PREVALENCE RATE OF DEPRESSION AMONG HIGH SCHOOL STUDENTS, TWO YEARS FOLLOWING THE TSUNAMI, IN PHANG-NGA PROVINCE, THAILAND

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ABSTRACT

Depression is an illness which can affect anyone from all ages and gender. It is believed that those affected by the disorder have to live with the pain of the illness longer than any other mental disorder. Depression is not a sever disorder per se, it is a common illness which can be treated and cured if help is sought for. However, most people who suffer from depression are likely to go undiagnosed and therefore will suffer from the illness for unnecessary extended periods of time.

This cross-sectional descriptive study used the Thai Depression Inventory to identify symptoms among high school students in grade 10, 11, and 12 in Takua Pa Senanukul and Taput Wittaya of Phang-Nga Province, the area most affected by the December 2004 tsunami.

The prevalence rate of depression among 205 high school students was divided into four categories; 2.94 percent revealed major depressive disorders, 7.80 percent showed to have moderate depression symptoms, 10.24 percent had low levels of depression, while 79.02 percent were diagnosed with no depression symptoms. The prevalence rate of depression was as high as 29.3 percent. Of the 205 respondents; nearly 60 percent found it slightly harder to make decisions and were disappointed about the future, 16 percent worried a lot about things in general and 12 percent found it difficult to concentrate. 5 percent felt worthless all the time while 4.4% were sad everyday.

Chi-square was used to describe the association between independent variables and depression symptoms (with p=0.05). Association was found with the number of mental health professionals and grades in Taput Wittaya high school as well as the following historical life events; problems with partner/lover, stress at school, Conflict with family members or friends, and financial problems.

The current findings also suggested that problems with a partner or lover, academic difficulties, conflict with friend(s) and family member(s), as well as financial problems affected the students' depression levels.

Depression levels were not revealed to be higher in tsunami affected areas two years following the disaster. The prevalence rate of depression among high school students was therefore not related to the December 2004 tsunami event, however, depression symptoms were associated with recent life events experienced by the students in the past two weeks.

KEY WORDS: PREVALENCE/DEPRESSION/HIGH SCHOOL STUDENTS

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LIST OF ABBREVIATIONS

CIA	:	Central Intelligence Agency
DALY	:	Disability-adjusted life year
D-TRAC	:	Disaster Tracking recovery Assistance Center
GO	:	Governmental Organisation
MHRC	:	Mental Health Recovery Centre
MOI	:	Ministry of Interior
MOPH	:	Ministry of Public Health
NIMH	:	National Institute of Mental Health
NGO	:	Non-Governmental Organisation
PTSD	:	Post-Traumatic Stress Disorder
UN	:	United Nations
UNICEF	:	United Nation's Children Fund
UNHCHR	:	United Nation High Commissioner for Human Rights
WHO	:	World Health Organisation

CHAPTER 1
INTRODUCTION

1.1 Rationale and Justification

Mental health is an issue which affects all people, from all cultures and religions, none are sheltered from either being or becoming psychologically impaired. We are all likely to suffer from at least one mental illness at least once in our lives, therefore mental health is an issue which craves much attention and consideration. The most common mental health problems are depression and anxiety. "Mental disorders are internationally responsible for significant disease burden and disability" (1)

Today's globalisation may suggest an increase in need and desire for valuables and an increase in materialisation. Many traditional ways of life have been destroyed due to the modernity of today (2). With an increase in competition and materialistic way of life, we can expect competition between people and cultures to increase and therefore negatively affect people's mental health. Depression is an illness which can be triggered by many factors, such as a loss of a relative or acquaintance as well as traumatic events such as natural disasters.

According to Murray's burden of disease, with respect to disability-adjusted life years (DALYs), depression was found to be the fourth most important illness following respiratory diseases, diarrhoeal diseases, perinatal illnesses, preceding ischemic heart disease. It has been suggested that by the year 2020, chronic diseases will result of 73 percent of the world's disease burden, infectious diseases will be fifteen percent and the remaining twelve percent will be burdened by trauma (3).

McNally suggested in his research conducted in 1996 that major symptoms and stressors may lead to psychiatric difficulties. He proposed that children whose

parents were adversely affected by a traumatic event and those with a history of mental illness are amongst the higher risk group to contract or experience psychiatric problems.

The prevalence rate of depression among children and adolescents of ages between 5 and 19 was found by Merry et al. at the University of Auckland in New Zealand to be as high as eight percent and associated with poor academic performance, social dysfunction, substance abuse, and suicide attempts (4). A study on depression and alcohol in Thailand carried out by P. Kittirattanapaiboon in 2006, suggested that depression ranked forth in women and fifteenth in men between the ages of 15 and 59, in respect to DALY. According to a study carried out in Thailand in 1999 on the burdens of diseases and injuries states that the highest DALYs value is found in depression sufferers. Those afflicted with depression may avoid an untimely death, however still have to endure the pain associated with the illness longer than any other mental illness (5).

Depression is not a rare illness, many in the world are currently facing depression that halts and interfere with their daily activities. Most people who have gone through an episode of depression are likely to re-live such feeling sometimes in the future. Depression or major depressive episodes can “severely disrupt your life, affecting your appetite, sleep, work, and relationships”. (6)

Event though depression is a serious illness, it is a common one and one that can be treated and cured. Most people with depression are likely to go undiagnosed and so suffer from the illness for unnecessary extended periods of time. If help, support or advice is not sought for, depression may worsen and intensify.

A study carried out in Philadelphia in 1998 by Brody et al. suggested that there are four main symptoms that best determine depression levels. These are; sleep disturbance, anhedonia, low self-esteem and decrease in appetite (7). There are further symptoms that may lead to depression. Feeling sad, irritable, or tense over extended periods of time, feeling tired or lacking energy, decrease ability to make

decisions and concentrate, feeling restless or over-lenient, feeling worthless and guilty as well as morbid and suicidal thoughts are all common symptoms for those suffering from depression (6).

Professor Blackman reported that over the past two decades, suicide rates have increased by 200 percent in North America and has become a higher cause of mortality than cardiovascular diseases and cancer among 15 to 19 years olds. However, studies concentrated on depression within this age group are largely understudied and scarce.

On December 26th 2004 a major earthquake breaks out at 7:58 am local time somewhere in the Andaman Sea. The second largest earthquake recorded in history created a series of colossal waves sweeping through the Indian Ocean flooding coastal areas and affecting over 12 countries and regions taking over 200'000 lives and forcing 400'000 people from their homes (8). Over 40 thousand persons were reported missing and over one million were displaced into temporary shelters and camps. It was reported that nearly two women per man was lost on that day. The reason for this is because many women were waiting on the beach for the fishermen to return to the bay.

Thousands of destroyed homes, schools, hospitals, clinics, religious and cultural recreational centres made this the worst disaster in modern history. The trench line called the Andaman-Sumatra subduction zone lies 240 kilometres off the coast of Sumatra, Indonesia. It had collected tectonic stress for over 100 years before releasing an earthquake measuring 9.3 on the Richter scale. The earthquake occurred at 8:00am Thai time, the rupture in the earth's crust created a tsunami or tidal wave of enormous size. The tsunami reached the province of Aceh half an hour later, while Thailand's first wave struck Takua Pa District around 10:00am local time.

A total of 200,000 lost lives and 2 million displaced people was a result of the catastrophic event. Along with a total of 370,000 destroyed and damaged homes,

5,000 miles (≈8,000 km) of devastated coastline and 2,000 miles (≈3,200 km) of road destroyed was reported by the William J Clinton Foundation (9).

Among the worst affected countries lies Thailand. Its southwest coast was hit nearly two hours after the earthquake taking everyone by surprise, devastating six southern provinces namely Krabi, Phang-Nga, Phuket, Ranong, Satoon and Trang. The tsunami was a succession of waves occurring at about 30 minutes in interval. The third wave striking the coast of Thailand was the most devastating one and highest in height. Thailand's death toll, assuming the missing persons were fatally wounded, reached over eight thousand of which one-third were foreigners on vacation during the high season. A total of 8,457 survivors were given medical treatment. Over 20,000 children were directly affected by the disaster needing food, shelter and emotional support (10), however UNICEF reported this number to be over two and a half times as high. "50,000 children lost everything in the disaster – including loved ones" (11). Takua Pa district had sustained the gravest damage in Phang-Nga province. Three of the eight sub-districts that make up Takua Pa, were destroyed and lost 3,808 lives and 4,210 survivors requiring medical attention.

