมเศร้า/แรงงานอพยพชาวพม่า/ประเทศไทย

ออง ซอ เพียว: ปัจจัยที่โน้มนำทำให้เกิดความวิตกกังวลและความซึมเศร้าในแรงงานอพยพชาวพม่าวัยทำงาน: กรณีศึกษาในจังหวัดราชบุรี ประเทศไทย

อาจารย์ที่ปรึกษาวิทยานิพนธ์ ผู้ช่วยศาสตราจารย์ ดร. ประเทือง หงสรานากร, 65 หน้า

การศึกษาครั้งนี้ได้ดำเนินการในเดือนมีนาคม พ.ศ. 2554 เพื่อพรรณาตัวแปรอิสระต่างๆ ด้านปัจจัยประชากร สังคม และเศรษฐกิจ ภูมิหลังการศึกษา และปัจจัยด้านพฤติกรรม และการประเมินความสัมพันธ์ระหว่างตัวแปรอิสระเหล่านี้กับตัวแปรตาม (ความวิตกกังวลและความซึมเศร้า) ในแรงงานอพยพชาวพม่าวัยทำงานในจังหวัดราชบุรี ประเทศไทย โดยเก็บตัวอย่างเฉพาะจากแรงงานอพยพชาวพม่าวัยทำงานเนื่องจากเป็นผู้ที่มีวุฒิภาวะมากกว่าและสามารถจัดการกับความรู้สึกไม่สมหวังได้ดีกว่าวัยรุ่น การเก็บข้อมูลใช้แบบสัมภาษณ์ที่มีโครงสร้างโดยการสัมภาษณ์กลุ่มตัวอย่าง

กลุ่มตัวอย่างส่วนใหญ่มีอายุระหว่าง 25-35 ปี โดยมีกลุ่มตัวอย่างรวมทั้งสิ้น 300 รายที่เป็นแรงงานอพยพชาวพม่าวัยทำงานที่ได้เข้าร่วมการวิจัยครั้งนี้ ร้อยละ 55 ของกลุ่มตัวอย่างเป็นเพศชายและร้อยละ 45 เป็นเพศหญิง กลุ่มตัวอย่างส่วนใหญ่เป็นโสด เป็นชาวพม่า เป็นผู้ทำงานเต็มเวลา และประมาณครึ่งหนึ่งมีการศึกษาระดับประถมศึกษา กลุ่มตัวอย่างส่วนใหญ่อาศัยร่วมกับเพื่อนและญาติ อีกทั้งบางรายอาศัยอยู่กับครอบครัว ร้อยละ 32 ของกลุ่มตัวอย่างยังดื่มและร้อยละ 18.7 เป็นผู้สูบบุหรี่

ประมาณสองในสามของกลุ่มตัวอย่างมีระดับของความวิตกกังวลระดับรุนแรง (ร้อยละ 64.3) และส่วนใหญ่ของกลุ่มตัวอย่างมีความซึมเศร้าระดับอ่อน (ร้อยละ 42.7) และระดับปานกลาง (ร้อยละ 36.7)

ในการวิเคราะห์ Bivariate analysis พบว่า สถานภาพการอยู่อาศัยมีความสัมพันธ์กับความซึมเศร้า ($p<0.05$) ส่วนปัจจัยอื่นๆ ไม่มีความสัมพันธ์กับความวิตกกังวลและความซึมเศร้า

กลยุทธ์ด้านสุขภาพจิตสำหรับกลุ่มตัวอย่างเหล่านี้ควรมองว่าเป็นกลยุทธ์เชิงการลงทุน ซึ่งจะยังประโยชน์ระยะยาวแก่บุคคล แก่สังคม และแก่ระบบสุขภาพ นักวิชาชีพด้านสุขภาพจิต เช่น นักจิตวิทยา พยาบาลด้านจิตเวช และนักสังคมสงเคราะห์ ควรได้รับการอบรมพิเศษเพื่อให้มีความรู้และทักษะอันเหมาะสมกับงานการดูแลแรงงานอพยพ

สาธารณสุขศาสตร์ ลายมือชื่อนิสิต .....

ปีการศึกษา 2553 ลายมือชื่ออาจารย์ที่ปรึกษาวิทยานิพนธ์.....

##5379124053: PUBLIC HEALTH
KEYWORDS: ANXIETY AND DEPRESSION/ MYANMAR MIGRANT WORKERS/ THAILAND

AUNG ZAW PHYO: FACTORS INDUCING ANXIETY AND DEPRESSION AMONG ADULT MYANMAR MIGRANT WORKERS: A CASE STUDY IN RATCHABURI PROVINCE THAILAND. ADVISOR: ASST.PROF. PRATHURNG HONGSRANAGON, Ph.D., 65pp.

This study was conducted in March 2011 to describe the independent variables composing of demographic factors, socio-economic factors, educational background and behavioral factors and to access the association of these independent variables with the dependent variables (anxiety and depression) among adult Myanmar migrant workers in Ratchaburi province, Thailand. This study was carried out only among adults Myanmar migrant workers because adults are more mature who can manage their frustration better than the teenagers. The data was collected by face-to-face interview questionnaire.

The majority of the respondents were in the age of 25-35 years old and three hundred Myanmar migrant workers were participated in this study. Fifty-five percent of the respondents were males and forty-five percent were females. Most of the respondents were singles, Myanmar, full time workers and about half of them attended primary school. Most of the respondents lived together with their friends and relatives, some lived with their family. Thirty-two percent of the respondents were drinking and 18.7% were smoking.

About two thirds of respondents were having marked to severe anxiety level (64.3%) and majority of respondents were having mild depression (42.7%) and moderate depression (36.7%).

In bivariate analysis, living status was associated with depression ($p<0.05$). All other factors were not associated with anxiety and depression.

A strategy for the mental health for these groups should be seen as a strategic investment which will create many long term benefits for individuals, societies and health systems. Professions in mental health such as psychologists, psychiatric nurses and social workers should receive special training for appropriate knowledge and skills among migrant workers.

Field of Study: Public Health Student‟s Signature.....
Academic Year: 2010 Advisor‟s Signature……..

ACKNOWLEDGEMENTS

It is a gratification for me to express my sincere thanks to those who helped this research paper work comes into reality.

Firstly, it is a privilege of mine to mention the sincerest and deepest gratitude to my advisor, Assistant Professor Prathurng Hongsranagon, Ph.D. for her valuable advice, continuous guidance, careful attention and spending of her time throughout the whole process of this research.

Secondly, my heartfelt thanks go to my chairperson in thesis committee, Naowarat Kanchanakhan, Ph.D. who provides her constructive suggestion, patience, kindness and attentive effort in my thesis exam as well.

Thirdly, my thanks extend to Dr. Wongwat Liulak and Associate Professor Dr. Sompoch Iamsupasit for their precious suggestions that make this research become better as well.

Ajarn Piyalaporn Havanond (Statistician at the College of Public Health Sciences, Chulalongkorn University) alsodeserves my special thanks for her efforts in my data analysis.

My special thanks go to every single individual who helped me in data collection process and who helped bring my dream of studying the Master of Public Health comes into existence as well. Last but not least, I would like to mention my appreciation to my parents who provide financial and moral assistance during my study in Thailand.

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CHAPTER I
BACKGROUND

1.1 Introduction

Migration, defined by International Organization for Migration, is “a process of moving, either across an international border, or within a state.”It includes migration of refugees, displaced persons, uprooted people, and economic migrants (International Organization for Migration [IOM], 2007). Migration is becoming an important global phenomenon in contemporary world. The growth of migration and population mobility, international trade and communication technologies are shaping global health (MacPherson, Gushulak, and MacDonald, 2007).

World situation

There are now about 192 million people living outside their place of birth, which is about three percent of the world‟s population. This means that roughly one of every thirty-five persons in the world is a migrant. Between 1965 and 1990, the number of international migrants increased by 45 million- an annual growth rate of about 2.1 percent. The current annual growth rate is about 2.9 percent. Currently, the UN‟s official estimate remains at 175 million migrants globally (IOM, 2007).

Regional situation

The volume of international migration from and within the Asian Region increased rapidly during the 1990s and has continued to do so. The International Organization for Migration (IOM) reported that between 1995 and 1999 about 2 million Asian workers left their country every year for contract employment. Approximately 1.2 million labor migrants were from South Asia, 1.3 million from South-East Asia and 100,000 from China (IOM, 2007).

During recent years, Thailand‟s gradual economic growth has been attraction a huge glow of migrants from its neighboring countries, especially those from Laos, Myanmar and Cambodia. Those people come to Thailand for seeking job opportunities and higher payment jobs due to less or lack of good payable jobs in their countries.

The flow of migration in the region, in general, however, is not only determined by the current economic gap among countries, but also by historical reasons (including changes in the borders or occupation), demand and supply of both unskilled and skilled workers in certain sectors, gender division of labor in respective countries, access to education and other social services and political stability (Labor Migration in the Greater Mekong Sub-region, 2006).

