Factors Affecting Anxiety and Depression in Myanmar Migrant Adolescents in Bang Bon District, Bangkok, Thailand

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ปัจจัยที่มีผลต่อความวิตกกังวลและความซึมเศร้าในผู้อพยพวัยรุ่นชาวพม่าในเขตบางบอน จังหวัดกรุงเทพมหานคร ประเทศไทย

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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต
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hesis Title	FACTORS AFFECTING ANXIETY AND DEPRESSION IN MYANMAR MIGRANT ADOLESCENTS IN BANG BON DISTRICT, BANGKOK, THAILAND
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หู พวิน ไคน์ : ปัจจัยที่มีอิทธิพลต่อความวิตกกังวลและความซึมเศร้าในผู้อพยพวัยรุ่นชาวพม่าในเขตบางบอน จังหวัดกรุงเทพมหานคร ประเทศไทย (Factors Affecting Anxiety and Depression in Myanmar Migrant Adolescents in Bang Bon District, Bangkok ,Thailand) อาจารย์ที่ปรึกษา: แอเลสซิโอ พันซ่า M.D, M.Com.H, D.T.M. &H., 72 หน้า

การศึกษานี้มีวัตถุประสงค์ในการอธิบายและประเมินความสัมพันธ์ระหว่างปัจจัยอาทิ ลักษณะประชากรของกลุ่มที่ศึกษา ลักษณะทางเศรษฐกิจและสังคม ลักษณะผู้เลี้ยงดู ประวัติและระดับการศึกษา และปัจจัยทางด้านพฤติกรรม ที่มีอิทธิพลต่อความวิตกกังวลหรือความเครียดในกลุ่มผู้อพยพวัยรุ่นชาวพม่าที่อาศัยอยู่ในเขตบางบอน กรุงเทพมหานคร ซึ่งทำการศึกษาโดยการตอบแบบสอบถามด้วยการสัมภาษณ์ในเดือนกุมภาพันธ์ พ.ศ. 2553

ผลการศึกษาระบุว่ากลุ่มที่ศึกษาจำนวน 271 คน ส่วนใหญ่มีอายุระหว่าง 18 -19 ปี เป็นโสด เป็นเชื้อสายพม่าและกะเหรี่ยง ทำงานเต็มเวลา มีการศึกษาระดับมัธยมศึกษา ไม่เข้าเรียนในโรงเรียนสำหรับผู้อพยพ และอาศัยอยู่กับเพื่อน ญาติ หรือคู่สมรส ร้อยละ 64 ของกลุ่มศึกษามีทั้งบิดาและมารดา ร้อยละ 16 มีบิดามารดาที่หย่าร้างกัน และ ร้อยละ 19 มีบิดาหรือมารดาเท่านั้น ในกลุ่มวัยรุ่นที่มีบุตรพบว่าส่วนใหญ่มีระดับการศึกษาเพียงชั้นประถมศึกษาและร้อยละ 36 ของคนกลุ่มนี้มีความวิตกกังวลและความเครียด ร้อยละ 35 ของกลุ่มศึกษาดื่มแอลกอฮอล์ ร้อยละ 25 ของกลุ่มศึกษาสูบบุหรี่ และร้อยละ 5.5 ของกลุ่มศึกษาเคยถูกบังคับให้มีเพศสัมพันธ์ ความชุกของความวิตกกังวลคือร้อยละ 22.1 ความชุกของความเครียดเล็กน้อยคือร้อยละ 13 และความชุกของความเครียดปานกลางคือร้อยละ 1.8 จากการวิเคราะห์ความสัมพันธ์พบว่าเชื้อชาติ รายได้ ความสัมพันธ์อันดีกับเพื่อน และ ความขัดแย้งของบิดามารดา มีความสัมพันธ์กับทั้งความวิตกกังวลและความเครียด ($p<0.05$) ปัจจัยทางด้านพฤติกรรมทั้งหมดไม่ความสัมพันธ์กับความวิตกกังวล มีเพียงปัจจัยทางด้านพฤติกรรมบางส่วนที่มีความสัมพันธ์กับความเครียด กลยุทธ์ในการส่งเสริมสุขภาพจิตในกลุ่มวัยรุ่นนี้ควรได้รับความสำคัญและผู้มีส่วนเกี่ยวข้องกับการส่งเสริมสุขภาพจิตในกลุ่มวัยรุ่นนี้ควรได้รับการอบรมและมีทักษะที่เหมาะสมต่อพันธ์กิจดังกล่าว

สาขาวิชา สาธารณสุขศาสตร์..... ลายมือชื่อนิสิต.....

ปีการศึกษา 2552..... ลายมือ อ.ที่ปรึกษาวิทยานิพนธ์หลัก.....

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KEYWORDS: ADOLESCENTS/ ANXIETY/ DEPRESSION

HPOO PWINT KHINE: FACTORS AFFECTING ANXIETY AND DEPRESSION IN MYANMAR MIGRANT ADOELSCENTS IN BANG BON DISTRICT, BANGKOK, THAILAND. THESIS ADVISOR: ALESSIO PANZA, M.D, M.Com.H, D.T.M. &H., 72pp.

This study was conducted on the February 2010, to describe the independents variables of the demographic factors , socio-economic factors , parental factors, educational background and the school status, behavioral factors and access the association of these independent variables with the dependent variables of (anxiety , depression)among the Myanmar migrant adolescents in Bang Bon district , Bangkok, Thailand. The data was collected the interviewer administrated questionnaire.

The majority of the respondents were in the age of 18-19 years old and two hundred and seventy one adolescents were participated in this study. Most of the adolescents were single, Myanmar and Karen, full time workers, had attained middle school education. Most of the adolescents were not attending the migrant school .Most of the respondents lived together with their friends and relatives, some lived with their spouse.64%of the adolescents have both parents, 16% had divorce parents and 19 % had single parents. Majority of the teens mothers' had primary education and only 36% of the teens mothers' had anxiety, depression .35% of the teens were drinking alcohol and 25% were smoking; only 5.5% of the teens had forced sex against their will.

The prevalence of anxiety in those migrant teens had 22.1% and depression was 12.9% mild depression and 1.8% moderate depression.

In bivariate analysis, race, income, good relationship with friends and parental conflicts were associated with both anxiety and depression ($p<0.05$). All behavioral factors were not associated with depression but some associated with anxiety.

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 adolescents.

Field of Study: Public Health. Student's Signature.....

Academic Year: 2009..... Advisor's Signature

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LIST OF ABBREVIATIONS

CES-D	Center for Epidemiologic Studies Depression Scale
ECCU	Ethical Review Committee for research Chulalongkorn University, International Children's Emergency Fund
NGO	Non Government Organization
NMWD	Network for Migrant Worker Development
PTSD	Post-Traumatic Stress Disorder
QOF	The Quality and Outcomes Frameworks
UNICEF	United Nations Children's Fund or originally the United Nations
WHO	World Health Organization

CHAPTER I

INTRODUCTION

1.1 Background

Adolescent (10to19years) is the transitional stage of development from child to adult. That time is identified with dramatic changes in body, psychology and academic career. Adolescence is a period of major physical and psychological change, as well as great changes in social interactions and relationships (WHO, 2009). In the onset of adolescence, children usually complete elementary school and enter secondary education, such as middle school or high school (Steinberg, 1996). There are an estimated 1.2 billion adolescents in the world today. One in every five people in the world is an adolescent, and 85% of them live in developing countries (WHO, 2008).

Healthy development of adolescents depend on several interactive and complex factors .They include the socioeconomic circumstances in which a person is born , the environment in which he/ she grows up, his/ her inter-personal relationships within the family, peer group pressure, the value of community which he or she lives and the opportunities for education and employment (WHO, Mental Health, 2003).

Migration can positively and negatively impact on health outcomes just a health status can affect the migration status. Migration itself is not a risk to health, only the condition surrounding the migration process can venerable to ill health (Clapham & Robison, 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 families and from familiar 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).Migrants themselves may thus simply not perceive themselves as being in need of psychological assistance

(Green et al., 2006)Many migrants women face the risk of sexual abuse which have 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 a migrant group is determined by a range of factors including the characteristics of the 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 involves 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 percent of immigrant workers of Thailand are Myanmar, many ethnic peoples such as the Mons, the Karens and the Shans, who flee poverty, war and ethnic conflict in their homelands. The ratio of female to male immigrant workers is 43 to 57(Immigrant workers, facts and figure, 2008).

This study area, Bang Bon district is situated in the South West of Bangkok and has only one sub district. Actually, Bang Bon was once a sub district of Bang Khun Thian but it is separated and formed as a Bang Bon district in 2007. In this district, over seven thousand of Myanmar migrants live and most of them are factory workers, working in shrimp factory, canned fish factory and plastic factory and majority of people are young adults (Public health volunteers from NMWD- NGO).

1.2 Research Questions

(1) What are the prevalence of anxiety and depression among Myanmar migrant adolescents?

(2) What are the factors affecting adolescent anxiety and depression?

1.3 Objectives

- To determine prevalence distribution and characteristics of anxiety and depression among Myanmar migrant adolescent in Bangkok urban area.
- To examine the relationship between the socio-demographic and parental variables with anxiety and depression in the same group of adolescents.

1.4 Study Hypotheses

There are relationships among demographic, socio-economic, parental, behavioral factors and anxiety and depression among adolescent migrants in Bang Bon district.

1.5 Operational Definitions

In this study, there are both independent and dependent variables.