The 'harbour waves' came at great speeds and took everything in its way, they spread across the Indian Ocean and ruined all in its path. The loss of homes, shelter, food and safe water were primary concerns to relief groups. Primary needs were such as treating the wounded, reuniting families and removing and managing the dead. Secondary needs of the affected population also demanded heavy responsibilities to maintain positive point of view on life and mentally strong individuals. People need to feel a sense of safety and reassurance for future outlooks and expectations. The areas affected by the 2004 tsunami were mostly very densely populated areas in mostly poor countries, where fishing, agriculture, and tourism are the main sources of income. The tsunami destroyed hundreds of thousands of boats making it now impossible for the locals to earn a living. The waves flooded many agricultural plains destroying and polluting the fields for the next few years. As well as devastating hundreds of acres of shrimp and fish ponds destroying the locals only mean of income. These are very demoralizing consequences which may provoke further or new psychological impacts.

The 2004 Boxing-Day disaster affected hundreds of thousands of people either by losing a loved one, their homes or their means of living. As people lose their motivation and self-esteem they find no will to go on or difficult to do so. A metal illness such as Post-Traumatic Stress Disorder, (PTSD) is directly linked to traumatic events such a natural disasters, war, conflict, and sexual abuse. No person is sheltered from PTSD and everyone would suffer from this illness if the exposure was traumatic enough.

According to the World Health Organisation (WHO), moderate common mental health disorders such as mild and moderate depression and anxiety disorders including PTSD are on an average of 10 percent in countries across the world. The WHO estimates this rate to rise to 20 percent after the exposure to traumatic events. The tsunami was such a devastating disaster that we may predict PTSD levels among high school students to be at least this high. With natural recovery, this rate may stabilize at 15 percent over time (12). It is very difficult for any agency to calculate the impact the tsunami event has had on the affected population both directly and indirectly. However, the total devastation of thousands of building such as houses and schools can only be aggravating factors to psychological stress and therefore depression can be suspected to be on the rise following the disaster.

Mental health issues due to the 2004 tsunami disaster can have many effects on the population as it was seen with other crisis moments and other natural disasters around the world. On the 26th of December 2003, an earthquake measuring 6.3 on the Richter scale struck south-eastern Iran and destroyed the ancient city of Bam, which claimed the lives of over 15,000 people, and flattened 70 percent of houses (13). A study conducted by M. Yassini and Fr Hosseini revealed that 89.2 percent of their sample size showed to have PTSD symptoms, of which 34 percent were severe cases (14). The 2005 Hurricane Katrina in USA destroyed hundreds of thousands of homes in Louisiana forcing over a million from their residents. The total cost to damage was estimated at around $200 billion, making it the most expensive hurricane in US history. This catastrophe had great effects on the survivors and their mental health status. “One of every three who experienced this disaster will have symptoms that are

more than the normal stress reaction" such as PTSD (15). These are all examples of how natural disasters have scarred the mental health of thousands of victims.

Adolescents are among the most vulnerable to mental dilemma for many reasons. Adolescents have an urge to reach adulthood and independence. Many adolescents adopt a no-care attitude often rejecting or challenging authority and rules. The adolescent years are difficult to define, however adolescents are usually referring to children between the ages of 14 to 19. This study was concentrated on high-school students, carried out in the latter three grades of high school, including ages of 16 to 18. At this age, people clearly understand the environment and society around them and want to be part of it. A disaster such as the 2004 tsunami will be understood by a teenager compared to younger children who have a wider imagination and less knowledge and understanding about consequences.

This study concentrated on high school students who as discussed above, are amongst the most vulnerable to psychological scars. Mental disorders lead to change in behaviour and may evolve into depression which in turn may lead to a rise in suicide, violent behaviour and delinquent attitude. Rise in psychosis and substance abuse are also directly linked to mental disorder and psychological instability.

"Their communities, families and livelihoods have been shattered. In order to hope for good mental health outcomes, we need to help them rebuild their communities and social networks" (Weinstein, 2005) (16).

1.2 Research Question

What is the prevalence rate of depression, two years following the tsunami disaster, amongst high school students in Takua Pa District and Taput District, Phang-Nga Province?

1.3 Research Objectives

1.3.1 General Objective

1.3.1.1 To find the prevalence of depression among high school students in Phang-Nga Province, Thailand

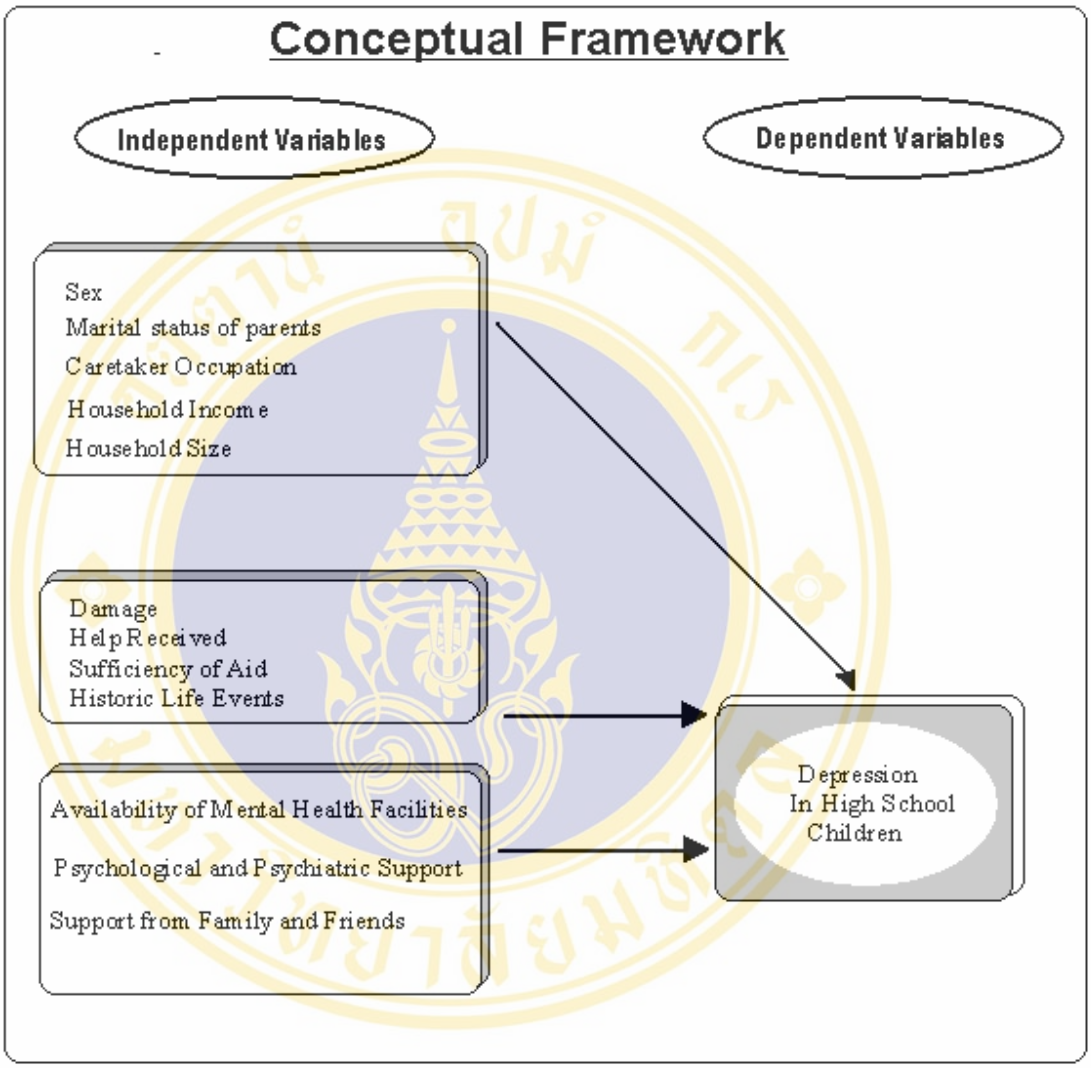
1.3.2 Specific Objectives

1.3.2.1 To identify the differentiation of depression symptoms among high school students who were adversely affected by the tsunami and the depression symptoms among high school students who had not been affected by the tsunami in Phang-Nga Province

1.3.2.2 To describe socio-demographic characteristics, personal factors, mental health consultancy, and recent life events of high school students in Phang-Nga Province.