Estimate number of migrants

The number of migrant population in Thailand cannot be known with any precision and can be calculated through rough estimation. According to data from Ministry of Labor, the total numbers of registered workers and dependents from Cambodia, Laos and Myanmar are 5,284,920 (IOM, 2007). Ministry of Labor also revealed that in 2004 alone, total number of 814,247 work permits had been issued to the migrant workers from Cambodia, Lao PDR and Myanmar. Half of the work permits had been granted to Myanmar migrant workers within the country (Labor Migration in the GMS,2006). The number of registered migrants reflects only 2% of the total Thai population in 2004 (MacPherson, Gushulak, and MacDonald, 2007). Up to two-thirds of the total Myanmar migrants are in the highly productive age group between 15 and 59 years (Labor Migration in the GMS, 2006).

Routes and reasons for migration

There are many informal routes used by Myanmar migrant workers entering Thailand. By using vehicles via border check-points, by crossing over mountains or rivers where check-points are not established and so on, just to mention some. A study conducted by Asian Research Center for Migration (ARCM) of 1,000 Myanmar migrant workers in 3 border towns found that over half of migrants entered Thailand holding legal documentation and then overstayed, becoming illegal workers (Labor Migration in the GMS, 2006).

A study, covered nearly 400 Myanmar migrants, was carried out between January and May 2003 by the World Vision Foundation of Thailand (WVFT) and the Asian Research Center for Migration (ARCM) in Mae Sai (Chiang Mai), Mae Sot (Tak Province) and Ranong (Ranong Province) found that there are five main reasons for those migrants to migrate from Myanmar to Thailand. Those five main reasons are:

(1) Low earnings in Myanmar
(2) Unemployment in Myanmar
(3) Family poverty
(4) Traumatic experiences, such as forced labor, and
(5) A lack of qualifications for employment. (Huguet & Punpuing, 2005)

Besides, the study also found that nearly half of the Myanmar migrants mainly involve in agriculture, fishing and fishery processing industries in the Southern Thailand (Huguet & Punping, 2005).

One of the factors, among many others, that migrants chose for working and staying is geographical location of the receiving province or country. The geographical distribution of migrants in Thailand is highly correlated with the underlying structure of the regional/provincial economy and with proximity to the border. Most Laotian workers, for an instance, are employed in Bangkok or in the Northeast, and Cambodians are in Eastern provinces. Myanmar migrant workers, however, are more concentrated in the Northern and Southern regions. This finding is also consistent with that from World

Vision Foundation of Thailand and Asia Research Center for Migration (Labor Migration in the GMS, 2006).

Geographical location of Ratchaburi Province

Ratchaburi province is situated in the central Thailand. It is also one out of ten provinces which border Myanmar. It covers 5200 square kilometers and located 80 kilometers west of Bangkok and borders Myanmar to the west. The province is subdivided into 10 districts (amphoe). The districts are subdivided into 104 sub-districts (tambon) and 935 villages (muban) (Encyclopedia II - Ratchaburi Province - Geography).

Estimate number of Myanmar migrants in Ratchaburi Province

There is an estimate of 2-3 million migrant workers in Thailand and over 1.2 million migrants staying in Thailand are Myanmar (Labor migration in the GMS, 2006). Approximate 70.4% of Myanmar migrant workers are registered workers. Ratchaburi which is located in the central Thailand is one out of ten provinces where Myanmar migrants live. Population of Ratchaburi province is 832,005 people. Out of them, 20,307 people are registered Myanmar migrants, 16,070 migrants have work permit and registered camp population is 8,353 people. But there are 10,000 to 20,000 non-registered Myanmar migrants in Ratchaburi province (WHO, 2005). Migrant population of Myanmar consists of Burma, Shan, Mon, Pa-O and Karen.

Although Ratchaburi province borders Myanmar and has a lot of Myanmar migrant people, there is no baseline data on factors inducing stress of Myanmar migrant people. And no such studies have been done among Myanmar migrant workers in that Ratchaburi province. If there was any data concerning stress that would be better to imply strategies how to cope with stressful situations. So this study will be conducted in Ratchaburi province.

1.2 Health impact of migration

Migration can positively and negatively impact on health outcomes. Migration itself is not a risk to health, only the condition surrounding the migration can venerable to ill health (Clapham & Robinson, 2009). Health risk factors are often link to legal status of migrants, determining the level of access to health and social services. Further contributors include poverty, stigma, discrimination, housing, education, occupational health, social exclusion, gender, differences in language and culture, separation from family and socio-cultural norms. Separation from their family and from their social norms, feelings of loneliness, poverty, exploitative working conditions are found to be unsafe behaviors. At the same time, these same factors may cause mental illness such as depression and anxiety (Kandula *et, al*. 2004). Many migrant women face the risk of sexual abuse which has negative impact on their mental state of health. Therefore, many suffer from physical and mental health problems due to the invisible nature of their work (Duckett, 2001).

So, the relationship between migrant status and mental health is complex and the psychological well-being of the migrant group is determined by a range of factors including the characteristics of migration, the new community and resettlement (Munroe-Blum *et, al.* 1989). In Thailand, there are many Myanmar migrant workers, estimated about 2 to 4 millions. Migrating to Thailand involve profound changes to the Myanmar migrant workers‟ social, environmental and cultural contexts. Many workers migrate without their families or existing social network (Griffin and Soskolne, 2003). About 80% of immigrant workers of Thailand are Myanmar, many ethnic people such as Mons, the Karens and the Shans who flee poverty, war and ethnic conflicts in their homelands. The ratio of female to male immigrant workers is 43 to 57 (Immigrant workers, facts and figures 2008) [online].

1.3 Research Questions

1. What is the prevalence of anxiety and depression among adult Myanmar migrants?
2. What are the factors affecting anxiety and depression?

1.4 Research Objectives

- To determine prevalence distribution and characteristics of anxiety and depression among Myanmar migrant workers in Ratchaburi province, Thailand.
- To examine the relationship between the demographic factors, socio-economic factors, educational background and behavioral factors and the anxiety and depression among Myanmar migrant workers in Ratchaburi province, Thailand.

1.5 Hypothesis of the Study

There are relationship between the demographic factors, socio-economic factors, educational background and behavioral factors and the anxiety and depression among Myanmar migrant workers in Ratchaburi province, Thailand.