1.5.1 Independent Variables

- Age refers to how old the interviewee is at the time of the interview.
- Gender refers to male and female.
- Ethnicity refers to which ethnicity does the interviewee belongs to and it is classified into Myanmar, Karean, Shan and others are Mon, Yakhine, Dawei.
- Practice of religion refers to the interviewee is going to temple or church or mosque and take meditation and observe fasting according to their religion.
- Teens' occupation refers to fully employed laborer, full time employed fisherman, temporary employee and jobseeker.
- Living status refers to that interviewee is living alone, with parents, with friends or relatives.
- Marital status refers to the current marital status of the interviewee. It is classified into married, single, widowed, and divorced.
- Parent conflicts refer to the interviewee's parents being separated or divorced, or quarrel everyday or fighting most of the time.
- Mother's educational level refers to interviewee mother's primary, secondary, or high school, graduate or illiterate status.
- Parent marital status refers to married, single, widowed, and divorced.
- Income refers to interviewee's monthly income.

- Educational level refers to the interviewee is illiterate, primary, secondary, high school or attending university.
- School attendance refers to the interviewee is attending school regularly (>80%of the time), irregularly (50-80% of the time), insuffiently (<50% of the time).
- Bullied by others at school refers to the interviewee is being bullied by others at school or not.
- Alcohol drinking refers to the interviewee is asked his/her drinking status, regular drinker (>3 glasses per day) or social drinker (<3 glasses per day), can he/she stop drinking by him/herself without difficulty, whether he/she being stigmatized by his friends, relatives, or others for being a drinker. (Michigan alcoholism test)
- Smoking refers to the interviewee is being non smoker, trivial, light, moderate or heavy smoker according to QOF indicators (The Quality and Outcomes Framework QOF). Trivial means less than one cigarettes per day, light smoker 1-9 cigs./day, Moderate smoker - 10-19 cigs./day & Heavy smoker - 20-39 cigs./day

1.5.2 Dependent Variable

- Anxiety refers to interviewees 'excessive worry. Anxiety is classified into mild, moderate and severe level according to Zung self rating anxiety scale.
- Depression refers to interviewees' feeling sad, hopeless, and/or un motivated for at least two weeks or more. It is also classified into mild, moderate and severe according to Zung self rating depression scale.

1.6 Conceptual Framework

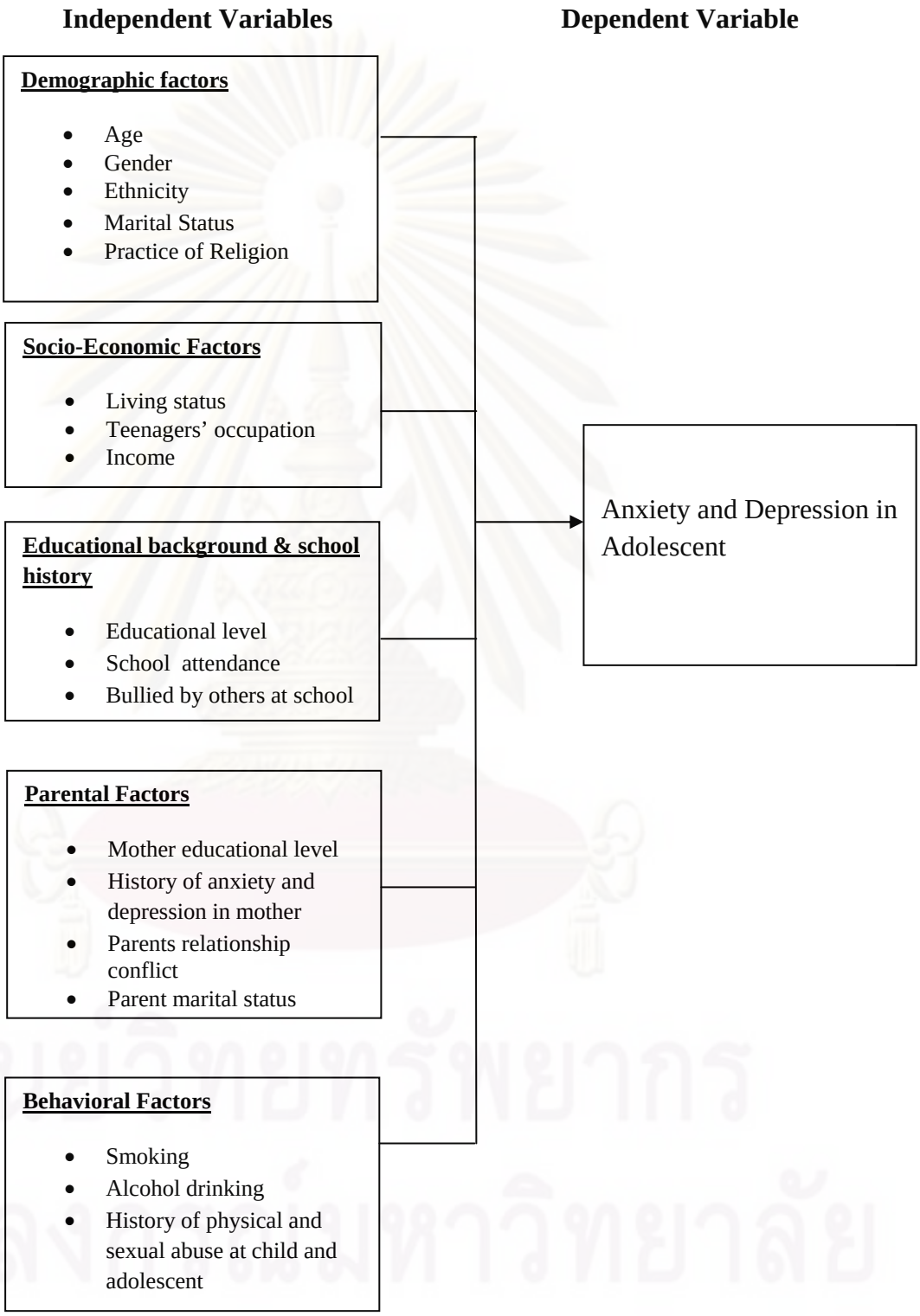

Figure 1: Conceptual Framework

CHAPTER II

LITERATURE REVIEW

2.1 Adolescent Health

Adolescence is divided into three stages , early adolescence (11 through 13 years of age), middle adolescence (14 through 16years of age) and late adolescence (17 through 19years of age) (Clark, 1991). The difference between early and late adolescence can be illustrated by comparing 11- and 12-year-olds with17- and 18-year-olds. Early adolescents are barely out of childhood. Much like younger children, they still need special nurturing and protection. Late adolescents, on the other hand, share many attributes of adults. Early and late adolescents have very little in common with each other, and their needs and abilities tend to differ. (Perkins,2001). During the transition from childhood to adulthood, adolescents establish patterns of behavior and make lifestyle choices that affect both their current and future health. And then, environmental factors such as family, peer group, school, and community characteristics also contribute to the challenges that adolescents face (Healthy Youths, 2009). Moreover, poverty is also the most important factor for adolescent health. Poverty is closely associated with higher rates of violence, sexually transmitted infections, unintended pregnancy, school grade repetition, and dropping out of school(Duh, Janet Shalwitz, & Tsoulos, 1999).Adolescent health is influenced by the socio-economic background, age , gender, family and peer group and environment (British Medical Association , 2003).

2.2 Adolescent Mental Health

The mental health of adolescents is extremely important, not only in itself, but also because of the strong links that it has with adolescent health risk behaviors, violence and delinquency. In many senses, mental health is at the centre of adolescent health frame works (British Medical Association, 2003). At least 20% of young people will experience some form of mental illness (WHO, 2008). The WHO Global Burden of Disease Study estimates that mental and addictive disorders are among the most burdensome in the world and their burden will increase over next decades (WHO, 2008). The most common disorders among adolescents include depression,

anxiety disorders and 6-18% of adolescents are experiencing an anxiety disorder (Mercer, 2009) whereas, in Thai adolescents the prevalence of depressive symptoms varied from 20–21% (Charoensuk,2000) .In a Kenyan study severe anxiety (not including moderate and mild anxiety) was 8.3% (Ndetei,2008). Relatively little is known about the prevalence of depression among migrants. The aforementioned three studies showed the measured depression through the use of the Center for Epidemiologic Studies Depression Scale (CES-D). Typically, approximately18% of individuals, complete the CES-D (Hovey, 2001).

For employment , the participation in the labor force in the age group of 15-19 years in Myanmar is 64% for males and 54% for females(WHO,2004) . Employment opportunities for out of-school youth are very limited and an estimated 90% are unemployed. Many uneducated young people from rural areas and different ethnicities have to migrate to the economic capital city of Yangon and other larger towns or even neighboring countries such as Thailand and China for work, due to economic constraints at home (Caouette & Pack, 2002).