1.3.2.3 To identify association between socio-demographic characteristics, personal factors, mental health consultancy, and recent life events, and depression levels of high school students in Phang-Nga Province

1.4 Conceptual Framework



1.5 Operational Definition of the variables

1.5.1 Depression

Depression refers to an individual's emotional and psychological unwell-being, in which he or she is unable to use his or her cognitive and emotional capabilities to function in society, and meet the ordinary demands of everyday life. Depression symptoms may vary from person to person, it usually refers to a person feeling sad, indifferent and apathetic for over two weeks. This study utilized the Thai

Depression Inventory to diagnose students with depression symptoms. A person scoring above or equal to 25 is referred to have mild to high depression symptoms.

1.5.2 Parents Marital Status

The martial status of the pupils' parents pre- and post-tsunami event were collected. These were divided into six groups; married, re-married, single, divorced, widowed, and separated.

1.5.3 Household size

Household size was the number of residents living in a household

1.5.4 Caretaker's Occupation

The occupation of the household caretakers pre- and post-tsunami was recorded. The occupation of the students' caretaker refers to what job or activities the primary breadwinner of the household was involved in at the time of the study as well as before the tsunami.

1.5.5 Household Monthly Income

The family income was the accumulation of the total amount of money earned by all household residents per month. The income generated by all family members pre- and post-tsunami was recorded.

1.5.6 Living Situation

This variable referred to with whom the student were living with, whether they were living with their biological parent(s), other relatives, friends or foster parents. This variable was split into two parts, pre-tsunami and post-tsunami.

1.5.7 Damage to home

Damage to home referred to whether the students' house sustained any level of damage, this was divided into two categories; yes or no

1.5.8 Relocation of child and/or family

Relocation referred to whether the student or the family was relocated following the tsunami disaster, this variable was divided into two groups; yes or no.

1.5.9 Help received

Help received by the student was divided into five forms of aid; food, shelter, clothes, money and other.

1.5.10 Sufficiency of aid

This variable was aimed at defining whether the help given to the students post-tsunami was sufficient, this was divided into two parts with optional explanation; yes or no

1.5.11 Support from family and friends

This defined whether the students had received help from relatives living in other provinces or districts following the tsunami disaster. This was divided into five categories with optional explanation, food, shelter, clothes, money, and other

1.5.12 Availability and numbers of mental health professionals

This variable referred to the availability and numbers of psychiatrists and psychologists in Phang-Nga Province.

1.5.13 Consultation of mental health professional

This variable was aimed at numbering the students who consulted psychiatrists and/or psychologists.

1.5.14 Satisfaction and Effectiveness

Satisfaction and effectiveness referred to whether the students who had consulted a mental health professional were satisfied with the sessions and whether he/she found them effective.

1.5.15 Historical Life Events

Historical life events that may have been experienced by the students were divided into seven variables; problems with partner/lover, difficulties with school work, conflict with a friend(s), conflict with relative(s), loss in a family member, and financial problems, and other.

CHAPTER 2
LITERATURE REVIEW

2.1 Mental Health in Thailand

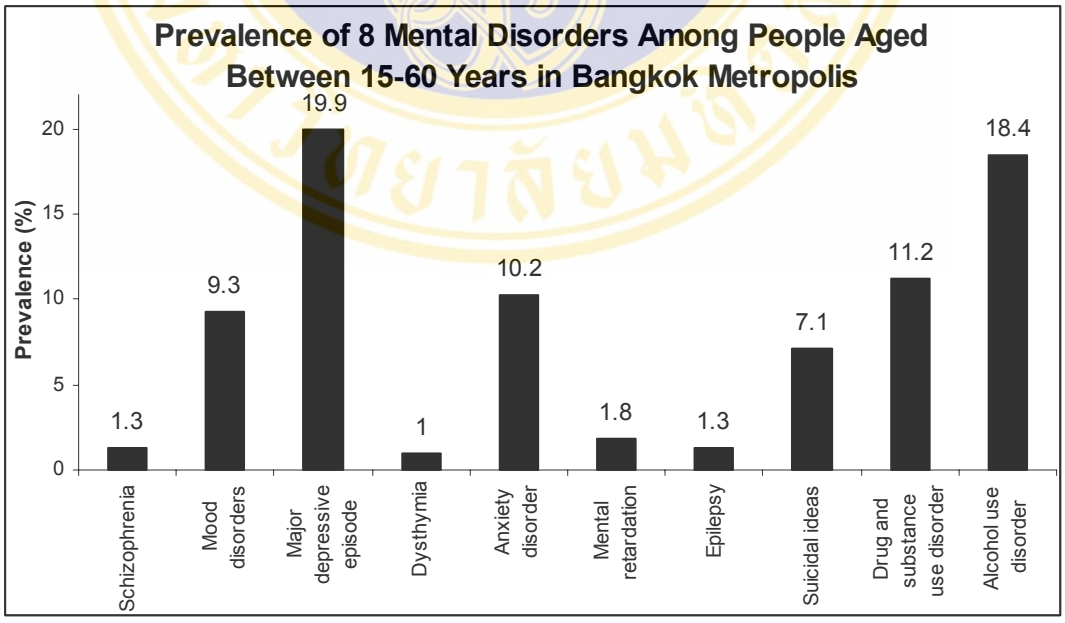
Mental awareness and concern grew of importance in Thailand during the Seventh and Eights National and Social Development Plans, between the years of 1992-1996 and 1997-2001 respectively. Problems of suicide, psychosis, mental retardation, depression, anxiety, senile dementia, alcoholism, and drug dependency, as well as problems with children and youth and violence against women are showing to be on an increase in Thailand (17). People who hold insurance cards are entitled to care for physical and mental health services at health clinics. If the patient has severe mental disorder the patient will be referred to special mental health facilities. The percentage of psychosis disorders in Thailand was revealed, with a three year survey conducted across the country, to be 0.4 percent. Mental retardation is shown to be 1 to 2 percent nationally, which is near the global figure. The same survey showed that depressive patients seeking treatment in general health facilities are on the rise and that there is a 3.4 percent incidence rate of depression, of which most are chronic cases. Depression is seen as a growing menace to the region and should be tackled quickly.

Anxiety disorders of the Thai population is said to be as high as 9.5 percent of which there were more females. Alcoholism is also a major factor contributing to mental disability. In Thailand there is an estimate of 19 percent of males and 4 percent of females addicted to alcohol, the survey reported that a further 14 percent for males and a 5 percent for females were suspected to be addicted to alcohol. The Thai's drinking habits are on the constant rise. Drug dependency is another major significant factor affecting ones mental health. The level of methamphetamines abuse and dependency in Thailand has seen a rapid decrease during the past decade, however mental disorders arising from methamphetamine usage are seen to be increasing

during the past five years. There has been an increase in arrests as well as an increase in treatment to drug addicted patients in Thailand (17).

In 1994, the department of Mental Health at the Ministry of Public Health (MOPH) was established. With the creation of this new sector, it had a policy that was aimed at promoting mental health care within the community with the assistance of people's participation and collaboration in health programs. Much motivation was done on the provision of suitable and efficient technology. From then on, the department of Mental Health has been allocated a larger budget. International cooperation has also enhanced the development of specific programs. The private sector and NGOs are encouraged and supported to provide psychological care and support to remote and marginalized areas (18).

2,948 residents of Bangkok Metropolitan area, aged between 15 to 60 years old were studied to find the prevalence of eight mental disorders. The results reported life time prevalence of mental disorders. These are shown in Figure 1;



source: Thavichachart, N *et al.* Epidemiological survey of mental disorders and knowledge attitude practice upon mental health among people in Bangkok Metropolis. Department of psychiatry, Chulalongkorn University, Bangkok

Figure 1 Prevalence of 8 Mental Disorders Among People Aged Between 15-60 Years in Bangkok Metropolis (19)

The above table shows that major depressive episodes, alcohol and drugs are the three most prevalent mental disorders found in Bangkok metropolis area in people aged between 15 to 60 years of age (19).