1.6 Variables Employed in the Study

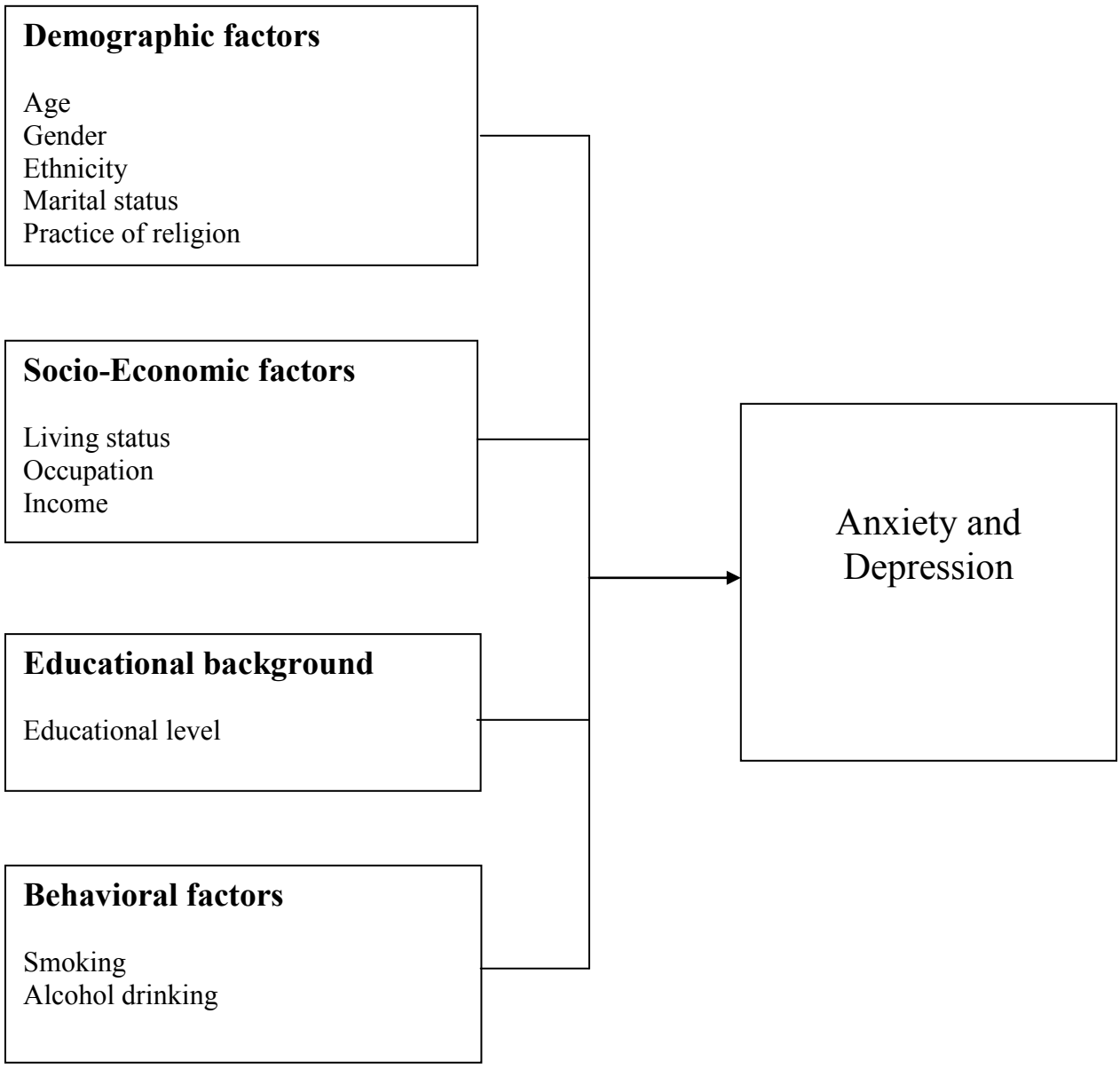
Independent Variables

Age, gender, ethnicity, marital status, practice of religion, living status, occupational status, income, educational level, smoking and alcohol drinking.

Dependent Variables

Anxiety and Depression

1.7 Conceptual Framework



CHAPTER II

LITERATURE REVIEW

2.1 Migration and Health

When migrating, temporarily, seasonally, or permanently, people connect individual and environmental heath factors between communities. Migrants travel with their health profiles, values and beliefs, reflecting the socio-economic and cultural background and the disease prevalence of their community of origin. Such profiles and beliefs can be different from those of the host community, and may have an impact on the health and related services of the host community as well as on the health of and usage of health services by migrants (WHO, Health of migrants2010).

2.2 What is mental health?

Concepts of mental health include subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence and recognition of the ability to realize one‟s intellectual and emotional potential. It has also been defined as a state of well-being whereby individuals recognize their abilities, are able to cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities. Mental health is about enhancing competencies of individuals and communities and enabling them to achieve their self-determined goals. (WHO, 2003). The WHO global burden of disease estimates that mental and addictive disorders are among the most burdensome in the world and their burden will increase in next decades (WHO, 2008). Relatively little is known about the prevalence of depression among migrants. The aforementioned study showed the measured depression through the use of the Center for Epidemiologic Studies Depression Scale (CES-D). Typically, approximately 18 % of individuals complete the CES-D (Hovey, 2001).

Many uneducated people from rural areas and different ethnicities have to migrate to the economic city of Yangon or other larger towns or even neighboring countries such as

Thailand and China for work, due to economic constraints at home (Caouette & Pack, 2002).

Anxiety and depression share a long, close history in psychiatric field. The anxiety disorders, individually and as a group, exhibit remarkably high rates of co-morbidity with each other and with major depression. Researchers have tested hypothesis of shared genetic etiologies as a potential basis of this relationship. In general, available family studies have found mixed evidence for co-aggregation of anxiety and depressive disorders, while twin studies more definitively indicate that shared genetic risk factors largely account for this co-morbidity. Some of this appears to be accounted for by genetic variation in personality traits that broadly predispose to anxiety and depression (John M. Hettema, 2008).

2.2.1 Anxiety

It is defined as having excessive and uncontrollable feelings of fear or nervousness about the future event or an actual situation. A small amount of anxiety or stress can be beneficial for development, it becomes the problem if the anxiety is developmentally inappropriate or prevent or limit appropriate behavior (Jamieson, 2006).

2.2.1.1 Types of Anxiety disorders

Anxiety can take a whole variety of forms. Mental health professionals have divided anxiety disorders into seven major categories. They are-

1. Social anxiety disorder
2. Generalized anxiety disorder
3. Obsessive-compulsive disorder
4. Separation anxiety disorder
5. Post-traumatic anxiety disorder
6. Panic disorder
7. Specific phobia (Jamieson, 2006).

Separation disorder occurs only in young children.

1. Social anxiety disorder

   The defining characteristics of social anxiety disorder, also called social phobia, is marked fear in social situations where the person is exposed to unfamiliar people. This anxiety can lead to severe distress or interfere with everyday activities and relationships (Jamieson, 2006).

2. Generalized anxiety disorder (GAD)

   GAD refers to excessive anxiety and worry over a number of things, such as appearance, health, money and future. At times, an unreasonable amount of worry may be focused on specific situation or events. Other symptoms of GAD include restlessness, fatigue, irritability, muscle tension, trouble concentrating, and difficulty in falling or staying asleep (Jamieson, 2006).

3. Obsessive-Compulsive Disorder (OCD)

   The essential feature of OCD is the presence of uncontrollable obsessions or compulsions. Obsessions are recurrent thoughts that are intrusive and perceive as inappropriate by the person having them, and that provoke anxiety and distress. Compulsions are repetitive behavioral or mental acts that a person feels driven to perform in response to an obsession or according to rigid rule. Such compulsions are aimed at preventing or reducing distress or preventing some dreaded events, even though there may be no realistic connection between the action and feared situation (Jamieson, 2006).

4. Post-Traumatic Stress Disorder (PTSD)

   The thing that sets PTSD apart is that it is the only anxiety disorder that requires a precipitating event. In PTSD, the symptoms always develop following exposure to traumatic occurrence. The event gives rise to intense feeling of fear, helplessness, or horror, because it is perceived as

posing a threat to a physical integrity of oneself or others. People with PTSD try to avoid things or places associated with the trauma. Many also feel emotionally numb in situation that call for an emotional response (Jamieson, 2006)

5. Panic Disorder

   The hallmark of panic disorder is the occurrence of spontaneous panic attacks, which are sudden waves of intense fear and apprehension. These feelings are accompanied by physical symptoms, such as, a rapid heart rate, shortness of breath, choking sensations, or sweating (Jamieson, 2006)

6. Specific Phobias

   A specific phobia is an intense fear that is out of proportion to any real threat and focused on specific animal, object, activity or situation. People with phobia experience anxiety when they encounter or even think about the thing they fear. This anxiety sometime takes the form of a panic attack. Whilst, the attacks in panic disorder seem to come out of the blue, the attacks in specific phobia have very specific triggers. The trigger can be divided into five basic categories: animal, natural environment, injury, situational and others (Jamieson, 2006).

2.2.2 Depression

Depression can be defined as feeling sad, hopeless and/or unmotivated for at least two weeks or more (Martin, 2007). Unrealistic academic, social or family expectations can create a strong sense of rejection and can lead to deep disappointment. Depression can take several forms, including bipolar disorder (formally called maniac-depression), which is a condition that alternates between periods of euphoria and depression. The depressed person often experiences a lot of anxiety. This can lead to them having panic attacks. Any lack of control within our lives can contribute to depression. Depression and anxiety disorders are not

the same, although at first glance they seem very similar. Anxiety is having excessive and uncontrollable feelings of fear or nervousness about the future event or an actual situation. Depression generate emotions such as hopelessness, despair and anger (Healthy place, 2009). A great number of depressions are also accompanied by anxiety. In one study, 85% of those with major depression were also diagnosed with generalized anxiety disorder while 35% symptoms of a panic disorder. Other anxiety disorders include obsessive-compulsive disorder and post-traumatic stress disorder (PTSD). Because they so often go hand in hand, anxiety and depression are considered the fraternal twins of mood disorders (Healthy place, 2009).

2.2.3 Measuring Anxiety and Depression

In the current study, the instruments for anxiety and depression were Zung Self-Rating Anxiety and Depression Scale (Zung, 1965). However, in this section, a comparison is made between Zung‟s instrument and instruments developed by others.

For Zung Self-Rating Anxiety and Depression Scale (Zung, 1965), there are 20 items for each scale that rate the four common characteristics of anxiety and depression. For Anxiety, each question is scored on a scale of 1-4 (none or a little of the time, some of the time, good part of the time, most of the time). There are fifteen questions worded toward increasing anxiety levels and five questions worded toward decreasing anxiety levels. (Zung, 1965).

The scores range from 20-80

- 20-44 = Normal Range
- 45-59 = Mild to Moderate Anxiety Levels
- 60-74 = Marked to Severe Anxiety Levels
- 75-80 = Extreme Anxiety Levels

Purpose

Zung‟s anxiety scales are intended as brief quantitative rating instruments for assessing anxiety as a psychiatric disorder rather than as a trait or feeling state. They “would be inclusive with respect to symptoms of anxiety as a psychiatric disorder” (Ian McDowell, 2006).

Conceptual Basis

Zung distinguished between several common uses of the term “anxiety” and focused his anxiety scales on the measurement of generalized anxiety disorders. The symptoms included in the instrument are those most commonly found in anxiety disorder. Zung noted that anxiety disorder typically arises as a response to coping with stress and the signs and symptoms are largely without cultural attributes (Ian McDowell, 2006).