Another cause of depression is associated with marital discord and parenting problems. Our studies indicate that difficulties in peer relations during adolescence are also problematic and associated with depression, with significantly higher levels of peer stress and greater depressive reactions among girls compared to among boys (Shih et al., 2006). In the Australian longitudinal community study of youth, chronic interpersonal difficulties in peer, romantic, and family relationships at age 15 were significantly higher among youth who had both early onset (by 15) and recurrent major depression. Also the association between maternal depression and youth depression by age 20 was entirely mediated for girls, but not for boys, by interpersonal difficulties at 15 (Hammen, Brennan, & Keenan-Miller, 2008).However, parental factor is also important 14% of teenagers have mother with low education, 12% of adolescents living with single parent which caused the severe depression in United States (Rushton et al., 2002). Offspring of depressed parents are known to be at increased risk for depression and other psychiatric and psychosocial problems compared to the general population (Beardslee, Bemporad, Keller, & Klerman, 1983). Children of depressed parents are at a three- to fourfold risk for developing depression prior to adulthood (Beardslee, Versage, & Gladstone, 1998; Weissman, Warner,

Wickramaratne, Moreau, & Olfson, 1997), with up to 45% having an episode of major depression by late adolescence (Beardslee et al., 1998; Hammen, 2000). For behavior factors such as alcohol drinking and smoking, UK adolescent girls are more likely (11%) to be regular smokers than boys (9%) (Blenkinsop 2003 quoted in BMA p.14). The situation is different in other countries with more male than female adolescent smokers for instance in Ethiopia 4.5% male and 1% female adolescents and in Mongolia 15.4 % males 4.4 % females reported being current smokers (Rudatsikira 2007 & 2008), but in Zambia no sex difference was reported (Zulu, 2008). The prevalence of drinking, the amount drunk and the use of drugs, however, slightly higher among boys.. Physical activity declines with age. Age also affects alcohol which adolescents are exposed to and the type of mental health problems experienced (Sweeting, quoted in BMA p. 2). There is considerable evidence that both family and peer factors influence adolescent health. The behavior of family and peers has also been found to influence adolescent smoking, drinking and drug use (West P & Sweeting, quoted in BMA p2).

2.2.1 Anxiety

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

Anxiety disorders are the most common mental health problem among children and adolescents. About 13 percent of children and adolescents between the ages of 9 and 17 experience some kind of anxiety disorder. In general, females are more affected than males (Jamieson, 2006).

2.2.1.1 Types of Anxiety Disorders

Anxiety can take a wide variety of forms. Mental health professionals have divided anxiety disorders into seven major categories. They are social anxiety disorder, generalized anxiety disorder, obsessive–compulsive disorder, separation anxiety disorder, post –traumatic anxiety disorder, panic disorder and specific phobia (Jamieson, 2006).

For this thesis, only six types are relevant for adolescents. Separation anxiety disorder is happening only in young children.

1. Social Anxiety Disorder

The defining characteristic of social anxiety disorder—also called social phobia—is marked fear in social situations where the person is exposed to unfamiliar people or possible scrutiny by others. This anxiety can lead to severe distress or interfere with everyday activities and relationships. Social anxiety disorder typically starts in late childhood or early adolescence. For some teens, the problem is limited to specific situations; for example, when speaking in class or eating in front of stranger (Jamieson, 2006).

2. Generalized Anxiety Disorder (GAD)

GAD refers to excessive anxiety and worry over a number of things, such as schoolwork, appearance, health, money, and the future. At times, an unreasonable amount of worry may be focused on specific situations or events; for example, a good student might worry incessantly about grades. 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 perceived as inappropriate by the person having them, and that provoke considerable 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 rules. Such compulsions are aimed at preventing or reducing distress or preventing some dreaded event, even though there may be no realistic connection between the action and the feared situation. Many teens with OCD realize that their recurrent thoughts and acts are excessive and unreasonable. Yet they feel unable to stop them. Some are obsessed with concerns about dirtiness or sinfulness. Others devote hours to compulsive behaviors, such as washing their hands, repeating actions a set number of times, or repeating words silently(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 a traumatic occurrence. The event gives rise to intense feelings of fear, helplessness, or horror, because it is perceived as posing a threat to the 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 situations 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. The problem sometimes starts with sporadic, isolated attacks around the time of puberty. Over time, the attacks may gradually become more frequent, and those affected may grow increasingly worried about when and where the next attack will occur or what the consequences might be (Jamieson, 2006).

6. *Specific Phobias*

A specific phobia is an intense fear that is out of proportion to any real threat and focused on a specific animal, object, activity, or situation. People with phobias experience anxiety when they encounter or even think about the thing they fear. This anxiety sometimes 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 triggers themselves can be divided into five basic categories: animal, natural environment, injury, situational, and other (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. Adolescent depression is increasing at an alarming rate. Recent surveys indicate that as many as one in five teens suffers from clinical depression. This is a serious problem that calls for prompt and appropriate

treatment. Depression can take several forms, including bipolar disorder (formally called manic-depression), which is a condition that alternates between periods of euphoria and depression. Depression can be difficult to diagnose in teens because adults may expect teens to act moody. Also, adolescents do not always understand or express their feelings very well. They may not be aware of the symptoms of depression and may not seek help. (Mental Health America, 2009).These symptoms may indicate depression, particularly when they last for more than two weeks:

- Poor performance in school
- Withdrawal from friends and activities
- Sadness and hopelessness
- Lack of enthusiasm, energy or motivation
- Anger and rage
- Overreaction to criticism
- Feelings of being unable to satisfy ideals
- Poor self-esteem or guilt
- Indecision, lack of concentration or forgetfulness
- Restlessness and agitation
- Changes in eating or sleeping patterns
- Substance abuse
- Problems with authority
- Suicidal thoughts or actions

Teens may experiment with drugs or alcohol or become sexually promiscuous to avoid feelings of depression. Teens also may express their depression through hostile, aggressive, risk-taking behavior. But such behaviors only lead to new problems, deeper levels of depression and destroyed relationships with friends, family, law enforcement or school officials (Mental Health America, 2009). 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. Depression generates emotions such as hopelessness, despair and anger (Healthy Place, 2009). It has been established that about 55% of people suffering from depression have bouts of severe anxiety. In fact some symptoms are so similar that these conditions can even be said to occur at the same time. For instance, if a person has depression, a number of negative thoughts may fill his/her mind, leading to a fear of anxiety through these thoughts. Looking at it the other way round, when certain unreal fears or acute anxiety start affecting normal life, it may lead to a feeling of life going beyond control. This in turn leads to negative thoughts and ultimately that goes on to cause depression (Anxiety Go Away, 2007). A great number of depressions are also accompanied by anxiety. In one study, 85 percent of those with major depression were also diagnosed with generalized anxiety disorder while 35 percent had 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). Clinicians have observed that when anxiety occurs "co morbidly" with depression, the symptoms of both the depression and anxiety are more severe compared to when those disorders occur independently (Healthy Place, 2009).

2.2.3 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 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

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

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This study was cross-sectional descriptive and also analytical in nature. The questionnaires were used for data collection in this study. This study was certified by Ethical Review Committee for research Chulalongkorn University, (ECCU) on 1st February, 2010 (certify number: 158.1/52).

3.2 Study Area

Myanmar migrant adolescents in Bang Bon District, Bangkok.

3.3 Study Population

This study population was Teenagers aged 15-19 from Myanmar Migrant Adolescents living in Bang Bon District, Bangkok. Although Adolescents are 10-19 years old, we didn't include 10 to 14 years old teenagers because that may be difficult to get informed consent from their guardian. For 15 to 18 years old, we asked them to give consent by themselves because, it was impossible and not practical to get the informed consent from the parents of migrant and this recruitment process was approved by ECCU.

3.4 Sampling Technique

Among the 50 districts in Bangkok, Bang Bon district was selected purposively because there were many migrants including Myanmar and other migrants in that district. The subjects were selected purposively, by snowball technique by the public health volunteers at the (Network for Migrant Worker Development- NGO) who knows the adolescence age group in the district. Data collection was done in their residential area and at their workplaces because of their different work nature and hours. Both registered and unregistered workers were included in the study. The subjects were considered as vulnerable group due to age and migrant status.

Inclusion criteria of the subjects are (1) Myanmar migrant adolescents who can speak Burmese, (2) age between 15 to 19 years and (3) were willing to participate in the research.

Exclusion Criteria of the subjects are (1) those who have no time to complete answer to the interview.

3.5 Sample Size

Sample size depends on the number of teen agers at the migrant group in Bangkok.

$$N = \frac{z^2 pq}{d^2}$$ (Wayne, 2005)

n = sample size

Z = standard value for 95% confidence interval = 1.96

d = error allowance = 0.05

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

q = 1-p = 1-0.2 = 0.8

$$n = \frac{(1.96)^2 (0.2) (0.8)}{(0.05)^2} = 246$$

Sample size = 246. After adding an expected refusal rate of 10%, 271 interviews were made.

3.6 Measurement Tools structured questionnaire consisted of:

3.6.1Independent Variables

These variables were developed from a review of related theories, concepts and research. They include: social and family matters, school work and behavioral factors.

3.6.2 Dependent Variables

In this study, Adolescence anxiety and depression is measured by physical health problems; bodily pain; social functioning; general mental health, covering psychological distress and well-being; role limitation due to emotional problems; and general health perceptions.

3.7 Data Collection

Data collected by Interviewed administered Questionnaires; that were translated to Burmese Language. And then, back translation was done. Data was collected by face-to-face interview with the subjects by the researcher and two other research assistants who understand Burmese language well. The research assistants were the health volunteers of the (NMWD- NGO) who have experience in conducting face to face interview by using questionnaire previously. After recruitment of two research assistants, refreshment training was followed for about two hours. The contents of the training included how researchers should administer a questionnaire, introduce themselves, built the rapport, create convenient and friendly environment, and explain the objectives and information about the study to the subjects and take their consent prior to starting the interviewing. All subjects were interviewed by the use of the same questionnaire. After interviewing, the researchers checked the items of the questionnaire which was required to be answered completely. Actual data collection for the thesis was done by two research assistants and the researcher on a total of 271 target respondents in Bang Bon district in Bangkok. Every evening, all filled in questionnaire were checked for completeness, correctness and consistency. Total of 284 interviews were made, among them, the refusal rate of this study was 4.5 % (13 persons refused) and 10 incomplete questionnaires were excluded but for the incomplete questionnaire then, 10 subjects were added to complete the calculated sample size. The data collecting was continued on the other days until it get the calculated sample size.