2.2 Mental Health and Youth

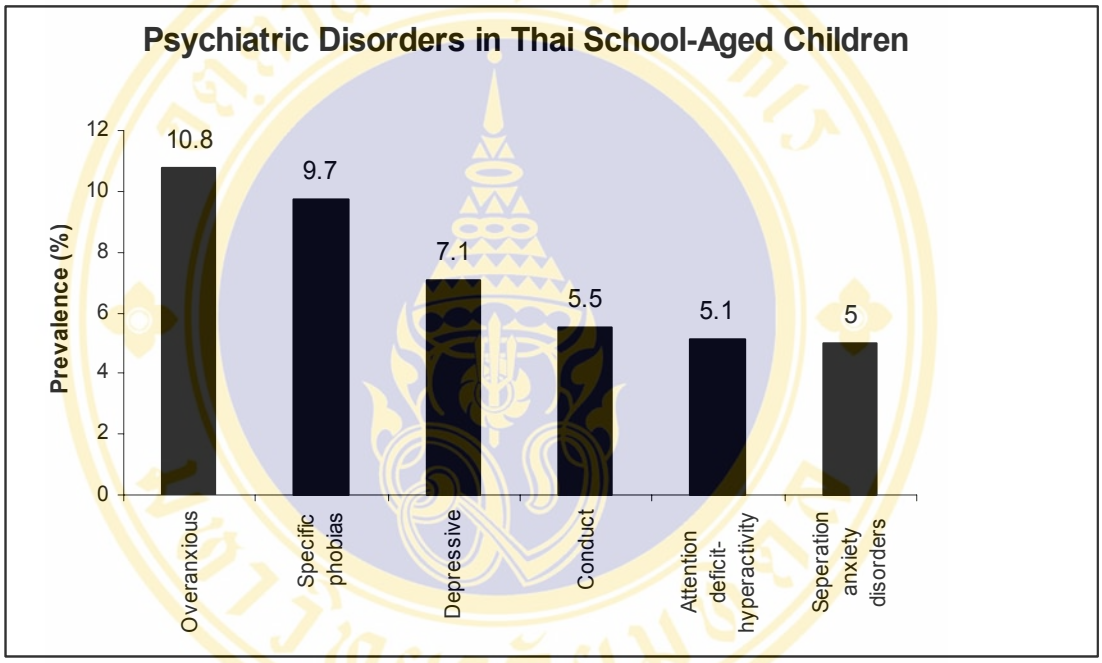
Children of secondary school age are prone to psychological problems such as depression, behavioural and personality disorders (20). The reason for this is because at this age children are often found to be facing challenges for many reasons including the time to leave childhood and enter the tough times of becoming adult and independent.

Uncontrollable manifestations of rage and anger as well as self-harm and suicide are all possible outcomes from an adolescents' mental impairment. Alcohol and toxic substance abuse, bulimia and decrease in libido are all results from depression. Thoughts of re-occurrence of event, bad dreams and insomnia, lack and increased difficulties of concentration as well as flashbacks are often experienced by adolescents who have faced traumatic events. A child with depression symptoms may result in familial problems, isolation, marginalisation, disassociation from close relatives, violent behaviour, delinquency as well as prostitution. These are very important aspects of mental health, as these will only worsen the adolescents' mental capacity to recover (20).

202 residents of northern Bangkok aged between 16 and 25 reported that 5.8 percent has been sexually abused at least once in their life, 11.7 percent had been physically abused and 31.8 percent had been emotionally abused. This study suggested a high rate of child abuse in the Thai capital. These sorts of abuse, especially sexual abuse have potentially devastating impacts in the victims' mental health and therefore depression (21). A feeling of guilt and shame is often expressed by children, and so depression is often under-diagnosed in people who have experienced traumatic events, such as physical and sexual abuse. It was reported that

10-20 percent of adolescents have experienced at least one major depressive episode by the time they reach 18 years of age(22).

The overall psychiatric disorder in children between 8 to 11 years old was estimated to be as high as 37.6 percent. The psychiatric disorders in Thai school-aged children is given in Figure 2.



source: Wacharasindhu A, Panyyayong B. Psychiatric disorders in Thai school-aged children. Department of psychiatry, faculty of medicine, Chulalonkorn University, Bangkok, Thailand

Figure 2 Psychiatric Disorders in Thai School-Aged Children (23)

Figure 2 reveals that over-anxiousness, phobias and depression are amongst the three most common psychiatric disorders found in Thai school-aged children. We can point out that the most common disorder amongst this population is overanxious with nearly 11 percent, while depressive disorders reach as high as 7.1 percent.

2.3 Mental Health and Disaster

A general population will vary in reactions and level of stress and depression will also vary according to many socio-demographic characteristics as well as the amplitude and severity of the traumatic event. Family structure and family relationship is also reported to be a major factor to depression symptoms.

There are many characteristics to depression in children, the following is a list of results from traumatic stressors. A child may feel the re-experiencing of the trauma such as recurrent dreams and daydreams, repetitive play containing themes about the event, sudden acting of feeling the event is happening again as well as the development of phobias. A child may become less involved with the external world and isolate him or herself. He/she may experience a lack of interest in activities, such as eating, playing and learning, a child may feel left-out or detached from others, feel a sense of foreshortened future, or experience more acute fearfulness, chronic anxiety as well as omen formation. There are additional effects to a child's mental status following a traumatic event, such as hyper-alertness, sleep disturbance, survivor guilt, memory impairment, regression in development, separation anxiety, concentration difficulties and changes in personality.

A list of common reactions following a disaster or traumatic event is given in Figure 3 shown below.

Common Symptoms of Reactions to Traumatic Stress	
Emotional Reactions	**Cognitive Reactions**
Shock	Impaired concentration
Terror	Impaired decision-making ability
Irritability	Memory impairment
Blame	Disbelief
Anger	Confusion
Guilt	Nightmares
Grief or Sadness	Decreased self-esteem
Emotional numbing	Decreased self-efficacy
Helplessness	Self-blame
Loss of pleasure derived from familiar Activities	Intrusive thoughts or memories
	Worry
Difficulty feeling happy	Dissociation (i.e. tunnel vision, dreamlike or "spacey" feeling)
Difficulty experiencing loving feelings	
Physical Reactions	**Psychosocial Reactions**
Fatigue, Exhaustion	Increased relational conflict
Insomnia	Social withdrawal
Cardiovascular strain	Reduced relational intimacy
Startle response	Alienation
Hyperarousal	Impaired work or school performance
Increased physical pain	Distrust
Headaches	Externalisation of blame
Gastrointestinal upset	Externalisation of vulnerability
Decrease appetite	Feeling abandoned / rejected
Decrease libido	Over-protectiveness
Vulnerability to illness	

Figure 3 Common Symptoms of Reactions to Traumatic Stress (25)

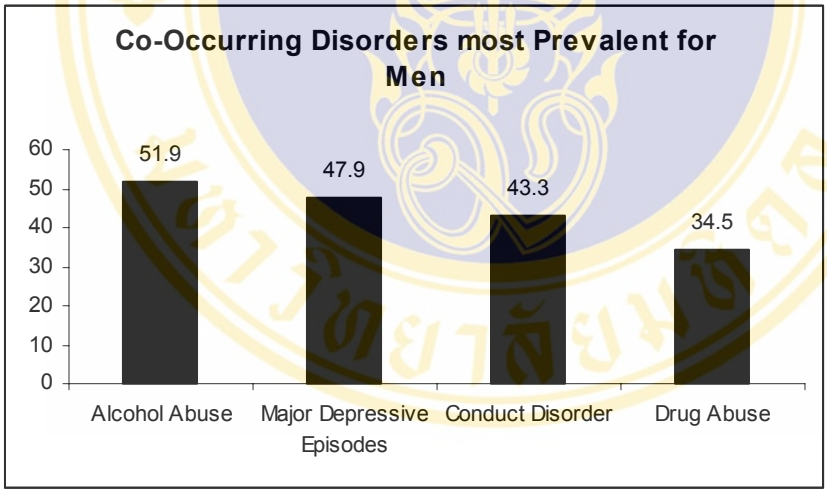
"Traumas happen to many competent, healthy, strong, good persons. No one can completely protect himself or herself from traumatic experiences. Up to 8% of persons will have PTSD at some point in their lives, and most likely everyone would develop PTSD if they were exposed to trauma that was severe enough." (24)

Traumatic events occurring before the disaster will have an impact on the emotional reactions felt by the child following the disaster. Children who have faced difficult times are more susceptible and vulnerable to experience further psychological distress. Such traumatic event could include divorce of parents, relocation of housing, exposure to illness, war, conflict and sexual abuse. These are

all examples of factors affecting emotional reactions to a disaster. Family exposure and loss to a traumatic event is a major factor to a child's mental health status (25).