Description

The first five items record affective symptoms and the remaining 15 comprise physiological symptoms of anxiety (Ian McDowell, 2006).

Validity

Zung studied 225 psychiatric patients and 343 non-patients. The correlation between the self- and clinician-administered versions was 0.66 overall, rising to 0.74 for patients with a diagnosis of anxiety disorder (Ian McDowell, 2006).

Commentary

The Zung anxiety scales offer a potentially useful resource where it is necessary to assess anxiety by either self-report or clinical rating. The self-rating scale, in particular, is used quite commonly in studies of anxiety. The scales were incorporated into the ECDEU (Early Clinical Drug Evaluation) protocol and appear useful as outcome measures. Their clinical orientation distinguishes the Zung scales from more general measures such as Taylor‟s Manifest Anxiety Scale. The Zung scale has also achieved popular attention with a web site that allows users to score their own anxiety on the SAS: www.ansietyhelp.org/information/sas_zung.htma#noteszung_sas (Ian McDowell, 2006).

The Beck Anxiety Inventory (A. Beck, 1988)

Purpose

Beck‟s self-report Anxiety Inventory (BAI) measures the severity of self-reported anxiety in adults and adolescents; it was especially designed to minimize confounding with symptoms of depression (Ian McDowell, 2006).

Conceptual Basis

A central stimulus for developing the BAI arose during studies of the link between anxiety and depression. During 1980s, concern arose over the high correlations between anxiety and depression scales, typically between 0.6 and 0.7 which are almost as high as correlations among anxiety scales. It was not clear whether this association between anxiety and depression reflected a biological link between them, or shared etiologies, or was merely as artifact due to non-specificity of the measures (Ian McDowell, 2006).

Description

The BAI is a patient-completed 21-item measure in which 14 items cover somatic symptoms and seven reflect subjective aspects of anxiety or panic. The items were chosen to measure symptoms specific to anxiety and unrelated to depression: they were also intended to measure general symptoms, rather than anxiety due to specific disorders such as phobias or panic disorders. After initial item analyses, the 21-item version was established (Ian McDowell, 2006).

Commentary

In the relatively brief period since its introduction, the BAI has become well established. The goal of developing a scale that distinguished anxiety form depression seems to have been largely achieved, although a common underlying negative affect factor underlies both conditions, so it will never be possible to separate them completely. The correlations between the BAI and the BDI do not prove that the scale is flawed, for many of the study samples included patients with general mood disorders who exhibited symptoms of both anxiety and depression (Ian McDowell, 2006).

According to research which carried out in Chiang Mai, researcher focused on treatment on depression and anxiety in demographic part and researcher used Resilience Scale (RS) which includes 25 questions and CES-Depression Scale which is similar to Zung‟s depression scale (Wallapa Songprakun, 2010).

For Depression, each question is scored on a scale of 1 through 4 (based on these replies: a little of the time, some of the time, good part of the time, most of the time). Scores on the test range from 25 through 100.(Zung, 1965). The scores fall into four ranges:

- 25-49 = normal Range
- 50-59 = Mildly Depressed
- 60-69 = Moderately Depressed
- 70 and above = Severely Depressed

The Depression Anxiety Stress Scales (P.F Lovibond, 1995)

Purpose

The Depression Anxiety Stress Scales (DASS) are designed to assess the severity of core symptoms of depression, anxiety and tension (or stress) over the previous week. Together, the scales provide a broad-spectrum measure of psychological distress, indicating the severity and frequency of symptoms. They are also suitable for tracking change in severity over time, for example before and after therapeutic intervention (Ian McDowell, 2006).

Conceptual basis

The DASS has similarities to, and differences form, the tripartite conceptual model. DASS Anxiety scale corresponds most closely to the criteria for diagnoses of the various Anxiety Disorders, with the exception of Generalized Anxiety Disorder (Ian McDowell, 2006).

Description

The DASS is a revised version of a scale originally described in 1983. The revised scale includes 42 negative symptoms; 14 each cover depression (DASS-D), anxiety (DASS-A), and stress (DASS-S). The scales were developed for people aged 17 or older but may be suitable for younger adolescents. The DASS can be administered and scored by non-psychologists. A 21-item abbreviation (DASS-21) requires less time to administer.

Commentary

The DASS is one of the newest anxiety or depression scales; early results of psychometric testing are extremely positive. The instrument appears to provide

a good indicator of the overall severity of negative emotions that correlates in a logical manner with other established scales.

Health-related self-report (HRSR) scale: the diagnostic screening test for depression in Thai population

In this study, a health-related self-report (HRSR) diagnostic scale for detecting depression in Thai population was introduced. The scale composed of 20 symptom items which were helpful in detecting and confirming depression and suicidal risk. There were 3 positive items (feel well, life is pleasant and meaningful and feel self-worth) which clearly distinguished normal subjects and depressed patients. The reliability coefficient (Chronbach's alpha) of the HRSR scale was 0.91 and was found to possess a clear factorial structure and clinical validity. The cut-off score at 30 gave 90.2 per cent specificity and 85.3 per cent sensitivity for major depression. Score > or = 25 provided higher specify (93.4%) but lower sensitivity (75.1%) and could detect probable cases of depression or other mental illnesses in the community. Thus it can be used as a diagnostic screening instrument.

CHAPTER III
RESEARCH METHODOLOGY

3.1 Study site

This study was done in Bann Leuk and Nongree sub-districts, Ratchaburi province which is located in central Thailand. Ratchaburi province is also one of ten provinces in Thailand which border Myanmar.

3.2 Research Design

Cross-sectional study was used to measure the association between demographic factors, socio-economic factors, educational background, and behavioral factors and anxiety and depression of the respondents.

3.3 Study Population

The study population was adult Myanmar migrant workers (age 18-59 years), both male and female living in Ratchaburi province, Thailand especially who work in the following factories.

1. C.J Factory , Bann Luek (Noodle factory)
2. S. Pattana Alloy Factory, Bann Luek (Metal factory)
3. Oo Sa Doll Factory, Bann Leuk (Doll factory)
4. Tao Fu Factory, Bann Leuk (Chinese Food)
5. Sweet Fish Factory, Bann Leuk (Fish factory)
6. Chor Ganchang Factory, Nongree (Construction)
7. Harson Sporting Goods Factory, Nongree (Football factory)
8. Bean Factory, Nongree.

3.4 Sample Size

The sample size was calculated by the formula below:

$$n = \frac{Z^2_{\alpha/2}\,(p \times q)}{d^2}$$ (Daniel W W, 8th edition)

.

n = minimum sample size

$Z^2_{\alpha/2}$ = critical value for 95% confidence level = 1.96

d = error allowance = 0.05

p = proportion of targeted population who have anxiety and depression related socio-economic factors = 20% = 0.2 (Charoensuk, 2000)

q = 1 – p = 1 – 0.2 = 0.0.8

From above formula,

$$n = \frac{Z^2_{\alpha/2}\,(p \times q)}{d^2}$$

.

$$n = \frac{(1.96)^2(0.2)(0.8)}{(0.05)^2}$$

$= 245.86 = 246$

Sample collected = 270 (after adding of 10% non-response rate/seasonal variation)

3.5 Sampling Technique

Factories were purposively selected because no similar research had been done at those factories before. Census sampling method was used to recruit the

participants. The number of participants from each factory was based on the population of each factory.

3.5.1 Inclusion criteria

- Adults Myanmar migrant workers (18-59 years) who can speak Burmese language.
- Those who have been living in Ratchaburi province for at least six months.
- Willing to participate in this research.

3.5.2 Exclusion criteria

- Age younger than 18.
- Those who have chronic illness and mental problems.
- Those who are not willing to participate.

3.6 Data Collection Tool

The data was collected by using the structured questionnaire (Zung‟s anxiety and depression test) which was translated from English to Myanmar language.

3.6.1 Independent variables

These variables were developed from a review of related theories, concepts and research. They include demographic factors, socio-economic factors, educational background and behavioral factors.

3.6.2 Dependent variables

In this study, anxiety and depression was measured by using Zung‟s test for anxiety and depression. (Khine PP, 2010)

3.7 Data Collection

The structured questionnaire was used to collect data and questionnaire was translated into Myanmar language. The data was collected by face-to -face interview after the consent form.

The data was collected by four interviewers who are health-volunteers from Bann Leuk Health Care Center in Ratchaburi province. Four-hour training about this study including objectives, questionnaires, selection of participants, techniques of how-to approach participants and face-to-face interview method was given to interviewers by researcher.

3.8 Data Analysis

For data analysis, Statistical Package of Social Science Software SPSS version 16 (licensed for Chulalongkorn University) was used. Followings were the statistics in use:

- Descriptive statistics:

  Dependent variables were presented by frequency, percentage, mean and standard deviation.

- Inferential statistics:

  The relation between independent variables and dependent variables was presented by the use of ANOVA and t-test.