3.8 Data Analysis

The researcher used SPSS 16 to organize and analyze data.

3.8.1 Descriptive Analysis

Frequency, percentage were used to organize data of dependent variables of family and social affairs, etc. The prevalence of anxiety and depression was presented.

3.8.2 Inferential Analysis

The relationships between the independent variables and dependent variables were presented by Chi-square test. Where sample were small the Fisher's exact test of statistical test was used in the analysis of contingency tables.

3.9 Reliability of the test

To establish of the reliability of the questionnaire, pilot study was conducted among 30 Myanmar Migrant Adolescents in Bang Khun Thian District, Bangkok, before doing the actual data collection. Then, internal consistency of the rating scales was done by Cronbach's alpha coefficient to measure the reliability. Overall Cronbach's alpha coefficient was 0.74. (Cronbach's alpha coefficient for anxiety test was 0.64; Cronbach's alpha coefficient for depression test was 0.8).

3.10 Validity of the test

Zung anxiety and depression test was validated because it is a standardized test. Alcohol drinking test validate by Michigan alcoholism test and smoking status is tested by QOF indicator (the quality and outcomes framework).General questionnaire was validated by 3 experts.

3.11 Ethical Consideration

Before conducting the research, approval from the Ethical Committee of Chulalongkorn University (through the College of Public Health Sciences) was obtained on the 1st of February 2010 and the approval number was158.1/52. Before interviewing the participants, the researcher and research assistants gave clear verbal explanation to each potential participant on the purposes and procedures of the study. Each potential participant would also be informed that participation in this study is completely voluntary and that they can withdraw at any time and which would not affect them by all means. The informed consents obtained from the participants who were willing to participate in the study.

3.12 Limitations

This study is conducted only in one district of Bangkok. Thus, it could not be a representative of all Myanmar adolescents' migrant population in Thailand. And the population is only 15 -19 years old teenagers not included 10-14 ages .So that is not the whole migrant adolescents in that district. And then, there is also a limitation of budget for the research.

3.13 Expected Benefit and Application

The result of this study was expected to be useful for both government and non-governmental sectors to review and planning of mental health promotion and

counseling for the Migrant Adolescents in Thailand for their betterment as well as the host country.

CHAPTER IV
RESULTS

This chapter presents the findings from the data analysis of the survey.

4.1 Univariate Analysis

The univariate analysis includes the frequency, percentage distribution of the respondents' demographic factors, socio economic factors, parental factors and behavioral factors.

(1) Demographic Factors

Table 1 shows the demographic characteristics of the respondents in the Bang Bon district, Bangkok. Almost 60% of the respondents were female and 44% were male. Age distribution is not normal and skewed toward to older age, the median is 18; the range is 15-19. Most of the respondents of Myanmar ethnicity were Myanmar 47.2%, second most was Karen 31%, Shan was 3.3% and others minority ethnic groups were 18.5%.However, for the religion, the majority were Buddhist with 86.3%, followed by Christian 10%, Muslims 2.6 % and Hindu 1.1%. Regarding with a practice of religion, 50.6% of respondents regularly went to pagoda, church or mosque, 39.5% were doing nothing, and 6.6% were practicing meditation and 3.3% practicing fasting. As for the marital status 72.3% of the respondents were single, 22.9% were married, 4.4%were divorced and only 0.4% were widow.

Table 1: Number and Percentage Distribution of Respondents by Demographic Factors (n=271)

Demographic Factors	Number	Percentage
Age		
15 Years	6	2.2
16 Years	38	14.0
17 years	62	22.9
18 years	81	29.9
19 years	84	31.0
Mean 17.73,Median 18,SD 1.1, Range 15-19		
Gender		
Female	151	55.7
Male	120	44.3
Ethnicity		
Myanmar	128	47.2
Karean	84	31.0
Shan	9	3.3
Others(Yakhine,Mon,Dawei)	50	18.5
Marital Status		
Single	196	72.3
Married	62	22.9
Divorced	12	4.4
Widow	1	0.4
Religion		
Buddhism	234	86.3
Christianity	27	10.0
Islam	7	2.6
Hinduism	3	1.1
Practice of Religion		
Go to temple or Church or Mosque	137	50.6
Meditation	18	6.6
Fasting	9	3.3
Doing nothing	107	39.5

(2) Socio economic factors

Table 2 describes about the occupation, income, living arrangements, good relationship with friends or not and having boyfriends / girl friends.

As for the occupation, majority of 66.4% were full time workers, 20.7% were temporary workers, 11.4% were job seekers and only 1.5 % were full time fishermen. About 59% of the respondents got 4,000-6,000 baht per month, 28% got less than 4,000 baht per month and 13 % got more than 6,000 baht per month. Most of the respondents 38.4% lived with their relatives, 28.4% lived with friends, 17.3% with parents, and 13.7% with their spouse and only 2.2% lived alone. Around 85% of the respondents have good relationship with their ordinary friends and 41% have boyfriends/ girlfriends.

Table 2: Number and Percentage Distribution of Respondents by Socio-Economic Factors (n=271)

Socio-Economic Factors	Number	Percentage
Occupation		
Full time worker	180	66.4
Temporary worker	56	20.7
Job Seekers	31	11.4
Full time Fishermen	4	1.5
Income		
<4,000 Baht per month (USD<125)	76	28
4,000-6,000 Baht($125-187)	160	59
>6,000 Baht ($>187)	35	13
Live with		
Relatives	104	38.4
Friends	77	28.4
Parents	47	17.3
Spouse	37	13.7
Alone	6	2.2
Good relationship with Friends		
Yes	230	84.9
No	41	15.1
Having Girlfriend/Boyfriend		
Yes	112	41.3
No	159	58.7

(3) Factors of Educational background and school history

Table 3 shows the educational background and school history. For educational level of respondents, 40% were middle school, 31% were high school, 16.6%were primary education, 9.3%were read and write only, 4.4 %were university education and only 1.8%was illiterate. Only 17.7% were attending school. Among them, 8.8%

were attending school irregularly, 6.3% were regularly and 2.6% were insufficiently. Among the 17.7%, 10.7% got depressed when they get low grade in the class and 10% were worried about the school lessons and only 1.5% was being bullied at school by others.

Table 3: Number and Percentage Distribution of Respondents by Educational Background and school history (n=271)

Educational background &School history	Number	Percentage
Educational Level(n=271)		
Illiterate	5	1.8
Read and Write	25	9.3
Primary	45	16.6
Middle	100	36.9
High school	84	31
University	12	4.4
Attending School (n=271)		
Yes	48	17.7
No	223	82.3
If attend school, (n=48)		
Regularly (attend>80%)	17	6.3
Irregularly (50-80%)	24	8.8
Insufficiently (<50%)	7	2.6
Worried about school lessons (n=48)		
Yes	27	10
No	21	7.7
Get Depress when school grade fall (n=48)		
Yes	29	10.7
No	19	7
Being bullied at school by others (n=48)		
Yes	4	1.5
No	44	16.2

(4) Parental Factors

Table4 illustrates about having parents, parental conflict, mothers 'educational level and history of anxiety and depression in the respondents' mother. About 36 % have one parent only, among them, 20% were deceased and 16% were divorced parents .Only 15.5% had the parental conflicts but history of anxiety and depression of the respondents' mothers were 36% .As for a mothers' educational status, 36% were primary education, 30% were read and write, 20% were middle school, 8% were illiterate, around 3 % were high school education, nearly 2% were graduate and nearly 1% had university education.

Table4: Number and Percentage Distribution of Respondents by Parental Factors (n=271)

Parental Factors	Number	Percentage
Having both Parents		
Yes	174	64.2
No	97	35.8
If not present , (n=97)		
Deceased	52	19.2
Divorced	45	16.6
Parent Relationship Conflict		
Yes	42	15.5
No	229	84.5
Mother's Educational Level		
Illiterate	22	8.1
Read and Write	81	30.0
Primary	98	36.2
Middle	54	19.9
High School	9	3.3
University	2	0.7
Graduate	5	1.8
History of Anxiety and Depression in Mother		
Yes	98	36.2
No	173	63.8

(5) Behavioral Factors

Table 5 shows about the behavioral factors which were alcohol drinking ,smoking cigarettes, feeling about puberty, forced sex and physically and mentally abused e.g. calling bad names, etc; . Only 35% were drinking alcohol, among them 23% drank less than 3 glass of beer or alcohol per day, 12% drank more than 3 glass of beer or alcohol per day and then, 32% of the respondents can stop drinking spirits after one or two drinks, whereas 25% of the respondents were being complained by their relatives or friends about drinking. For a smoking status , only 25.5% were smoking , among them 23% were smoked 1-9 cigarettes per day , 1.5% were smoked 20-29 cigarettes per day and only 0.7% was trivial smokers, that is less than 1 cigarettes per day . 56% of the respondents were never been physically abused (called bad names, beaten) by others from childhood till now, 25% were often abused and 18% were seldom abused .5.5% of the respondents were having sex (physically and mentally) against their will. Regarding with the feeling about the puberty, 36% had no feeling about puberty and 64% had feeling about puberty. Among 64%, over 26% were shy, about 20% were satisfied, nearly 10% were discomfort and only 7.7% were worried about for puberty.