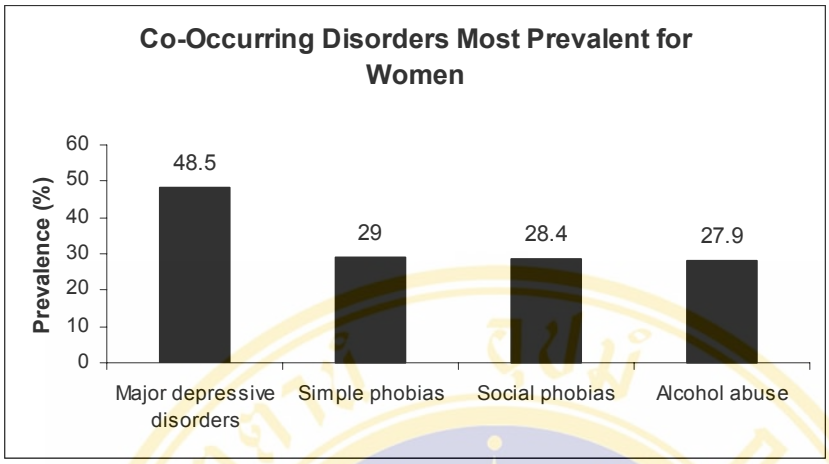
An analysis was carried out in Detroit, Michigan, USA and reported that the risk factors for exposure to traumatic events include low education, male sex, early conduct problems, extraversion and family history of psychiatric disorder or substance abuse. While the risk factors for depression and PTSD onset after the exposure include; early separation from parents, neuroticism, pre-existing anxiety or depression, and family history of anxiety (26).

Figure 4 and Figure 5 show the distribution of disorders experienced by persons with PTSD.



source: Friedman M. Post-Traumatic Stress Disorder: An Overview. National Centre for PTSD. Dartmouth Medical School. [Online] available from http://www.gospelassemblyfree.com/facts/ptss.htm [Nov 06]

Figure 4 Co-Occurring Disorders most Prevalent for Men (27)



source: Friedman M. Post-Traumatic Stress Disorder: An Overview. National Centre for PTSD. Dartmouth Medical School. [Online] available from http://www.gospelassemblyfree.com/facts/ptss.htm [Nov 06]

Figure 5 co-occurring Disorders Most Prevalent for Women (27)

Figure 4 shows that alcohol abuse and major depressive episodes are approximately 50 percent of co-occurring disorders among males. Women reveal a higher level of major depressive episodes when compared to males, however, alcohol abuse only accounts for 28 percent for women and nearly 50 percent for men. Women show to suffer from phobias while men show to change their behaviour and conduct.

A forced relocation of household and loss of personal effect is a direct factor leading to depression. On August 17th 1999, Turkey experienced one of the worst earthquakes in modern history. Unofficial reports, estimates the death toll to be between 45,000 and 50,000 people. Newsweek Magazine in 1999, defined this event as "one of the half-dozen deadliest earthquakes of the century" (28). People had lost extensive numbers of housing and were forced to set up camps in parks and other open spaces, without accessibility to electricity or running water. Over 1.5 million people had become homeless from the earthquake (29). Kolaitis et al conducted a study to find whether children attending schools affected by the Athens earthquake would show stronger depressive symptoms and higher PTSD symptoms. Depression was shown to be as high as 32 percent and the control group of 12.5 percent. Severe

to mild PTSD symptoms were as high as 78 percent among children found at the epicentre. Severe to moderate symptoms of PTSD were stated to be closely correlating with high scores of depression (p=0.002) (30).

Following the Armenian earthquake in 1988, children where showing to often experience withdrawal, lack of concentration, aggressive tendencies, nightmares, negative changes in academic performance, irritability, and increased reports of episodic daydreaming. Many stress aggravated illnesses where also prevalent such as high blood pressure, mental illness and psychosomatic problems. Vandalism and other types of juvenile delinquent actions where also present (31).

Both adults and children will have a wide range of reaction following a traumatic event. Some will only suffer minor effects such as only worries and bad memories that fade with time. While others will face much more severe reactions and may develop long-term issues, such as extended periods of depression. Children who have been exposed to violence at home, in school or in the community may develop long-term problems. Support from parents and teachers are most effective to reduce the long-term emotional problems and the risk of relapse. Relapse of depression is believed to occur to 70 percent of those who had depressive symptoms earlier in life. This relapse is most likely to occur within the first five years. Therefore support from acquaintances is of major importance as it will ease the pain of the sufferer.

Early intervention to children suffering from trauma due to a disaster is of prime importance. Chatterjee stated that depression is closely linked to traumatic event (34) and therefore, help should first be provided at the epicentre of the traumatic scene (35). “Psychosocial care can be just as valuable as material assistance in disaster situation” (34). In order to reduce the possible offset of psychological problems and issues, social aid should be promptly delivered to the worst affected areas. However, it is not unusual that people view themselves as mentally stable and that therapy is not needed. This allows many people to go-on undiagnosed and further increase their mental disability and worsens the severity of the illness (34).

Kowalski and Kalayjian suggested that there are four phases usually experienced by trauma survivors. The first stage is the experience of shock and disbelief. The survivor will usually deny the traumatic event and exercise a no-care attitude. The secondary stage is a strong emotional response, this stage refers to a survivor feel overwhelmed and fails to cope with the situation. In this stage, the victim may become antisocial and lack in social interaction. The third stage is the acceptance stage. The survivor is aware of the magnitude and accepts the results from the traumatic event. This stage is the pioneer stage for possible mental stability, where the person feels like they can overcome the disaster and plan for their future. The final stage is the recovery stage. This is when the survivor feels that life has regained its routine and habitual ways (29).

A death in family or close friend strongly affects children. The direct relationship with the deceased and the relationship shared together are major factors to an increase in mental instability. The level of mental instability and so depression is also associated with the nature of the death, whether it was expected or sudden, as well as the manner in which a person lost his/her life (35).

In 1989, Sugar conducted a psychological epidemiological survey, the results suggested that children who had suffered from severe illness or previous records of mental illness showed to be at higher risk to undergo mental stress such as depression following a traumatic event. “Children with previous history of emotional or physical illness are at greater risk after disasters” (36).

UNICEF noted that children who have been cut from a stable lifestyle and family relations are likely to become victim of risky behaviour and/or exploitation (11). In order to prevent further mental health complications, UNICEF stresses the importance to provide aid as so children find a state of ‘normalcy’ or as normal as can be.

American psychologist, Ben Weinstein suggested that providing therapy at an early stage may be a negative effect on the affected population because “most people

will heal on their own". "Back in the safety of their homes with their family and friends, most people will return to normal" (Weinstein, 2005) (17)

2.4 Mental Health and Tsunami

This study was conducted in southern Thailand and set to define the prevalence of depression among high school students in Phang-Nga Province. Children are the most at risk from mental impairment and are found to be the most vulnerable to depression. Natural disasters and near death experiences are major factors that lead to depression. The United Nation's declaration of the Right of the Child states that children have the right to be among the first to receive protection and relief in times of disaster. There are many reasons why the level of depression may rise in a child, such as, peer-relationships, parents' behaviour and recent life events such as traumatic events (i.e. parental divorce, illness and relocation). Children with previous history of emotional or physical illness are at greater risk after a disaster. As these factors play an important role to the child's psychological development, many results can be observed following traumatic disasters such as a tsunami.

Reliable data on mental health problems in tsunami affected countries is very limited. The following would give an estimated size of the overall situation and mental effect the tsunami disaster had on the affected population. An estimated 20 to 40 percent of the tsunami affected population would be prone to develop mild psychological distress. But these are likely to self recover within a few days. An estimated 30 to 50 percent suffer from moderate or sever psychological problems. The rate of people with mental disorder is expected to rise by approximately 5 to 10 percent. Across the globe, the severe mental disorder range between 2 to 3 percent of the population, the tsunami disaster is likely to increase this figure to 3 to 4 percent (12).

Following the extensive loss of housing, people were placed in temporary shelters. These relocation camps forced people of different religion, culture and tradition to live together under difficult situations (36). As people have no choice but

to go along with what is provided, they feel a sense of loss of control and a decrease in joie de vivre.

Griesven conducted a study in early 2005 which showed that depression level of relocated survivors were significantly different when compared to non-displaced groups. In Phang-Nga, the rate of depression amongst displaced persons was as high as 30 percent. The non-displaced group revealed 21 percent of depression symptoms (38).