Measuring Anxiety and Depression

In this study, the instruments for anxiety and depression were Zung Self-Rating Anxiety and Depression Scale (Zung, 1965). There are 20 items for each scale that rate the four common characteristics of anxiety and depression. For anxiety, each question was scored on a scale of 1-4 (none or a little of the time,

some of the time, good part of the time, most of the time). There were fifteen questions worded toward increasing anxiety levels and five questions worded toward decreasing anxiety levels. (Zung, 1965)

The scores range from 20-80

- 20-44 = Normal Range
- 45-59 = Mild to Moderate Anxiety Levels
- 60-74 = Marked to Severe Anxiety Levels
- 75-80 = Extreme Anxiety Levels

For depression, each question was scored on a scale of 1 through 4 (based on these replies: a little of the time, some of the time, good part of the time, most of the time). Scores on the test range from 25 through 100 (Zung, 1965). The scores fall into four ranges:

- 25-49 = Normal Range
- 50-59 = Mildly Depressed
- 60-69 = Moderately Depressed
- 70-100= Severely Depressed

3.9 Reliability and Validity

3.9.1 Validity

The structured interview questionnaire was checked by three experts from Ratchaprachasamasai Institute, Ministry of Public Health, for the accuracy, clarity, and appropriateness of the questionnaire. And the names of three experts were

(1) Thanapat Boonkrong, M.D.

(2) Ariyatat Eiamudomsuk, M.D.

(3) Yaowanit Samana (Nurse).

3.9.2 Reliability

Reliability of the data collection tool has been tested with 20 samples at Samut Sakhon province with adult Myanmar migrant workers. Cronbach‟s alpha for anxiety was 0.78 and for depression was 0.79.

3.10 Ethical Consideration

After the approval of the Ethics Review Committee for Research Involving Human Subjects, Chulalongkorn University, this study was done. Before the interview, the purpose of the study, objectives and benefits of the study were explained to the participants. Then, oral consent as well as written consent was taken from each respondent. The name of respondent was not recorded and data was coded. The respondents felt free to participate or withdraw at any time throughout the interview. Privacy was maintained throughout the interview by having enough physical space for the subjects, so one could not hear what another one is answering. All the data was kept confidentially except for the further health education or implementation for migrant workers and none of the questionnaires could be traced back to the respondents.

3.11 Limitation of the Study

This study was done among adult Myanmar migrant workers in Bann Leuk and Nongree sub-district, Ratchaburi province only so that the results cannot represent the whole Myanmar migrant workers in Thailand. There can be information bias and participant bias in this study.

3.12 Expected outcome of the study

From this study, prevalence of anxiety and depression of adult Myanmar migrant workers as well as the factors influencing anxiety and depression among respondents were determined.

3.13 Benefit of the Study

The result of this study might be useful for both government and non-governmental sectors to review and planning of mental health promotion and counseling for migrant workers in Thailand for their betterment as well as the host country. Any participants who replied most of the time to negative questions could have counseling with the doctor.

CHAPTER IV
RESULTS

This chapter shows the findings from the data analysis of the study.

4.1 Univariate Analysis

The univariate analysis includes the distribution of frequency, percentage, mean, and standard deviation of the respondents" demographic factors, socio economic factors, educational background and behavioral factors.

(1) Demographic Factors

Table 4.1.1 shows demographic characteristics of respondents in Ratchaburi province, Thailand. Fifty five percent of the respondents were male and 45% were female. More than 80% of the respondents were younger than 35 years, mean is 29.33 and SD =6.985. Nearly 60% of the respondents were Myanmar, second most was Mon (23%), Karin (15.3%) and Shan (2%) respectively. For the religion, the majority were Buddhists with 85.7%, followed by Christians (7.3%), Muslim (4.3%) and Hindu (2.7%). Regarding practice of religion, more than half of the respondents meditates (54.7%), some goes to temple (13%), others do fasting (16%) and 16.3% of the population have no practice of religion. Of the respondents, one- third was married.

Table 4.1.1 Number and percentage distribution of respondents by demographic factors (n=300)

Socio-demographic characteristics	Number	Percentage
Gender		
Male	165	55
Female	135	45
Age (years)		
<25	95	31.7
25-35	155	51.7
35-45	48	16
>45	2	0.6
Mean=29.33 ;SD=6.985		
Ethnicity		
Myanmar	179	59.7
Mon	69	23.0
Karin	46	15.3
Shan	6	2.0
Religion		
Buddhist	257	85.7
Christian	22	7.3
Muslim	13	4.3
Hindu	8	2.7
Practice of religion		
Temple	39	13.0
Meditation	164	54.7
Fasting	48	16.0
No practice	49	16.3
Marital status		
Yes	102	34.0
No	198	66.0

(2) Socio-economic factors

Table 4.1.2 shows living status, occupation and income of the respondents. Eighty-one percent of the respondents were full time workers and remaining were temporary workers. More than two-third of respondents got less than 5,000 baht per month (77.3%).Others got more than 5,000 baht salary per month. More than half of the respondents were living with family or relatives 53.3%, nearly 30% of the population were living with friends Seventeen percent were living alone.

Table 4.1.2 Number and percentage distribution of respondents by socio-economic factors (n=300)

Socio-economic factors	Number	Percentage
Work		
Full time	243	81.0
Temporary	57	19.0
Income		
<5,000baht	232	77.3
5,000-7,000baht	51	17.0
>7,000baht	17	5.7
Living		
Alone	51	17.0
With friends	89	29.7
With family or relatives	160	53.3

(3) Educational background

Table 4.1.3 shows educational background of the respondents. For educational level, half of respondents were primary school, 22.7% can read and write, 21.7% were middle school, nearly 5% were high school,

and a few were illiterate. Only one person went to university among respondents.

Table 4.1.3 Number and percentage distribution of respondents by educational factors (n=300)

Education	Number	Percentage
Illiterate	3	1.0
Can read, write	68	22.7
Primary	149	49.6
Middle	65	21.7
High	14	4.7
University	1	0.3

(4) Behavioral factors

Table 4.1.4 shows behavioral factors of the respondents. One-third of the population was drinkers. But majority of them were not heavy drinkers (drink <3 cups for 83.3%). And staying without drinking is not a problem for most of the drinkers (92.7%). Seven point three percent of the drinkers cannot stay without drinking. For smoking, less than 20% of the respondents were smokers while others were not. Only about one-tenth of the smokers smoke more than 10 cigarettes per day. Forty six point four percent smoke not even one cigarette per day and 44.6% smoke 1-9 cigarettes per day. Nearly two-third of the respondents had good relationship with their surrounding (63.7%). However, 36.3 % do not have good relationship with their surrounding. Moreover, 63% of respondents were having problems with working environment.

Table 4.1.4 Number and percentage distribution of respondents by behavioral factors (n=300)

Behavioral factors	Number	Percentage
Drinking		
Drink	96	32.0
Not drink	204	68.0
Drinking 1		
<3 cups	80	83.3
=>3 cups	16	16.7
Drinking 2		
Can stay not drinking	89	92.7
Cannot stay not drinking	7	7.3
Smoking		
Smoke	56	18.7
Not smoke	244	81.3
Smoke 1		
<1 cigarette	26	46.4
1-9 cigarettes	25	44.6
10-19 cigarettes	4	7.2
20-39 cigarettes	1	1.8
Good relationship with surrounding		
Yes	191	63.7
No	109	36.3
Problems with working environment		
Yes	189	63.0
No	111	37.0

(5) Prevalence of anxiety

For the prevalence of anxiety, 24.3% had mild to moderate anxiety, 64.3% had marked to severe anxiety and 11.3% had extreme anxiety.

Table 4.1.5 Prevalence of Anxiety (n=300)

Anxiety	Number	Percentage
Mild – Moderate anxiety	73	24.3
Marked – Severe anxiety	193	64.4
Extreme anxiety	34	11.3
Mean 65.73, SD 7.561		

(6) Prevalence of depression

For depression prevalence, only few percentages of the respondents have normal range. Most of them were having mild or moderate depression and 16.7 % were having severe depression.

Table 4.1.6 Prevalence of depression (n=300)

Depression	Number	Percentage
Normal range	12	4.0
Mildly depressed	128	42.6
Moderately depressed	110	36.7
Severely depressed	50	16.7

4.2 Bivariate Analysis

(1) Association between demographic factors and anxiety

Table 4.2.1 shows association between age, gender ethnicity, marital status, practice of religion and anxiety, all of which were not associated with anxiety in this study.

Table 4.2.1 Association between demographic factors and anxiety (n=300)

Demographic factors	n	Mean	t/F	p-value
Age*				
<25	95	66.84	1.539	0.216
25-35	155	65.14		
>35	50	65.48		
Gender				
Male	165	65.99	0.659	0.510
Female	135	65.41		
Ethnicity				
Myanmar	179	65.70	-0.097	0.922
Other races	121	65.79		
Marital status				
Yes	102	65.00	-1.207	0.229
No	198	65.11		
Practice of religion				
Practice religious activity	251	65.62	-0.600	0.549
No practice	49	66.33		

*ANOVA

(2) Association between socio-economic factors and Anxiety

Table 4.2.2 shows association between living status, occupation and income and anxiety. There is no significant association between those factors and anxiety in this study.