Table 5: Number and Percentage Distribution of Respondents by Behavioral Factors (n=271)

Behavioral Factors	Number	Percentage
Alcohol Drinking		
Yes	95	35.1
No	176	64.9
If Yes, (n=95)		
Less than 3 glass of beer or alcohol	63	23.3
More than 3 glass of beer or alcohol	32	11.8
Stop drinking without any difficulty after one or two drink of sprits(n=95)		
Yes	86	31.7
No	9	3.4
Relatives or Friends complain about your drinking (n=95)		
Yes	69	25.5
No	26	9.6
Smoking		
Yes	69	25.5
No	202	74.5
How many Cigarettes per day(n=69)		
<1	2	0.7
1-9	63	23.3
10-19	4	1.5
20-39	-	-
physically abused (beaten , called bad name) from childhood up to now		
Never	153	56.5
Often	69	25.5
Seldom	49	18.0
Have forced (physically and Mentally)sex against their will		
Yes	15	5.5
No	256	94.5
Feeling about Puberty		
Just normal	99	36.5
Shy	72	26.6
Satisfied	53	19.6
Discomfort	26	9.6
Worried	21	7.7

(6) Prevalence of Anxiety

For the prevalence of anxiety, 22% of the respondents had mild to moderate anxiety according to the Zung anxiety scale. The mean of anxiety was36.4, standard deviation was 8.58 and the range was 21-57.

Table 6: Prevalence of Anxiety (n=271)

Anxiety	Number	Percentage
Normal	211	77.9
Mild to Moderate Anxiety	60	22.1
Severe Anxiety	-	-
Extreme Anxiety	-	-
Mean 36.4,SD 8.58,Range 21-57		

(7) Prevalence of Depression

For depression, about 13% had mild depression and nearly 2% of the respondents had moderate depression according to the Zung depression scale. The mean of depression was 40, standard deviation was 8.46and the range was 26-67.

Table 7: Prevalence of Depression (n=271)

Depression	Number	Percentage
Normal	231	85.3
Mild Depression	35	12.9
Moderate Depression	5	1.8
Severely Depression	-	-
Mean 40,SD 8.46,Range 26-67		

4.2 Bivariate Analysis

Table 8 showed the association between demographic factors and anxiety. There was significant association between the sex and anxiety ($p < 0.05$) and females are more anxious than males.

There was also significant association between the ethnicity and anxiety ($p < 0.01$), 20.3% of Myanmar, 13% of Karean, 22% of Shan and others ethnic group are the most anxious group.

Age, religion, practice of religion and marital status were not associated with anxiety in this study.

Table 8: Association between Demographic factors and Anxiety (n=271)

Demographic factors	Anxiety		Chi-square	p-value
	Yes	No		
	Freq: (%)	Freq :(%)		
Sex				
Male	19(15.8)	101(84.2)	4.335*	0.037
Female	41(27.2)	110(72.8)		
Age				
15-17	29(27.4)	77(72.6)	2.275	0.131
18-19	31(18.8)	134(81.2)		
Ethnicity				
Myanmar	26(20.3)	102(79.7)	15.675**	0.001
Karean	11(13.1)	73(86.9)		
Shan	2(22.2)	7(77.8)		
Others (Mon, Yakhine, Dawei)	21(42.0)	29(58.0)		
Religion				
Buddhist	51(21.8)	183(78.2)	0.017	0.896
Non Buddhist	9(24.3)	28(75.7)		
Practice of religion				
Yes	39(23.8)	25(76.2)	0.43	0.512
No	21(19.6)	86(80.4)		
Marital status				
Single	44(22.4)	152(77.6)	0.001	0.973
Non single (married, divorce, widow)	16(21.3)	59(78.7)		

*($p<0.05$), ** ($p<0.01$)

Table 9 shows about association among socio-economic factors and anxiety.

Occupation was one of the key factors that clearly associated with anxiety. In occupation, temporary workers and job seekers had significantly more anxiety than full time workers and fishermen ($p<0.05$).

Income was also a major factor associated with anxiety. Results suggested that the lowest income group had significantly more anxiety than the middle and high income group ($p<0.01$).

There were also association between having good relationship with friends and anxiety. Those who had good relationships with friends showed significantly less anxiety than those with no good relationship with friends ($p<0.05$).

There were no association between anxiety and living status found in the survey.

Table9: Association between the Socioeconomic factors and Anxiety (n=271)

Socioeconomic factors	Anxiety		Chi-square	P-value
	Yes Freq :(%)	No Freq :(%)		
Living Status				
Alone & Friends	25(30.1)	58(69.9)		
Relatives	19(18.3)	85(81.7)	4.691	0.196
Parents	8(17.0)	39(83.0)		
Spouse	8(21.6)	29(78.4)		
Occupation				
Fulltime workers and Fishermen,	28(15.2)	156(84.8)	14.708**	0.00
Temporary workers and job seekers	32(36.8)	55(63.2)		
Income				
<4,000 Baht per month	30(39.5)	46(60.5)		
			19.79**	0.00
4,000-6,000 baht per month	22(13.8)	138(86.2)		
>6,000 baht per month	8(22.9)	27(77.1)		
Good relationship with friends	45(19.6)	185(80.4)	4.902*	0.027
Yes	15(36.6)	26(63.4)		
No				

* ($p<0.05$), ** ($p<0.01$)

Table 10 shows the association between anxiety and educational background & school history.

Educational status was also significantly associated to anxiety. The results showed that respondents who had low education (illiterate, read only and write and primary education) was significantly more anxious than those with high educational level (middle school, high school and university) ($p<0.01$).

Attending school was also associated with anxiety, 40%of respondents attending school had anxiety compared to 20% who are not attending school. Results suggested that those who attend school had significantly more anxiety than those who not attending school ($p<0.01$).

Other factors, worried about school lessons, get depressed for low school grade and being bullied by others at school were not associated with anxiety.

Table10: Association between Anxiety and the Educational background and School history(n=271)

Educational &School history	Anxiety		Chi-square	P-value
	Yes Freq: (%)	No Freq: (%)		
Educational status :Illiterate				
+ read &write only+ primary	27(36..0)	48(64.0)	10.47	0.001
Secondary, high school, University	33(16.8)	163(83.2)	**	
Attending school				
Yes	19(39.6)	29(60.4)	9.103	0.003
No	41(18.4)	182(81.6)	**	
Depression when school grade fall				
Yes	13(44.8)	16(55.2)	0.38	0.538
No	6(31.6)	13(68.4)		
Worry about school lessons				
Yes	12(44.4)	15(55.6)	2.34	0.629
No	7(33.3)	14(66.7)		
Bullied by others at school				
Yes	2(50.0)	2(50.0)	0.00	1
No	17(38.6)	27(61.4)		(Fisher exact)

* ($p<0.05$), ** ($p<0.01$)

Table 11 describes the association between parental factors and anxiety.

Mothers' educational level was significantly associated with anxiety, 56% with high educational level mother (high school, university and graduate) had anxiety compared to 20% of those with low educated mothers (illiterate, read &write, primary and middle) had anxiety. The result suggested that the respondents who had mother with high educational level had more anxiety than those who had low education mothers ($p<0.01$).

Mothers' anxiety was also significantly associated with anxiety in adolescents. The result suggested that the respondents who had mother with anxiety had more anxiety than who had not.

Having both parents was significantly associated with anxiety. The results suggested that having both parents respondents had less anxiety compared to 32% of those who had not both parents.

Having single parent was significantly associated with anxiety ($p<0.05$), 42.2% of respondents had anxiety whose parents were divorced and 23% who's had one deceased parent. The result suggested that the respondents who had divorce parent had more anxiety than those who had deceased parents.

Parental conflict was also significantly associated with anxiety ($p<0.05$), 47.6% of the adolescents have anxiety that had parental conflict. The result suggested that the respondents who had parental conflict had significantly more anxiety than those who had not.

Table 11: Association between the Parental factors and Anxiety (n=271)

Parental factors	Anxiety		Chi-square	P-value
	Yes Freq :(%)	No Freq :(%)		
Mother Educational level				
Illiterate +Read &write +Primary + Middle	51(20.0)	204(80.0)	9.470**	0.002 (Fisher-exact)
High-school +Uni &Graduate	9(56.2)	7(43.8)		
Mothers' anxiety				
Yes	30(30.6)	68(69.4)	5.645*	0.018
No	30(17.3)	143(82.7)		
Having both parents				
Yes	29(16.7)	145(83.3)	7.585**	0.006
No	31(32.0)	66(68.0)		
Single parent				
Deceased	12(23.1)	40(76.9)	13.58**	0.001
Divorced	19(42.2)	26(57.8)		
Parental conflict	20(47.6)	22(52.4)	17**	0.00
Yes	40(17.5)	189(82.5)		
No				

* ($p<0.05$), ** ($p<0.01$)

Table 12 revealed about the association between the behavioral factors and anxiety.

There was significant association between the physically abused by others and anxiety ($p<0.01$), nearly 33% of those who were seldom abused, 35% of those with often abused and 13% who had never been abused. Forced sex was also significantly associated with anxiety ($p<0.01$), about 47% of respondents had anxiety who had forced sex.

There were no association between anxiety and drinking alcohol, smoking and feeling about puberty.