A study conducted by Thienkrua et al in 2005 aimed at finding the prevalence rate of PTSD and depression among children affected by the tsunami in southern Thailand. It was set up to find whether relocation and destruction has an effect on depression and PTSD symptoms. Children living in camps, children from affected villages and children from unaffected villages were compared. Both depression and PTSD showed to be higher amongst children living in camps. Amongst children who are living in camps, those from affected villages, and those from unaffected villages, depression symptoms were found to be 11 percent, 5 percent and 8 percent respectively while PTSD symptoms were 13, 11 and 6 percent respectively (10).

Andrew Morris, the UNICEF Programme Coordinator in Thailand reported that many children were reluctant and afraid of returning to school, as well as worried about leaving their parents' sight. A little more then a year after the disasters, schools in Phang-Nga began to open their doors. The largest school in Phang-Nga had a decrease of 30 percent of pupils directly due to the tsunami event. As children returned to school and noticed how many of their friends and teachers were missing, mental health issues and reminiscence of the event were unavoidable (39).

Following the tsunami, a little girl of six years old was brought to the Phuket Pathong hospital, the tsunami event was so traumatic that she has lost her sense of speech and could not remember her name or her parents name or her nationality. Naturally, we can only expect such a case to suffer from acute depression as well as severe PTSD.

2.5 Socio-Demographic Characteristics and Mental Health

2.5.1 Gender and Mental Health

Women are amongst the higher risk group to experience depression when compared to men. A study carried out by the National Institute of Mental Health (NIMH) reveals that women are reported to be most prone to traumas (33). Females are reported to be twice more likely to suffer from depression, this may be due to hormonal changes brought on by puberty, menstruation, menopause and pregnancy. Men, on the other hand, are more likely to go undiagnosed and less likely to seek professional help. They may display depression symptoms, but are more likely to become angry and hostile or mask their condition with alcohol or drug abuse. Suicide is an especially serious risk for men with depression, who are four times more likely then women to kill themselves (6).

A study was conducted to find the psychiatric reactions of children and adolescents exposed to the 1999 Athens, Greece earthquake. This study suggested that there is a gender differentiation when levels of mental disability are compared. This study concluded that girls show more symptoms of depression when compared to boys. Girls were more likely to develop anxiety and further depression following a traumatic event such as a natural disaster (40).

Children between 10 and 16 years of age studying in a tsunami affected school reported that the psychiatric problems faced by boys in affected schools is significantly higher when compared to those in unaffected schools (41).

Another study showed that the 9/11 attacks had a greater mental impact on girls when compared to boys (25).

2.5.2 Marital Status and Mental Health

The marital status of the students' parents is a factor that may lead to depression. A child from a broken home or a child with a widowed parent may show an elevated level of depression.

Early separation of a parent shows to possibly lead towards psychological instability of a child. Lars Vedel Kessing et al suggested that parental divorce is a stressful moment for children and is a risk factor that leads many to depression (42). Eley supported this fact and reported that there are several environmental factors that affects an adolescents mental health, including separation from their family (43).

Several literatures have suggested that divorce and marital instability has major impacts on a child's psychological development. Broken families may lead a child to feel a sense of loss, concerned about being left alone, as well as anger, self-blame, rejection, and insecurity (35).

2.5.3 Economic Status and Mental Health

Economic status is a stressor leading to mental disorder. David Gunnell stated in his study that low income groups are highly associated with an increase in suicide. He also noted that unemployment is a major risk factor to suicide and therefore depression (44), (42). Several researchers have reported that economic difficulties are strongly associated with psychological impairment and a stressor to depression (43), (24).

Most fishing boats in Phang-Nga were destroyed from the tsunami and the level of tourism dramatically dropped, and so the income of many families was negatively affected. The effects the tsunami had on the tourism and fishery industries were devastating. The loss of fishing boats and decrease in tourism plunged many families into "severe poverty" (45). Forced unemployment of a parent may result in depression in the child as many are forced to stop scholar education and start working to support their family.

A psychiatric epidemiological survey was conducted on students residing 20 miles from Ground Zero. It reported that students who were suffering financial difficulties following the 9/11 attacks revealed more then five times more likely to undergo psychiatric difficulties when compared to those who did not have financial problems. The same report stated that youth living in poor communities are likely to

experience violence more often then those living in middle and higher socioeconomic communities (25).

2.5.4 Household Structure and Mental Health

The household structure is an important and significant factor relating to a persons stress level and therefore depression. A larger household may provide a bigger sense of security while a smaller household may provoke a sense of loneliness and increase disassociation with the outside world. The residents themselves are also potential factors to depression levels. A child's mental status would correlate with whom they are currently residing with. Whether the child is living with direct relatives, indirect family, family friends or with a foster family was recorded as they may be linked to psychological impairment.

UNICEF is a leading organisation which carries out much work to help natural disaster survivors. During a counselling session in Phuket fifteen months after the tsunami event, children were assigned to draw a picture of how their home has changed since the disaster. A large number of these children showed that they were longing for things to go back to their habitual way of life and routine activities (11).

2.6 Social Support

Social interaction and support is a primary factor contributing to a well-being of a survivor. Social support should be provided from and to all sectors, from national level to the private sector. NGOs and international organisations are key players in the relief and rehabilitation of surviving persons in a disaster affected area. In May 2005, the WHO organised a meeting discussing the mental and psychosocial effects of the tsunami on the affected population. They stressed that in order to perform efficient and competitive support to the affected population a strong partnership between the public and private sector must be achieved (46).

"What most children need is not therapy but community based activities that help to restore their sense of safety, connection to caring adults, and hope for the future" (47).

The National Chamber of Industries of Sri Lanka sponsored individual and group therapy to 1,724 tsunami survivors. Play therapy was provided to children which was found to be a very effective way for a child to regain trust and a sense of normalcy (48).

Extensive aid to children in Sri Lanka was provided by the Christian Children's Fund and local partners who established 240 child-centred spaces for children. These spaces were provided to children in order for them to engage in activities and receive psychosocial support which in turn will recreate a sense of safety and predictability.

Activities such as singing and dancing, informal education, and routine interaction with peers should all be carried out to provide support to psychological development (47).

20 percent of schools in tsunami affected regions were either destroyed or damaged. In order to regenerate normalcy, Save The Children Organisation donated 60,000 textbooks, built over 90 school, trained 1,000 teachers and granted 2,050 scholarships (49).

"Successful psychosocial interventions require that people regain, as soon as possible, a sense of normalcy, tap into their natural resilience, and are provided with positive options for the future. People will only recover if they feel secure and confident that their basic needs are being met" (51)

To provide effective disaster relief, personnel should focus on reuniting families as quickly as possible, rebuild houses and properties, as well as providing

psychotherapy especially to those who witnessed the death of a family member and those who had near death experiences (52).

An estimated 211,000 children in the region have benefited from psychosocial support organised by UNICEF. UNICEF paid for the rehabilitation of 1,573 schools allowing over 561,000 children to learn again. It also contributed in rebuilding homes, setting up emergency housing, providing medical care, and supplying safe drinking water. UNICEF has provided tents, tarpaulin and school clothing, as well as sports equipment and other school supplies for the surviving children of Phang-Nga.

The Mental Health Recovery Centre (MHRC) was set up shortly after the tsunami disaster for two years. It is dedicated in the training of monks and teachers to provide peer support in the six effected provinces of Thailand.

Most acute stress problems during acute emergencies are best managed without medication following the principles of psychological first-aid (52). These include emotional support, distribution and coverage of basic needs, protection from further harm, and organisation of social support and networks are the most effective manner to reduce depression following a traumatic event. Strong community participation is needed to re-establish cultural and religious events which are of great importance to the population as they find spiritual well-being. Informal schooling should be promptly restarted as to bring a sense or normality in children. Recreational activities are important to create a space where they can interact with each other. The best therapy for acute stress is social interaction.

2.7 Measuring Mental Health

This study was focused on depression, one of the most common and most prevalent mental illnesses found today. Several literatures have been collected in order to clearly define how and why depression may arise.

Self-reported questionnaires are cost effective and need little time to conduct. These are instruments which provide much clinical information (53), however, there are numerous available checklists and rating scales. Some researchers have suggested that too many of such questionnaires are available and that many are not focused enough on reliability and validity (54).

As discussed above there are numerous inventories, however the instrument used in this study must be culturally bound and acceptable to the study population. Therefore, the Thai Depression Inventory was employed to measure symptoms of depression.