Table 4.2.2 Association between socio-economic factors and anxiety (n=300)

Socio-economic factors	n	Mean	t/F	p-value
Living status*				
Alone	51	64.12	1.418	0.244
With friends	89	65.97		
With family or relatives	160	66.12		
Occupation				
Full time	243	65.49	-1.153	0.250
Temporary	57	66.77		
Income				
<5.000	232	65.80	0.289	0.773
=>5,000	68	65.50		

*ANOVA

(3) Association between education background and anxiety

Table 4.2.3 shows association between educational level of respondents and anxiety. There is no statistical association between those variables.

Table 4.2.3 Association between educational background and anxiety (n=300)

Educational background	n	Mean	t/F	p-value

Educational level				
=<primary	220	65.81	0.305	0.761
=>middle	80	65.51		

(4) Association between behavioral factors and anxiety

Table 4.2.4 shows association between drinking, smoking and anxiety. None of these variables were statistically associated with anxiety in this study.

Table 4.2.4 Association between behavioral factors and anxiety (n=300)

Behavioral factors	n	Mean	t/F	p-value
Smoking				
Smoke	56	64.70	-1.138	0.256
Not smoke	244	65.97		
Alcohol drinking				
Drink	96	65.04	-1.087	0.278
No drink	204	66.06		

(5) Association between demographic factors and depression

Table 4.2.5 shows association between age, gender, ethnicity, marital status, practice of religion and depression. There is no statistically significant relationship between these variables and depression.

Table 4.2.5 Association between demographic factors and depression (n=300)

Demographic factors	N	Mean	t/F	p-value
Age*				
<25	95	60.68	0.269	0.764

25-35	155	60.21		
>35	50	61.08		
Gender				
Male	165	60.76	0.634	0.527
Female	135	60.19		
Ethnicity				
Myanmar	179	60.57	0.178	0.859
Other races	121	60.40		
Marital status				
Yes	102	60.14	-0.578	0.563
No	198	60.69		
Practice of religion				
Practice religious activity	251	60.59	0.450	0.553
No practice	49	60.04		

*ANOVA

(6) Association between socio-economic factors and depression

Table 4.2.6 shows association between living, occupation, income and depression. Living status and depression are statistically associated (p-value = 0.018). Others are not associated with depression.

Table 4.2.6 Association between socio-economic factors and depression (n=300)

Socio-economic factors	n	Mean	t/F	p-value
Living status*				
Alone	51	57.76	4.077	0.018
With friends	89	61.55		
With family or relatives	160	60.79		
Occupation				
Full time	243	60.32	-0.848	-0.981

Temporary	57	61.30		
Income				
<5.000	232	60.57	0.284	0.776
=>5,000	68	60.26		

*ANOVA

(7) Association between educational background and depression

Table 4.2.7 shows association between educational levels and depression. There is no significant difference between two education levels.

Table 4.2.7 Association between educational background and depression (n-300)

Educational background	**n**	**Mean**	**t/F**	**p-value**
Educational level				
=<primary	220	60.30	-0.743	0.458
=>middle	80	61.06		

(8) Association between behavioral factors and depression

Table 4.2.8 shows association between drinking, smoking and depression. According to statistics, there is no significant association between these variables and depression.

Table 4.2.8 Association between behavioral factors and depression (n=300)

Behavioral factors	**n**	**Mean**	**t/F**	**p-value**
Smoking				
Smoke	56	60.32	-0.192	0.848

Not smoke	244	60.55		
Alcohol drinking				
Drink	96	59.91	-0.902	-0.878
No drink	204	60.78		
Harassment				
Yes	42	61.00	0.441	0.660
No	258	60.42		

CHAPTER V
DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

This study was cross sectional descriptive study carried out on 300 adult Myanmar migrant workers residing in Ratchaburi province, Thailand to find out the prevalence of anxiety, depression and its association with related factors.

From this study, more males were found than females (55% males and 45% females). This may be due to a man‟s role of breadwinner in a family for making money and taking care of a family or may be because of the natures of the job like construction sites and metal industries at the study site. PHAMIT found that men are more likely to migrate than women (Raks Thai Foundation, 2006). There is no statistical association between gender and anxiety (with p value 0.510). This is contradicted to the study by Kessler, R.C., & Walters. E.E where they studied the 15 to 25 years old age group in United States and found out females had twice mental health problems than males (Kessler, Walters, 1998). There is also no statistically significant association between gender and depression with (p value 0.527).

Regarding to the migrants‟ age, more than half of respondents were aged between 25-35 years (51.7%). About one-third are younger than 25 years. In associating with age and anxiety, no statistically significant association was found (with p value 0.216). In associating with age and depression, there was also no statistically significant association (with p value 0.764).

Nearly 60% of the respondents were Myanmar ethnicity followed by Mon 23%, Karen 15.3% and Shan 2%. This may be because of the study site; Ratchaburi province is adjacent to Tanintharyi Division of Myanmar where most of the populations are Myanmar which has easy access to enter Thailand. When associating, no significant association between ethnicity and anxiety was found (with p value 0.922). In associating ethnicity and depression, there is also no significant association (with p value 0.859). This is contradicted to the study done in United States at the aged over 18 by David R. Williams showed African Americans and Caribbean Blacks had nearly twice more mental health problems compared with Non-Hispanic Whites (Williams, et al, 2007).

Only 34 % of the respondents were married while others (66%) were not. This might be because they were working age and they came here for earning money. But statistically, there is no association between marital status and anxiety (with p value 0.229). There is also no association between marital status and depression (with p value 0.563). They might be already having depression and anxiety according to conditions they were facing as migrant workers.

As for a religion and practice of religion in this study, majority were Buddhist (85.7%), 7.3 % Christian, 4.3% Muslims and 2.7%Hindu. The population statistics of Myanmar by Jan Lahmeyer said that 89% Buddhist, 5% Christian, 4% Muslims, 1% animist and 0.5% Hindu. (Lahmeyer, 2004). However, statistically there was no association between practice of religion and anxiety (with p value 0.549). There was also no association between practice of religion and depression (with p value 0.653).

Regarding living, more than half of respondents were living with their family or relatives. Only 17% of respondents were living alone. However, there was no statistically significant association between living and anxiety. But there was significant association between living and depression with p value 0.018. People living alone were more likely to have depression than others living with friends or family members. This may be because they were living alone and when they face with some problems, they have no one to share their difficulties, feelings and there is no one to give them opinions.

Regarding occupation, 81% of the respondents were full time workers and only 19% were temporary workers. But there was no significant association between occupation, anxiety and depression in this study. This is contradict to the study by David R Williams on men and women aged over 18 years in United States which showed that unemployed groups have more mental health problems than employed groups (Williams et al, 2007).

In terms of income, more than three quarter of respondents were getting less than 5,000 baht (77.3%), remaining was getting more than 5,000 baht. There is no statistically significant association between income, anxiety and depression in this study. This is contradicted to study by Joanne Desanto Iennacoat of United States: age above 18 years that had low income had more anxiety and depression than higher income (Iennaco, 2009).

Concerning education, nearly half of them had primary education (49.6%), 21.7 % had middle education, 22.7% could only read and write while very few percents went to high school or university. Nevertheless, there is no statistically significant association between education, anxiety and depression in this study.

In Myanmar migrant workers, one-third of respondents were drinkers and nearly one fifth of respondents were smokers. And there is no significant association between drinking, smoking, anxiety and depression. As the migrant workers, they can‟t spend much money, for they have to save as much money as they can to send the money to their family in Myanmar. Similar study was done on Myanmar migrant youth in Samut Sakhorn province, Thailand showed that 9% were smoking and 25.4% were drinking alcohol (Howteerakul, Suwannapong, & Than, 2005).

Although most of the variables are not statistically related to anxiety and depression, vast majority of the respondents are having anxiety and depression according to description. According to anxiety prevalence, about 1 out of 10 persons were having extreme anxiety which is very high prevalence and 16.7% of respondents were also having severe depression which is remarkably high prevalence. If I had time, I would like to find out the reason behind it.

5.2 Conclusion

In this study, male migrants were more than females. Promotion mental health care programmed in the migrant‟s area has become imperative because a lot of anxiety and depression were found among the Myanmar migrant workers. Thai government also supports the NGOs for the migrant mental health care. As they are migrants, they had many social problems to encounter. Regarding with anxiety, more than half of the respondents were having moderate to severe anxiety and the figure goes the same for depression. There was statistical association between age variable and anxiety and living and depression.