Table 12: Association between Behavioral factors and Anxiety (n=271)

Behavioral factors	Anxiety		Chi-square	P-value
	Yes Freq: (%)	No Freq :(%)		
Alcohol drinking				
Yes	20(21.1)	75(78.9)	0.027	0.87
No	40(22.7)	136(77.3)		
Smoking				
Yes	17(24.6)	52(75.4)	0.169	0.681
No	43(21.3)	159(78.7)		
Feeling about puberty				
Feeling (shy, worry, discomfort, satisfy)	44(25.6)	128(74.4)	2.711	0.1
No feeling	16(16.2)	83(83.8)		
Physically and mentally abused				
Seldom	16(32.7)	33(67.3)	16.83**	0.00
Often	24(34.8)	45(65.2)		
Never	20(13.1)	133(86.9)		
Forced sex against will				
Yes	7(46.7)	8(53.3)	4.137*	0.027 (Fisher-exact)
No	53(20.7)	203(79.3)		

* ($p<0.05$), ** ($p<0.01$)

Table 13 shows the association between the depression and demographic factors.

There was significant association between ethnicity and depression ($p<0.05$), 13% of Myanmar had depression, almost 10% in Karean and Shan and 28 % in others minority ethnic group had depression. Result suggested that others minor ethnic groups had significantly higher depression than the other group.

There were no association between depression and sex, age group, religion, practice of religion and marital status.

Table 13: Association between Demographic factors and Depression (n=271)

Demographic factors	Depression		Chi-square	P-value
	Yes Freq :(%)	No Freq :(%)		
Sex				
Male	15(12.5)	105(87.5)	0.582	0.446
Female	25(16.6)	126(83.4)		
Age				
15-17	16(15.1)	90(84.9)	0.000	1
18-19	24(14.5)	141(85.5)		
Ethnicity				
Myanmar	17(13.3)	111(86.7)		
Karean &Shan	9(9.7)	84(90.3)	9.098*	0.011
Others (Mon,Yakhine, Dawei)	14(28.0)	36(72.0)		
Religion				
Buddhist	35(15.0)	199(85.0)	0.00	1
Non Buddhist	5(13.5)	32(86.5)		
Practice of religion				
Yes	25(15.2)	139(84.8)	0.011	0.918
No	15(14.0)	92(86.0)		
Marital status				
Single	28(14.3)	168(85.7)	0.027	0.869
No single(married, divorced, widow)	12(16.0)	63(84.0)		

* ($p<0.05$), ** ($p<0.01$)

Table 14 shows the association between the depression and socio-economic factors.

Income was also significantly associated with depression ($p<0.01$), among the respondents whose income was less than 4,000 baht per month, 25% had depression , almost 10% were got depressed when the income is between 4,000-6,000 per month , only 17% of the respondents got depression whose income is more than 6,000 baht per month. Results suggested that lowest income group had significantly more depression than who had middle and high income.

There was also significantly association between the depression and the good relationship with friends ($p< 0.05$), about 12% of respondents had depression although they had good relationship with their friends. Results suggested that the respondents who had no good relationships with their friends had significantly more depression than the one who had good relationship with friends.

Other socioeconomic factors like living status, occupation were not associated with depression.

Table 14: Association between the socioeconomic factors and Depression (n=271)

Socioeconomic factors	Depression		Chi-square	P-value
	Yes Freq :(%)	No Freq :(%)		
Living Status				
Alone & Friends	16(19.3)	67(80.7)		
Relatives	17(16.3)	87(83.7)	4.762	0.19
Parents	5(10.6)	42(89.4)		
Spouse	2(5.4)	35(94.6)		
Occupation				
Full time workers and Fishermen	26(14.1)	158(85.9)	0.58	0.809
temporary worker& job seekers	14(16.1)	73(83.9)		
Income				
<4,000Baht per month	19(25.0)	57(75.0)	10.18**	0.006
4,000-6,000 baht per month	15(9.4)	145(90.6)		
>6,000 baht per month	6(17.1)	29(82.9)		
Good relationship with friends				
Yes	28(12.2)	202(87.8)	6.78**	0.009
No	12(29.3)	29(70.7)		

* ($p<0.05$), ** ($p<0.01$)

Table 15 shows the association between depression and educational background& school history**.**

There was a significant association between depression and being bullied by others at school ($p<0.01$), 75% of the respondents got depression when they were being bullied by others at school. The result suggested that the respondents who had

bullied by others at school had significantly more depress than those who had not bullied by others.

There were no association between depression and educational status, attending school, get depressed for low school grade, worry about lessons.

Table15: Association between Depression the Educational background and School history (n=271)

Educational &School Background	Depression		Chi-square	P-value
	Yes Freq :(%)	No Freq: (%)		
Educational status				
Ill +read& write+ primary	15(20.0)	60(80.0)	1.724	0.189
Secondary high school +University	25(12.8)	171(87.2)		
Attending school				
Yes	8(16.7)	40(83.3)	0.035	0.852
No	32(14.3)	191(85.7)		
Depression when school grade fall				
Yes	17(24.1)	22(75.9)	1.742	0.123(Fisher-
No	1(5.3)	18(94.7)		exact)
Worry about school lessons				
Yes	7(25.9)	20(74.1)	2.438	0.064(Fisher-
No	1(4.8)	20(95.2)		exact)
Bullied by others at school				
Yes	3(75.0)	1(25.0)	6.6**	0.012(Fisher-
No	5(11.4)	39(88.6)		exact)

* ($p<0.05$), ** ($p<0.01$)

Table 16 describes the association between depression and the parental factors.

Parental conflict was significant associated with depression ($p<0.01$), 38%of the respondents had depression that had parental conflict. Results suggested that the

respondents who had parental conflict had significantly more depression than those who had not parental conflict.

There were no associations between depression and mothers' educational status, mothers 'anxiety, having both parents and having only single parents.

Table 16: Association between Parental factors and Depression (n=271)

Parental factors	Depression		Chi-square	P-value
	Yes Freq :(%)	No Freq :(%)		
Mother Educational level				
Illiterate + Read & write + Primary + Middle	37(14.5)	218(85.5)	0.1	0.714(Fisher-exact)
High school + Uni & Graduate	3(18.8)	13(81.2)		
Mothers' anxiety				
Yes	20(20.4)	78(79.6)	3.221	0.073
No	20(11.6)	153(88.4)		
Both parents present				
Yes	20(11.5)	154(88.5)	3.428	0.064
No	20(20.6)	77(79.4)		
Single parent				
Deceased	12(23.1)	40(76.9)	4.66	0.097
Divorced	8(17.8)	37(82.2)		
Parental conflict				
Yes	16(38.1)	26(61.9)	19.373**	0.000
No	24(10.5)	205(89.5)		

* ($p<0.05$), ** ($p<0.01$)

Table 17 shows about the association between the depression and behavioral factors. There were no association between the depression and alcohol drinking, smoking, feeling about puberty, physically and mentally abused by others and forced sex against will.

Table 17: Association between Behavioral factors and Depression (n=271)

Behavioral factors	Depression		Chi-square	P-value
	Yes Freq :(%)	No Freq :(%)		
Alcohol drinking				
Yes	12(12.6)	83(87.4)	0.298	0.585
No	28(15.9)	148(84.1)		
Smoking				
Yes	11(15.9)	58(84.1)	0.015	0.901
No	29(14.4)	173(85.6)		
Feeling about puberty				
Feeling (shy, worry,	25(14.5)	147(85.5)	0.00	1.000
discomfort, satisfy)	15(15.2)	84(84.8)		
No feeling				
Physically and mentally abused				
Seldom	7(14.3)	42(85.7)	5.524	0.063
Often	16(23.2)	53(76.8)		
Never	17(11.1)	136(88.9)		
Forced sex against will				
Yes	4(26.7)	11(73.3)	0.928	0.250
No	36(14.1)	220(85.9)		(Fisher-exact)

Table 18 Summary table of all significant associations between independent variables and anxiety, depression

Independent Variables	Anxiety		Depression	
	Chi-square	P-value	Chi-square	P-value
Sex	4.335*	0.037		
Ethnicity	15.675**	0.001	9.098	0.011
Educational Status	10.471**	0.001		
Attending School	9.103**	0.003		
Bullied by others at school			6.6*	0.012
Occupation	14.640**	0.000		
Income	19.790**	0.000	10.18	0.006
Good relationship with fri	4.902*	0.027	6.78	0.009
Mothers' Education	9.470**	0.002		
Mothers' anxiety	5.645*	0.018		
Both parents	7.585**	0.006		
Single parent	13.580**	0.001		
Parental conflict	17.000**	0.000	19.373	0.000
Physically mentally abused	16.830**	0.000		
Forced sex against will	4.137*	0.027		

* ($p<0.05$), ** ($p<0.01$)

CHAPTER V

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

This study was cross sectional descriptive study carried out on 271 Myanmar migrant adolescents residing in Bang Bon district, Bangkok, Thailand to find out the prevalence of anxiety, depression and its association with related factors.

In this study, 60% of the respondents were late adolescents of 18, 19 years old and are more than middle adolescents of 15, 16,17 years old which were only 39%.The main reason was they were migrated from Myanmar to work here where they can earn much. That's why, most of them are 18-19 years old, a few of them are children who followed their migrant parents and also work together with their parents in Thailand. The15– 19 year's old adolescent's population in Myanmar was 10 % (WHO, 2004). A study was done in San Francisco, in that study also showed that 19% were age 15 to 17and 13% were age 18 to 19 (Duh, Shalwitz, & Tsoulos, 1999). To compare with those studies migrant Myanmar adolescents in Thailand is quite high.

Female adolescents (55.7%) were more than male (44.3%) in this study. In Myanmar population, adolescent males are 5 % and female are 4.9%, (WHO, 2004). The male and female adolescent population in Myanmar is almost the same but among adolescent Myanmar migrants females are 11.4% more than males. This shows that females adolescent migrate to Thailand more than male adolescents where job opportunities were more favorable for females. This finding is similar in migrants of the United States that shows that among the foreign-born groups the majority of immigrants indicating more females than males (Grieco, 2003).