CHAPTER 3
METHODOLOGY

3.1 Research Design

A cross-sectional descriptive study aimed at finding the status of depression among upper high school pupils was carried out in Phang-Nga Province, Thailand. The data was collected using a structured questionnaire and a standard depression inventory.

3.2 Study Population

High school students in grade 10, 11, and 12 of both sexes in Takua Pa and Taput Districts in Phang-Nga Province.

3.2.1 Place of Study

Phang-Nga Province was selected as it was the province worst affected by the 2004 tsunami. Takua Pa District, for the same reason, was chosen as it sustained the most dreadful destruction and loss. Taput District was chosen as a control group as it was sheltered from the tsunami.

3.2.2 Sample Size Calculation

The following formulae was used to determine what is the minimum sample size needed to represent a reliable figure. The proportion of depression amongst high school students victim to natural disasters was unavailable. However, The National Health and Medical Research Council (NHMRC) reported in 1997 that depression amongst children between 5 and 19 is 8 percent (4). A study done in tsunami affected areas in southern Thailand defined the level of depression amongst children between 7 and 14 years of age. Three different study groups were analysed which are; children living in camps, children from affected villages, and children from unaffected

villages. The study revealed depression levels to be 11 percent, 5 percent, and 8 percent respectively (10). The proportion taken for this study was 0.10.

$$n = \frac{Z^2 P (1-P)}{E^2}$$

Anticipated population proportion (P):	10% (12)
Confidence Level (Z):	95%
Absolute Precision (E):	5%

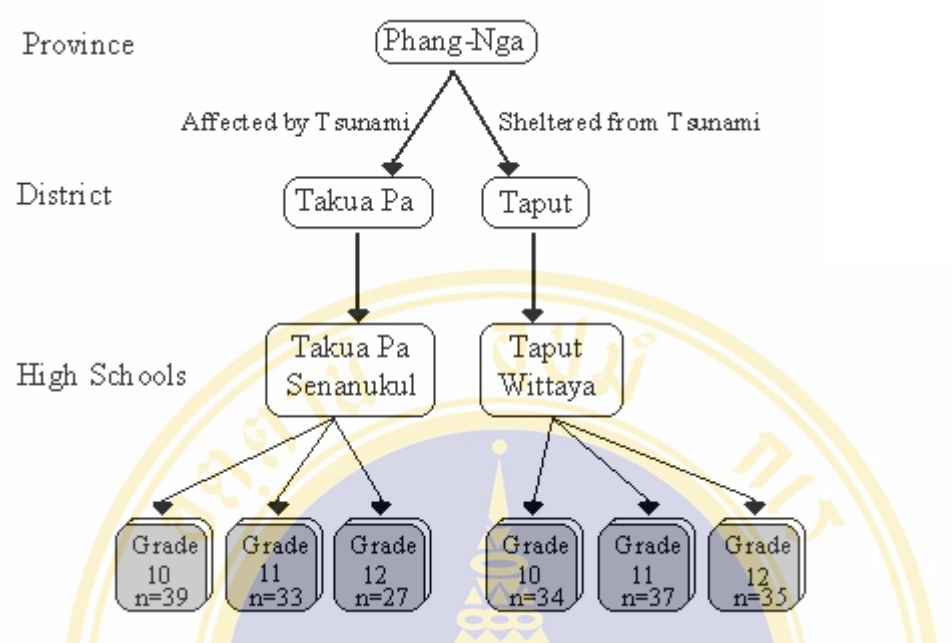
$$n = \frac{(1.96)^2 (0.1) (1-0.1)}{(0.05)^2} = 138 + 10\% = 150$$

The total of respondents needed depend on the level of accuracy we allow this for study. By accepting 95 percent accuracy, the sample size is 150 including an additional 10 percent.

3.2.3 Sampling Technique

Two high schools were purposely selected in Phang-Nga Province. A school located close to the shore line which was adversely affected by the tsunami was compared to another school located further inland, sheltered from the tsunami.

This allowed the study to define whether the tsunami has an effect on depression levels recorded in students in Phang Nga Province.



3.3 Research Instruments for Data Collection

The research instruments used to collect data for this project was conducted through a structured questionnaire. This questionnaire was divided into four parts, of which; part I is the socio-demographic background of the student, part II is the measurement of depression which is done by using the Thai Depression Inventory. Part III is a set of six questions which refer to the immediate effects the tsunami had of the respondent, the final part (Part IV) asks whether there were any additional events which may influence the students' current state of mental health.

3.3.1 Questionnaire Part I – Socio-Demographic Characteristics

The first part of the questionnaire is concerned with the socio-demographic characteristics of the high school respondent. This section includes a few questions which are; gender, guardians occupation pre- and post-tsunami, guardians marital status pre- and post-tsunami, total monthly income of household, and household structure.

3.3.2 Questionnaire Part II – Thai Depression Inventory

The second part of the questionnaire is the measurement of depression amongst high school students. The questionnaire used to report depression symptoms will be the Thai Depression Inventory. This questionnaire was developed using widely used Western rating scales (56), however this one has been conducted in Thailand before and so has been altered to become culturally bound. The Thai Depression Inventory is formulated of 20 questions with a maximum of 60. The respondents must chose between four possible answers which each have a rating scale between 0 and 3. The Thai Depression Inventory defines levels of depression as follows; a sum of less than 20 refers to no symptoms of depression, between 21 and 25 low depression symptoms, 26 to 34 the respondent is considered to have a mild level of depression, people suffering form major depressive disorders score between 35 and 40, and a total score of above 40 is considered clinical depression levels.

The inventory was tested against the Hamilton Rating Scale and showed good reliability (Cronbach alpha = 0.858; r = 0.72) (56). Lotrakul and Sukanich stated that the Thai Depression Inventory is culturally bound and has reliable and valid qualities to measure the severity of depression.

This study however did not include the questions concerned with morbid thought of suicide nor the item concerned about a loss of libido. And so changes to the calculations of total score were done accordingly.

3.3.3 Questionnaire Part III – Situational Factors

The third section of the questionnaire is interested on the direct effects from the tsunami the victims have experienced. It asks such questions as to find whether the students' household had sustained damage following the tsunami and whether he/she was relocated. Part III also asks whether help and assistance was sought for and whether it was adequate to their expectations. The student was also asked if they had relatives or friends that reside in other districts who had offered help following the tsunami. The final question of part III is asking if the student has in the past

consulted a psychiatrist or psychologist and whether these sessions were effective and satisfactory to their demand.

3.3.4 Questionnaire Part IV – Historical Life Events

The final part of the questionnaire is constructed to define whether the student had experienced any additional traumatic or stressful events in the last two weeks prior to the data collection. This part was a series of six questions which found out if the student had experienced difficulties with a partner or lover, if the respondent had experienced stress at school or a decrease in academic performance. It also asked if the student had in the past two weeks a conflict with a friend, parent or other family member. If the respondent experienced a loss in a family member was also asked and whether they were currently undergoing financial problems.

3.4 Data Collection Procedure

Self assessed questionnaires were distributed in two high schools in Phang-Nga Province namely Takua Pa Senanukul and Taput Wittaya. A class in each grade (10, 11, and 12) were targeted in both high schools.

3.5 Data Analysis Procedures and Statistics Used

Upon collecting the questionnaires from the high school pupils, their responses were tabulated. Specialised computerised programmes such as Minitab and Excel were used to calculate the correlation of variables and their relevance to each other.

CHAPTER 4
RESULTS

The study was conducted to find whether high school students in tsunami affected areas were more likely to reporting depression symptoms compared to high school students who were sheltered from the tsunami two years following the tragedy. It was conducted in the most adversely hit province in Thailand, namely Phang-Nga. The research was intended to find correlations with socio-demographic characteristics, interpersonal variables, and situational and environmental factors. The target population was 205 high school students studying in Phang-Nga Province, of which 99 were studying in Takua Pa District, a high affected area, while the remaining students were studying in Taput District, a sheltered district. The data collection took place in late January 2007. The results for this study are presented in three parts. The primary section describes the respondents' socio-demographic characteristics, situational factors, mental health consultancy, and life events encountered in the two week prior to the data collection. The second part is the description of the respondents' mental health status. The latter part is statistical analysis between all factors and mental health status. Pearson's chi-square test was used for the analysis.