5.3 Recommendations

1. The mental health of migrant population should be given a greater priority together with appropriate funding resources, according to the existing needs.
2. Supporting mental health of these groups should be seen as a strategic investment which creates many long term benefits for individuals, societies and health systems.
3. Professions in mental health such as psychologists, psychiatric nurses and social workers should receive special training to address the need for appropriate knowledge and skills among migrant workers.
4. Mental health services for migrants should be developed and operated in close collaboration with the family, neighbors, friends, etc.
5. Mental health services for adolescents should be provided by primary care with some specialist support, for instance, through one day training on mental health for primary health care staff.
6. Further studies should be done on the migrants to know about the behavior and attitude about them.

7. For mental health, qualitative studies are as necessary as quantitative studies by NGOs specialized in research, academic institutions and also future MPH students.
8. The doctors and health assistants at health care center should give health education to migrants about how to cope with stressful situations and promote relationship with surroundings because it was one of the important factors for mental health.

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Appendixs

APPENDIX A

Patient/Participant Information Sheet

Title of research project … **Factors inducing anxiety and depression among adult Myanmar migrant workers: A case study in Ratchaburi province, Thailand**

……

Principal researcher's name …Mr. Aung Zaw Phyo….. **Position** ….student……

Office address ……Collage of Public Health Science , Chulalongkorn University……

Home address ……521/3-4 Soi Sriayuthaya 2-4, Sirayuthaya Road, Prayatai Distric,Rajthavee,Bangkok 10400……..

Telephone(office) …….. **Telephone (home)** ……..…….

Cell phone ……0865201080…….. **E-mail:** ……azp.phyo@gmail.com…...……

1. You are being invited to take part in this 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 to you or if you would like to have more information.

2. This research project involves “Factors causing stress (anxiety and depression) among Myanmar migrant workers in Ratchaburi province, Thailand”.

3. Objectives of the projects are

- 3.1 To know occurrence and characteristics of anxiety and depression among Myanmar migrant workers in Ratchaburi province, Thailand

  3.2 To know the association between the socio-demographic and anxiety and depression among Myanmar migrant workers in Ratchaburi province, Thailand.

4. Details of participant.
   - Characteristics of participant are adult Myanmar migrant workers (age 18-59 years), both male and female living in Ratchaburi province, Thailand,

     4.1 Including criteria

     - Adults Myanmar migrant workers (18-59 years) who can speak Burmese language.
     - Those who have been living in Ratchaburi province for at least six months.
     - Willing to participate in this research

     4.2 Exclusion criteria

     - Age younger than 18.
     - Those who have chronic illness and mental problems.
     - Those who are not willing to participate.

   - Number of participants required is 270. Those participants will be collected from following factories.

- 1. C.J Factory , Bann Luek (Noodle factory)
  2. S. Pattana Alloy Factory, Bann Luek (Metal factory)
  3. Oo Sa Doll Factory, Bann Leuk (Doll factory)
  4. Tao Fu Factory, Bann Leuk (Chinese Food)
  5. Sweet Fish Factory, Bann Leuk (Fish factory)
  6. Chor Ganchang Factory, Nongree (Construction)
  7. Harson Sporting Goods Factory, Nongree (Football factory)
  8. Nut Factory, Nongree.

5. Researcher and research assistants who are health-volunteers from Bann Luek Health Care Center in Ratchaburi province will provide information about the study to you. Once you understand and are willing to participate in the study, you will be asked to sign the informed consent form.

6. Process of providing information (which also be stated in the proposal):

   You will be interviewed by the researcher or the assistants for about 20-30 min. There are 15 questions about your demographic information(age, education, income, etc), 20 questions about your feeling of fear or nervousness and 20 questions about sad feeling and hopelessness. In some case, after the interview, you may be asked for more information which might take just a few minutes more.

7. Your information will be kept confidential and the presentation of research result will be in an overall picture only.

8. Your participation in this research project is voluntary and you have the right to refuse this participation or to withdraw at any time with no harm on your benefit and there will be no adverse impact on you.

9. “If you have any question or if you would like to obtain more information, the researcher is available at all time. If the researcher has a piece of new information regarding the benefit or the risk/harm, the participant will be immediately informed”.

10. “Information that is directly related to you will be kept **confidential.** Results of the study will be reported as an overall statement with anonymity.

11. There is no payment and compensation for participant in this research.

12. If the researcher does not treat you as stated in the patient‟s information sheet, you can write a report to the Ethics Review Committee for Research Involving Human Research Subjects, Health Science 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

Address ……

Date …….

Code number of the participant ……

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

Title "…**Factors inducing anxiety and depression among adult Myanmar migrant workers: A case study in Ratchaburi province, Thailand** …"

Principal researcher's name…….Mr.Aung Zaw Phyo……....……

Contact address..521/3-4 Soi Sriayuthaya 2-4, Sirayuthaya Road, Prayatai Distric, Rajthavee,Bangkok 10400…….……..

Telephone……0865201080…….……

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

I willingly **agree** to participate in this research project and allow the researcher to ask a series of questions in this structured face- to- face interview which covers general information, living condition, working condition, speaking Thai language skill, feelings of fear, nervousness, sad feeling and hopelessness.

The interview time will take about 20-30 minutes and will be done only one time.

I have **the right** to withdraw from this research project at any time at will without any clarification. This withdrawal **will not have any negative impact upon me**.

The researcher has confirmed that the procedure(s) will be exactly the same as indicated in the patient‟s information sheet. Any personal information will be **kept confidential.** Results of the study will be reported as an overall statement with anonymity.

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

I have also received a copy of patient‟s information sheet and an informed consent form.

Signature ……..……

(……Mr. Aung Zaw Phyo……)

Researcher

Signature ……..……

(……..……)

Participant

Signature ……..……

(……..……)

Witness

APPENDIX C

Questionnaire

Questionnaire on "Factors inducing anxiety and depression among Myanmar migrant workers: a case study in Ratchaburi Province, Thailand"

Part I : Demographic Characteristics

Instruction: The following questions are about demographic information. Please mark √ in the parenthesis ( ). Please also write down in the blank space where provided.

1. What is your gender?
   ( ) 1.Male
   ( ) 2.Female

2. What is your age? . . . . . .age . . . . . .months

3. What is your race?
    ( ) 1.Myanmar
    ( ) 2.Mon
    ( ) 3.Karin
    ( ) 4.Shan
    ( ) 5.Others (Please specify) . . . . . .

4. What is your religion?
    ( ) 1.Buddhist
    ( ) 2.Christian
    ( ) 3.Muslim
    ( ) 4.Hindu
    ( ) 5.Others (Please specify) . . . . . .

5. What is your practice of religion?
    ( ) 1.Go to temple or church or mosque
    ( ) 2.Meditation
    ( ) 3.Being fasting
    ( ) 4.No practice
    ( ) 5.Others (Please specify) . . . . . .

6. What is your education status?
    ( ) 1.Illiterate
    ( ) 2.Read and write

( ) 3.Primary

( ) 4.Middle school

( ) 5.High school

( ) 6.University

7. What is your occupation?

( ) 1.Fully employed laborer

( ) 2.Temporary employee

8. How much is your average monthly income?

( ) 1. <5,000 baht

( ) 2. 5,000-7,000 baht

( ) 3. >7,000 baht

9. With whom do you live?

( ) 1.Alone

( ) 2.With friend

( ) 3.With relative

( ) 4.With parent

( ) 5.Others (Please specify) . . . . . .

10. Are you drinking alcohol within last six months?

( ) 1.Yes

( ) 2.No, go to no: 11

10.1. How many glasses do you drink per day?

( ) 1.Less than 3glass of beer or alcohol per day

( ) 2.More than 3glass of beer or alcohol per day

10.2. Can you stop drinking without difficulty after 1 or 2 drinks of sprits (whisky, vodka, Mekong)?

( ) 1.Yes

( ) 2.No

11. Do you smoke within last six month?

( ) 1.Yes

( ) 2.No, go to no: 12

11.1How many cigarettes do you smoke per day?

( ) 1. < 1 cig/day

( ) 2. 1-9 cigs/day

( ) 3. 10-19 cigs/day

( ) 4. 20-39 cigs/day

12. Are you married?

( ) 1.Yes

( ) 2.No

13. Do you have problems with your surroundings?

( ) 1.Yes

( ) 2.No

14. Do you have any problems with working environment within last six months?

( ) 1.Yes

( ) 2. No

Part II: Test for anxiety

Instruction: The following questions are about anxiety. Please mark √ in the column for the one best answer only.

Zung Anxiety Test

Within last six months, do you have following feelings?