In Bang Bon district, among migrant Myanmar workers, 47% were Myanmar, 31% Karen, 3% Shan and 18 % were others from minor ethnics groups. In the whole Myanmar 68% Myanmar,9% Shan, and7% Karen 4% yakhine and 3% Chinese (Leighton, Hazlett& Gamelin, 2008). To compare to the ratio of Myanmar population and Migrant Myanmar population, with Karen population and migrant Kayen population.Karean was quite high in migrant population and Shan was low.

Regarding with the marital status in this study, 72% were single, 22.9% were married and only a few percents were divorced / widowed. According to this study, most were single because they were teenagers and working as a migrant workers. But census data in united states of aged 15 -19 years showed that 30%were single and 56.8%were married and others were divorced, widowed (Kredior, Simmons, 2000).

As for a religion and practice of religion in this study, majority were Buddhist (86.3%) and (10%) Christian and the remaining others were Hindu and Muslims. The population statistics of Myanmar by by Jan Lahmeyer said that 89% Buddhist, 5 % Christian ,4% Muslims ,1% animist and 0.5% Hindu. (Lahmeyer, 2004). To compare with religions in Myanmar population and migrant Myanmar, more Christians migrate than the other religions. 60% of the migrant adolescents had practiced of religion and 40% had not. Although they are migrant adolescents they usually went to temple, church and some did fasting and meditation. Melinda Lundquist Denton studied the American adolescents of 13 -17 years old and among them 68%of teenagers practice fasting, meditation and praying (Denton, 2003). Ananda B Amstadter studied Vietnam adolescents aged 11 to 18 years also showed that 1.8 % of Vietnamese adolescent had religious practice (Amstadter, 2009).

In this study , majority of 36.9%had middle school and 31% high school education and others were illiterate , read& write only, primary and university education. In Myanmar adolescent, only 24%attend secondary school (Lahmeyer, 2004). The migrant teens have lower educational level than teens that remains in Myanmar. In another study which was done in migrants' children in china showed that 58% had primary education and 42% had secondary education. (Wong,Chang & He, 2008). Although they were migrants, a few migrant adolescents (17.7%) attend the migrant school which was open only in the weekends, so even they were full time workers they can attend the school to continue their education. Among them, some of the adolescents had worried about their school lessons and got depressed for low grade and some were being bullied by others at school .Only 1.5% were being bullied by others at school in this study. To compare with others studies, for instance, in UK, 10% of the adolescents were bullied by others. (Salmon, James, & Smith, 1998).

Most of the migrants adolescents in this study were full time workers (66.4%) and others were fishermen, temporary workers and job seekers. According to WHO

statistics an estimated 90% of Myanmar adolescents were unemployed. (WHO, 2004). Many uneducated young people from rural areas and different ethnicities have to migrate to the economic capital city of Yangon and other larger towns or even neighboring countries such as Thailand and China for work, due to economic constraints. In this study, unemployed (job seekers) were only 11%. Compared with this study and Myanmar teenagers, migrant adolescents had high employed rate due to the migrant workers status.

In Myanmar migrant adolescents, only 35.1% were drinking alcohol and 25.5% were smoking in this study because most of the respondents were female in this research, and they usually didn't drink and smoke. As the migrant workers they can't spend much money, for they have to save as much 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 24.9%were smoking and 25.4%were drinking alcohol (Howteerakul, Suwannapong, & Than, 2005). According to Myanmar adolescents by WHO report 23.3%were smoking and 31.2% were drinking (WHO, 2004). One study showed that migrant adolescents in China age above 14 years old that occasional alcohol drinker was 99.3 %and usual drinker was 0.7 %and for cigarettes smoking, 97%were occasional smokers and 3.1 % were usual smokers (Li et al., 2009).

In this research, most of the adolescents had feeling about puberty such as shy, worried, discomfort and satisfy to become puberty, only 36.5% were not feeling about puberty. Although they were adolescents they think that they were adults because of working as adult migrant workers that is why they suffer more about the pubertal changes.

Prevalence of anxiety in Myanmar migrant adolescents is quite high (22.1%). In this study, the rate was higher than the results in the study done by David M Ndetei studied about Kenyan adolescents (14-18 years) where severe anxiety (not including moderate and mild anxiety) was 8.3% (Ndetei, 2008). In Srilanka , the prevalence of anxiety was 28% in adolescents age 14 -19 years old (Rodrigo et.al.,2010). Ahmed A. Mahfouz studied adolescents of school age in Saudi Arabia showed that 15.5 % of anxiety in that adolescents (Mahfouz et al., 2009).

Prevalence of depression in Myanmar migrant adolescents is (14.7%).The prevalence of depressive symptoms varied from 20–21% in Thai adolescents by Sukjai Charoensuk in Chon Buri , Thailand (Charoensuk, 2000). But the depression in Virginia adolescents was 14%done by Novella Ruffin,in Virginia (Ruffin, 2009). However, the prevalence of depression in srilanka adolescents age 14 -19 years old was 36 %(Rodrigo et al.,2010).Compared with depression in Thai teens the depression studied in Myanmar migrant adolescent was quite lower.

In bivariate analysis, anxiety was associated with more independent variables than depression.

There was association between the demographic factors and anxiety, depression. There was a significant association between the sex and anxiety in this study, female was found to be more anxious than male in this study. Kessler, R. C., & Walters, E. E studied the 15 to 20 years old adolescents in United states and found out females had twice mental health problems than males.(Kessler, Walters, 1998). Rodrigo studied the adolescents aged 14 to 18 in Sri Lanka also showed that females had significantly more anxiety than males (Rodrigo.et.al,2010). Another studied in Greek adolescents aged 13 to 17 years by Fichter also showed that females were significantly more anxious than males (Fichter.et.al, 2004).

And also, ethnicity was significantly associated between both anxiety and depression ($p<0.05$), minor ethnic groups had more anxiety and depression than Myanmar and Karean because in the migrant population, majority are Myanmar and Karean so they have a their own supportive large communities while the small ethnic minorities do not have their own support groups, to whom they can rely for help in case of problems. Similar study was done in United States showed that Hispanic, African-American, and Asian Pacific Islander age 11 to 19 years teens experience depressive symptoms, on average, more often than on Hispanic white teens. (Wight, Botticello, & Aneshensel, 2005). Another study which was also 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).

In this study, 17.7% of the migrant teens attend the school, among them 39.6% of the migrants teens had anxiety associated with attending school. Educational status

was also associated with anxiety in this study, 36%teenagers who had low education was more anxious than with high education. Similar study was done by Linda Wetterberg in Swedish 17years old teens, in that studies, 21%of the Swedish teens had anxiety due to school related factors (Wetterberg, 2004).

Depression was significantly associated with being bullied at school by others in this study.Similar study was done in UK, which was associated between the depression and bullied at school by others(Salmon, James& Smith, 1998) and Children who bullied were often suffering from depression by Jerry Wiener (Wiener, 2001). Another study done in Finland also showed that 10% of Finnish adolescents had bullied by others at school and it was associated with depression (Kaltiala-Heino, Rimpela, Marttunen, & Rimpela, 1999). But in this study on mental health problems of migrant adolescents, it emphasize only on the one who bullied by others not to study the one who bullied to others got mental health problems.

Monthly income was statistically associated with both anxiety and depression in this study, low income groups had more anxiety and depression compared to higher income groups. There was similar 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). Another similar study was done in Pakistan women aged 15 and above, which was also found that 31% of the lowest income women had more depression compared to middle and higher income (Ali, Israr, Ali & Janjua, 2009).

Occupation was also statistically associated with anxiety in this study, full time workers , full time fishermen were much less anxious than temporary and job seekers. For this variable, full time workers have regular income and job so that they had less anxiety than part time workers and job seekers. For a part time workers and job seekers they were always worried for their job and income. David R Williams studied men and women aged over 18 years in United States also showed that unemployed groups have more mental health problems than employed groups(Williams et al , 2007).

Adolescents with no good relationship with friends had more anxiety and depression compared to the one who had good social influences. American National Adolescent Health Information Center (2007b) showed 16%of teens (12-17years) had

mental health problems due to friends related problems (National Adolescent Health Information Center., 2007b). Annette M. La Greca and Hannah Moore Harrison studied about the peer relation and anxiety in 14-19 years old adolescents in United States also showed that there was statistically significant association with peer relation and anxiety (Greca, & Harrison, 2005).In this study , all parental factors were statistically associated with anxiety, mothers 'educational level, mothers' anxiety, having both parents, single parent, parental conflict and for a depression only parental conflict was associated .There was a study about the parental psychological distress and psychological mal-adjustment in adolescents of Canada also showed that association between the parental factors and adolescent mental health(Roustit et.al, 2009) .

Kelly Musick ,Ann Meie studied the secondary data from national survey of family and households showed that parental conflict , having single parents were associated with adolescents(10-18 years) depression(Musick& Meier, 2008). One study in Greek showed that parental factors were associated with child adolescents (11-18Years) mental health (Giannakopoulos, Mihas, Dimitrakaki & Tountas, 2009).

There were also statistically associated with anxiety and behavioral factors of physically and mentally abused by others, the similar study was done in UK; (Salmon, James, & Smith, 1998).5.5% of the migrant adolescents had been sexually abused in this study. Erica Bisgyer Monasterio**,** said that35%of female high school adolescents had been sexually abused both on dating and non dating in United States. (Monasterio, 2009).To compared with that, migrant adolescents had lower rate of sexual abuse than US teenagers. Indian adolescent mental health journal also said that physical and sexual abuses caused the anxiety and depression in teenagers (Indian Adolescent Mental Health, 1990).