No	Questions	Little or none of the time	Some of the time	A large part of the time	Most of the time
1.	I feel more nervous and anxious than normal				
2.	I feel afraid for no reason at all				
3.	I feel like I'm falling apart and going to pieces.				
4.	I get upset easily or feel panicky.				
5.	I feel that everything is all right and nothing bad will happen				
6.	My arms and legs shake and				

	tremble.				
7.	I am bothered by headache, necks and back pains.				
8.	I feel weak and get tired easily.				
9.	I feel calm and can sit still easily.				
10.	I can feel my heart being fast.				
11.	I am bothered by dizzy spells.				
12.	I have fainting spells or feel like it.				
13.	I can breathe in and out easily.				
14.	I get feelings of numbness and tingling in my fingers and toes.				
15.	I am bothered by stomach ache or indigestion.				
16.	I have to empty my bladder often.				
17.	My hands are usually warm and dry.				
18.	My face gets hot and flashes.				
19.	I fall asleep easily and get a good night‟s rest.				
20.	I have nightmares.				

Any participants who replied most of the time to negative questions could have counseling with the doctor.

Below demonstrated the full result from this section of the questionnaire:

(7) Zung anxiety test

This following table shows response of Myanmar migrant workers to Zung anxiety test. More than half of the respondents answered little or none of the time or some of the time to negative questions and a large part of the time or most of the time to positive questions.

Zung anxiety test (n=300)

No	Questions	Little or none of the time	Some of the time	A large part of the time	Most of the time
		n (%)	n (%)	n (%)	n (%)
1.	I feel more nervous and anxious than normal	196(65.3%)	77(25.7%)	24(8%)	3(1%)
2.	I feel afraid for no reason at all	178(59.3%)	104(34.7%)	16(5.3%)	2(0.7%)
3.	I feel like I'm falling apart and going to pieces.	187(62.3%)	93(31%)	11(3.7%)	9(3%)
4.	I get upset easily or feel panicky.	142(47.3%)	138(46%)	5(1.7%)	15(5%)
5.	I feel that everything is all right and nothing bad will happen	87(29%)	79(26.3%)	64(21.3%)	70(23.3%)
6.	My arms and legs shake and tremble.	201(67%)	78(26%)	11(3.7%)	10(3.3%)
7.	I am bothered by headache, necks and back pains.	135(45%)	107(35.7%)	40(13.3%)	18(6%)
8.	I feel weak and get tired easily.	168(56%)	102(34%)	27(9%)	3(1%)

9.	I feel calm and can sit still easily.	76(25.3%)	85(28.3%)	77(25.7%)	62(20.7%)
10.	I can feel my heart being fast.	159(53%)	105(35%)	31(10.3%)	5(1.7%)
11.	I am bothered by dizzy spells.	125(41.7%)	120(40%)	39(13%)	16(5.3%)
12.	I have fainting spells or feel like it.	164(54.7%)	108(36%)	24(8%)	4(1.3%)
13.	I can breathe in and out easily.	47(15.7%)	55(18.3%)	73(24.3%)	125(41.7%)
14.	I get feelings of numbness and tingling in my fingers and toes.	167(55.7%)	84(28%)	33(11%)	16(5.3%)
15.	I am bothered by stomach ache or indigestion.	180(60%)	92(30.7%)	27(9%)	1(0.3%)
16.	I have to empty my bladder often.	141(47%)	132(44%)	23(7.7%)	4(1.3%)
17.	My hands are usually warm and dry.	195(65%)	68(22.7%)	29(9.7%)	8(2.7%)
18.	My face gets hot and flashes.	215(71.7%)	61(20.3%)	24(8%)	0(0%)
19.	I fall asleep easily and get a good night‟s rest.	25(8.3%)	61(20.3%)	104(34.7%)	110(36.7%)
20.	I have nightmares.	172(57.3%)	101(33.7%)	24(8%)	3(1%)

Part III: Test for depression

Instruction: The following questions are about depression. Please mark √ in the column for the one best answer only.

Zung Depression Test

Within last six months, do you have following feelings?

No.	Questions	A little of the time	Some of the time	Good part of time	Most part of the time
1.	I feel down-hearted and blue.				
2.	Morning is when I feel the best.				
3.	I have crying spells or feel like it.				

4.	I have trouble sleeping at night.				
5.	I eat as much as I used to.				
6.	I enjoy sex/ I think I will enjoy sex.				
7.	I notice that I am losing weight.				
8.	I have trouble with constipation.				
9.	My heart beats faster than usual.				
10.	I get tired for no reason.				
11.	My mind is as clear as it used to be.				
12.	I find it easy to do the things I used to.				
13.	I am restless and can‟t keep still.				
14.	I feel hopeful about the future.				
15.	I am more irritable than usual.				
16.	I find it easy to make decisions.				
17.	I feel that I am useful and needed.				
18.	My life is pretty full.				
19.	I feel that others would be better off I f I were dead.				
20.	I still enjoy the things I used to do.				

Below demonstrated the full result from this section of the questionnaire:

(1) Zung depression test

This following table shows response of Myanmar migrant workers to Zung depression test. More than half of the respondents answered a little

or none of the time or some of the time to negative questions and good part of the time or most part of the time to positive questions.

Zung depression test (n=300)

No.	Questions	A little of the time	Some of the time	Good part of time	Most part of the time
		n (%)	n (%)	n (%)	n (%)
1.	I feel down-hearted and blue.	191(63.7%)	82(27.3%)	6(2%)	21(7%)
2.	Morning is when I feel the best.	51(17%)	98(32.7%)	86(28.7%)	65(21.7%)
3.	I have crying spells or feel like it.	164(54.7%)	91(30.3%)	28(9.3%)	17(5.7%)
4.	I have trouble sleeping at night.	178(59.3%)	76(25.3%)	24(8%)	22(7.3%)
5.	I eat as much as I used to.	70(23.3%)	74(24.7%)	47(15.7%)	109 (36.3%)
6.	I enjoy sex/ I think I will enjoy sex.	131(43.7%)	111(37%)	55(18.3%)	3(1%)
7.	I notice that I am losing weight.	164(54.7%)	89(29.7%)	44(14.7%)	3(1%)
8.	I have trouble with constipation.	165(55%)	85(28.3%)	39(13%)	11(3.7%)
9.	My heart beats faster than usual.	184(61.3%)	80(26.7%)	35(11.7%)	1(0.3%)
10.	I get tired for no reason.	185(61.7%)	80(26.7%)	30(10%)	5(1.7%)
11.	My mind is as clear as it used to be.	53(17.7%)	76(25.3%)	102(34%)	69(23%)
12.	I find it easy to do the things I used to.	41(13.7%)	45(15%)	110(36.7%)	104(34.7%)
13.	I am restless and can‟t keep still.	184(61.3%)	74(24.7%)	36(12%)	6(2%)
14.	I feel hopeful about the future.	74(24.7%)	61(20.3%)	74(24.7%)	91(30.3%)
15.	I am more irritable than usual.	148(49.3%)	97(32.3%)	51(17%)	4(1.3%)

16.	I find it easy to make decisions.	49(16.3%)	111(37%)	63(21%)	77(25.7%)
17.	I feel that I am useful and needed.	56(18.7%)	58(19.3%)	104(34.7%)	82(27.3%)
18.	My life is pretty full.	80(26.7%)	130(43.3%)	44(14.7%)	46(15.3%)
19.	I feel that others would be better off I f I were dead.	230(76.7%)	42(13%)	22(7.3%)	6(2%)
20.	I still enjoy the things I used to do.	25(8.3%)	71(23.7%)	78(26%)	126(42%)

APPENDIX D

Budget

No.	Activities	Unit	Price (Baht)	Unit (Number)	Total budget (Baht)
1	Pre-testing				
	Photocopy	Quest.	3/set	3×20	60
2	Data Collection				
	Copy Quest.	Quest.	3/set	3×400	1,200
	Interviewers per day	Person	300/day	4persons×14days	16,800
	Accommodation	Person	500/day	500×14days	7,000
	Transport cost	Trip/day	200/day	200×14days	2,800
				Subtotal	27,800
3	Document Printing				
	Paper+printing	Page	5/page	800 pages	4,000
	Copy (exam+final submit)	Page	0.5/page	12×400	2,400
	Stationary	Set	400/set	1	400
	Binding Paper	Set	200/set	6	1,200
				Subtotal	4,400
				Grand Total	32,260

APPENDIX E

Time Schedule

Procedure	Time Frame (Months)									
	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-20
1. Literature review	■	■	■							
2. Writing thesis proposal			■	■						
3. Submission for proposal exam					■					
4. Ethical consideration from Chulalongkorn University(CPHS)					■	■	■			
5. Pretest questionnaires						■				
6. Field preparation and data collection								■		
7. Data analysis								■	■	
8. Thesis writing									■	
9. Final thesis exam									■	
10. Submission of article for publication										■
11. Submission of thesis										■

CURRICULUM VITAE

Name	:	(Mr.) Aung Zaw Phyo
Date of Birth	:	6 July 1986
Place of Birth	:	Pindaya (Shan State, Union of Myanmar)
Educational Achievement	:	M.B;B.S
Work Experiences	:	
Jan „08 – Dec „08	:	House surgeon internship
Mar „09 – Feb „10	:	General Practitioner
Mar „10 – May ‟10	:	Volunteer in IHC (Intensive HIV Care) Department in Mandalay General Hospital, Myanmar.