5.2 Conclusion

In developing countries among migrants, age between15and19 years of age represent 29 percent of all migrants under 20 years of age .In Asia, 74% of the migrants teens were age between age 15-19. Migrant females are the least numerous in the age group of 15to19 globally. For every 100 male migrants aged between

15and19, there are only 91 female migrants (UNICEF, 2009).In this study, females migrant are more than males. Promoting mental health care programmed in the migrants area become imperative because 14.7% of depression and 22.1% anxiety were found among the adolescents Myanmar migrants. 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 good relationship, half of the teens having good relationship with friends have anxiety compared with the teens that do not have good relationship with friends. This underlines the importance of peer influences for the mental health in migrant adolescents. Among many factors that caused anxiety and depression in adolescents among all factors, all parental factors were associated with anxiety and only parental conflicts were associated with depression. In this research, most of the respondents were female and there were no alcohol drinking and smoking in the female population. Only a few male were smoked and drank. Surprisingly, these studies found that there were forced sex against their will and physically and mentally abused by others in this study. Some female teenagers had sex with their boyfriends but that is not their will, some were both physically and mentally abused by others. Majority were feeling something for puberty. Most of the people were shy in the onset of puberty but some were satisfy because they thought that they were became adulthood.

The data presented here relate only to social, parental and behavioral problems, not to welfare in general, however they gave perhaps some cause for guarded optimism because anxiety and depression prevalence were relatively low and no cases of severe anxiety and depression were found. We were particularly concerned not to imply that things were difficult for all teenagers. There was also positive outcome in the life experiences of today's teenagers such as they do not practice alcohol drinking and smoking in order to relieve their anxiety and depression. However, for important sub-groups in particular such as the small ethnic sub-groups the picture might be less rosy, so we need to set objectives to meet the challenges facing this sub group within a bigger conversation about society, expectations and social support. The promotion of proper language capacities, a precondition to a

healthy cognitive and social development, is also important, especially in the migrants' populations at risk.

5.3 Recommendations

1. The mental health of adolescents in migrant population should be given a greater priority together with appropriate funding resources, according to the existing needs.
2. Supporting the 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 adolescents.
4. Mental health services for adolescents should be developed and operated in close collaboration with the family, the school, day care centers, neighbors, friends, etc.
5. Mental health services for adolescents should be provided by primary care with some specialist support, for example through one day training on mental health for primary health care staff.
6. The NGO in Bang Bon district should support more mental health care of the teens. Although they have health care centre in that district they still need the counseling services. As they are teenagers they still need care from the parents or relatives, even we assume that they are adults and working as a migrant workers they are still under 18, so we have to support their physical as well as mental health needs.
7. The doctors and health assistants of the Bang Bon health centre give the health education to the parents' of adolescents about the nature of the teenagers and also to the migrant school teachers if they found the adolescents who are really anxious or depress in the class, try to give them counseling and refer to appropriate professional for further counseling when necessary.

8. Further studies should be done on the migrant parents and teachers to know about the behavior and attitude about the teens at home and at school.

9. For mental health, qualitative studies are as necessary as quantitative studies by NGOs specialized in research, academic institutions and also future MPH students.

10. Further details studies should be done on the adolescents migrants of minor ethnic groups because anxiety rates is higher than in minor ethnic groups compared to Myanmar and Karean.

11. Teachers in migrant school should not push much on migrant teenagers like other teenagers. Migrant teens have more stress compared to non-migrant adolescents because they are working to earn money, send back to their family. Among them who want betterment of their life encourage them to attend the migrant school to study.
12. The doctors and health assistants of the Bang Bon health centre give health education to the adolescents about the nature of the puberty and promote the peer and family relationship because it was one of the important factors for adolescent mental health. Youth-friendly services in youth-friendly community settings should be developed for young people in general and for young people at risk in particular. And one important thing is if they were abused (both physically and mentally) by others don't shy to discuss with the health care provider about that.

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APPENDICES

APPENDIX: A

INFORMED CONSENT FORM

Code number of participant ……

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

I **read the information sheet about** rationale and objective(s) of the project, what I will be engaged with in details, risk 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 interview me by using a questionnaire for about 45 minutes.

I have **the right** to withdraw from this research project at any time as I wish with no need to **give any reason**. Either my withdrawal or my refusal to answer certain questions **will not have any negative impact upon me.**

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, Phyat hai 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 ……..…… Sign ……..……

(……..……) (……..……)

Researcher Participant

APPENDIX B: QUESTIONNAIRE

1. Gender
   - i. Male ☐
   - ii. Female ☐
2. Age -------
3. Race ☐
   - i. Myanmar ☐
   - ii. Karin ☐
   - iii. Shan ☐
   - iv. Others ☐
4. Religion
   - i. Buddhist ☐
   - ii. Christian ☐
   - iii. Muslim ☐
   - iv. Hindu ☐
5. Practice of Religion
   - i. Go to temple or church or mosque ☐
   - ii. Meditation ☐
   - iii. Being fasting ☐
   - iv. No Practice ☐
6. Education Status
   - i. Illiterate ☐
   - ii. Read and write ☐
   - iii. Primary ☐
   - iv. Middle school ☐
   - v. High school ☐
   - vi. University ☐
7. Are you attending school and class?
   - i. Yes ☐
   - ii. No, go to no 8. ☐

7.1.i Regularly (attend >80% of the classes) ☐

ii. Irregularly (attend 50-80 % of the classes) ☐

iii. Insufficiently (attend <5 0% of the classes) ☐

7.2Are you worried about your school lesson?

i. Yes ☐

ii. No ☐

7.3Are you feel depress when your school grade fall?

i. Yes ☐

ii. No ☐

*7.4Are you being bullied at school by others?

i. Yes ☐

ii. No ☐

8. Educational Status of Mother

i. Illiterate ☐

ii. Read and write ☐

iii. Primary ☐

iv. Middle school ☐

v. High school ☐

vi. University ☐

9. Did your mother cried or sad a lot when you are child?

i. Yes ☐

ii. No ☐

10. What is your occupation?

i. Fully employed laborer ☐

ii. Full time employed fisherman ☐

iii. Temporary employee ☐

iv. Looking for job ☐

*** Note for the research assistant: i**nvite teenagers who answer "YES" in the question 7.4 to go talk to the counselor at health centre and provide pre-printed address and contact # and email.

11. Average income of the family

i. < 4000 baht ☐

ii. 4000 – 6000 baht ☐

iii. > 6000 baht ☐

12. Do you have both parents present?

i. Yes ☐

ii. No ☐

13. If no, why

i. Divorced ☐

ii. Dead ☐

14. With whom do you live?

i. Alone ☐

ii. With friend ☐

iii. With relative ☐

iv. With parent ☐

15. Do your parents often fight or yell at each other? ☐

i. Yes ☐

ii. No ☐

16. Are you drinking alcohol?

i. Yes ☐

ii. No, go to no :17 ☐

16.1. i Less than 3 glass of beer or alcohol per day ☐

ii. More than 3 glass of beer or alcohol per day ☐

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

i. Yes ☐

ii. No ☐

16.3. Does any near relative or close friend ever worry or complain about your drinking? ☐

i. Yes ☐

ii. No

17. Are you smoking?

i. Yes ☐

ii. No ,go to no:18 ☐

17.1. i. <1 cig/day ☐

ii.1-9 cigs/day ☐

iii. 10-19 cigs/day ☐

iv. 20-39 cigs/day ☐

18. Do you have boyfriend / girlfriend?

i. Yes ☐

ii. No ☐

19. Do you have a good relationship with your ordinary friends?

i. Yes ☐

ii. No ☐

20. How did you feel when experience the changes in your body and mind during adolescence?

i. Shy ☐

ii. Worry ☐

iii. Discomfort ☐

iv. Satisfied ☐

v. Normal feeling ☐

21. * Do you have a physically abused (beaten, call bad name) from your childhood up to now?

i. Seldom ☐

ii. Often ☐

iii. Never ☐

22. * Were you ever forced (physically or mentally) to have sexual contact or intercourse against your will?

i. Yes ☐

ii. N o ☐

*** Note for the research assistant: i**nvite teenagers who answer “YES” in the question 21 & 22 to go talk to the counselor at the health centre and provide pre-printed address and contact # and email.

Zung Anxiety Test

No.	Questions	Little or non 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 get upset easily or feel panicky.				
4.	I feel like I'm falling apart and going to pieces.				
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.				

Zung Depression Test

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 if I were dead.				
20.	I still enjoy the things I used to do.				

APPENDIX C: ESTIMATED BUDGET

No.	Items	Unit	Unit Number	Price(in Thai Baht)	Total Budget
1.	Pre-test -Photocopy -Presents for Respondents	 Page Person	 300 30	 10 30	 3000 900
2.	Data Collection -Interviewer per diem -Photocopy -Respondents	Person Page Person	15*2 3000 270	300 0.5 30	9,000 1,500 8,100
3.	Preparation and completion of the thesis paper			5,000	5,000
	Total				27,500

APPENDIX D: TIME LINE

Project procedure	Aug 09	Sept 09	Oct: 09	Nov: 09	Dec: 09	Jan: 10	Feb: 10	Mar: 10	April 10	May 10
Literature review										
Writing of thesis proposal										
Proposal exam										
Ethical consideration										
preparation and data collection										
Data analysis										
Thesis writing										
Thesis exam										
Submission of thesis										

VITAE

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