4.1 Description

4.1.1 Socio-demographic characteristics of the respondents

The following table shows the socio-demographic characteristics of high school students in Phang-Nga Province. The respondents were picked from two high schools. 51.7 percent of respondents are students in Taput Wittaya and 48.3 percent from Takua Pa Senanukul, of which 39 students were in tenth grade, 33 from eleventh grade and 27 from twelfth grade while Taput Wittaya had 34, 37, and 35 respectively. There was a big gender difference, of which two-to-one of the respondents were female (68.3%). (Table1)

Almost all (93.2%) of the respondents are being cared for by their own parents, while 11 respondents (5.4%) are cared by other family members. The marital status of the respondent's caretaker is largely married with 81.95 percent, while as much as 18.05 percent reported to live in a household with a single parent. 81 percent of the students parents are married (Table 1).

The number of household members range from 1 to 10, with a median of 4 people. The households are largely between 4 and 6 residents with 71 percent. 42 households (20.5%) have less than 4 members and 9 percent have over 7 residents. (Table 1)

The occupation of the respondents' caregiver pre- and post-tsunami shows the same trend where the majority are working in farming and gardening, while one fifth are merchants and business owners. (Table1)

The household monthly income pre-tsunami ranged from 3,000 Baht to 60,000 Baht (μ=10,904, SD=10,072) and 1,500 Baht to 65,000 Baht (μ=10,996, SD=11,738) post-tsunami. The results show that the average household income has slightly increased following the tsunami, where 48.20 percent were living in low income group pre-tsunami compared to 45.83 percent post-tsunami, however the number of respondents who did not know their monthly income also increased. Over 30 percent of the respondents did not know their monthly income pre- or post-tsunami (Table 1).

Table 1 Personal factors of respondents

Socio-demographic characteristics	Frequency (n=205)	%
Gender		
Male	65	31.71
Female	140	68.29
School		
Takua Pa Senanukul	99	48.29
Taput Wittaya	106	51.71
Grade in Takua Pa Senanukul (n=99)*		
Grade 10	39	39.39
Grade 11	33	33.33
Grade 12	27	27.27
Grade in Taput Wittaya (n=106)*		
Grade 10	34	32.08
Grade 11	37	34.91
Grade 12	35	33.02
Grade		
10	73	35.61
11	70	34.15
12	62	30.24
Number in Household		
≤3	42	20.49
4-6	145	70.73
≥7	18	8.79
Median = 4, SD = 1.39, Min = 1, Max = 9		
Living Situation		
Biological Family	191	93.17
Extended Family (only)	11	5.37
Other (Alone, Foster, and Coach)	3	1.46
Marital Status of Caregiver		
Married	158	77.07
Re-Married	10	4.88
Divorced	11	5.37
Widowed	17	8.29
Single	5	2.44
Separated	4	1.95

Table 1 Personal factors of respondents (cont.)

Socio-demographic characteristics	Frequency (n=205)	%
Occupation of Primary Caregiver pre-tsunami		
Farming and Gardening	74	36.10
Government officer	25	12.20
Private Employee	38	18.54
Merchant and Business Owner	51	24.38
Fishery Industry	7	3.41
Handicraft	5	2.44
Retired, Housewife and Unemployed	6	2.93
Occupation of Primary Caregiver post-tsunami		
Farming and Gardening	76	37.07
Government officer	28	13.66
Private Employee	35	17.07
Merchant	48	23.42
Fishery Industry	7	3.41
Handicraft	5	2.44
Retired, Housewife and Unemployed	6	2.93
Family Income pre-tsunami (n=143)*		
≤3,000	5	3.50
3,001-6,000	64	44.70
6,001-9,999	23	16.08
10,000-19,999	27	18.88
≥20,000	24	16.78
Don't Know	62	30.24
Mean = 10,904, SD = 10,072, Min = 3,000, Max = 60,000		
Family Income post-tsunami (n=129)*		
≤3,000	10	7.75
3,001-6,000	49	37.98
6,001-9,999	26	20.16
10,000-19,999	25	19.38
≥20,000	19	14.73
Don't Know	76	37.07
Mean = 10,996, SD = 11,738, Min = 1,500, Max = 65,000		

* Number of selected student is specified school

*Not including unknown answers

4.1.2 Situational factors

4.1.2.1 Help received following the tsunami

This part of the results shows numbers of the respondents' satisfaction and effectiveness towards help and assistance brought to the respondents following the December 2004 tsunami event. 16 households (7.80%) sustained some level of destruction and 7 respondents (3.41%) were relocated. It is worth to note that all the students that had been relocated following the tsunami are studying at Takua Pa Senanukul high school (Table 2). Only 32 respondents (15.6%) received help following the tsunami, but 84.4 percent of them found the help given was sufficient. 50 percent (50.73%) found that there is a lack of psychiatrists and psychologists while 88.8 percent found that mental health professionals are accessible (Table 3).

Table 2 Damage and Relocation of respondents

Damage	**Yes**		**No**		**Total**	
	n	**%**	**n**	**%**	**N**	**%**
Takua Pa Senanukul	16	100	83	43.92	99	48.29
Taput Wittaya	0	0	106	56.08	106	51.71
	16	7.80	189	92.20	205	100

Relocation	**Yes**		**No**		**Total**	
	n	**%**	**n**	**%**	**n**	**%**
Takua Pa Senanukul	7	100	92	46.46	99	48.29
Taput Wittaya	0	0	106	53.54	106	51.71
	7	3.41	198	98.59	205	100

Table 3 Situational factors of respondents

Situational Factors	Frequency (n=205)	%
Damage to household	16	7.80
Family/respondent relocation	7	3.41
Place of relocation (n=7) [a]		
Relatives	2	28.57
Foster	1	14.28
New Home	4	57.14
Help received [b]	32	15.61
Food	20	62.50
Shelter	8	25.00
Clothes	15	46.88
Money	20	62.50
Sufficient help (n = 32) [c]	27	84.38
Outside help from family/friends [b]	30	14.63
Food	15	50.00
Shelter	8	26.67
Clothes	15	50.00
Money	19	63.33
Enough psychiatrists and psychologists		
Yes	101	49.27
No	104	50.73
Psychiatrists and psychologists are accessible		
Yes	182	88.78
No	23	11.22

[a] Relocated respondents (only)
[b] Multiple answer
[c] Respondents who had received help (only)

4.1.2.2 Satisfaction of psychiatric consultation

The table below shows the number of students who had previously discussed with psychiatrists and/or psychologists following the 2004 tsunami. The table reveals that only 3.41 percent, or 7 respondents had consulted mental health professionals, but it further shows that 100 percent of these students were satisfied with the sessions and found them effective (Table 4).

Table 4 Satisfaction and effectiveness of professional consultation

Satisfaction and Effectiveness	Frequency (n = 205)	%
Consultation of psychiatrist/psychologist	7	3.41
Satisfaction of consultations (n = 7)[±]	7	100
Effectiveness of consultations (n =7)[±]	7	100

[±] Respondents who had consultations (only)

4.1.3 Life Events

Stress at school is a major life event followed by financial problems with 64.88 percent and 50.73 percent respectively. Conflicting problems with family members or friends are seen to be of similar proportion. These are issues which were expected to be revealed as this age group is prone to undergo common teenage problems (Table 5).

Table 5 Life events occurred within the past two weeks (multiple answers)

Life Events	Frequency (n = 205)	%
Problems with Partner/Lover	51	24.88
Stress at School	133	64.88
Conflict with Friends	46	22.44
Conflict with Family Member	49	23.90
Loss of Family Member and/or Friend	25	12.20
Financial Problems	104	50.73
Other	18	8.78

4.2 Mental health status of respondents

4.2.1 Depression symptoms distribution

Table 5 shows the distribution of the answers given by the respondents on the Thai Depression Inventory. This questionnaire uses a four-rating scale technique, where 0 represents not having the symptom, while 3 is having these symptoms very often. When analysing each question, certain results will reveal the mental health status of the respondents.

Questions related to a student's learning ability are such as lack of concentration, difficulties studying, feeling lazy, and having no interest. These range from 43 to 76 percent with no symptoms. Symptoms related to a student's mental status vary between 50 and 82 percent and revealed no such problems. The mental health status of the respondent could be identified through sleeping difficulties, staying awake at night, experiencing loss of appetite, and worrying. 4.9 percent said they felt worthless all the time and 4.4 percent were sad everyday. Emotional distress includes symptoms such as; having difficulties in decision making, being violent, restless, trembling or having palpitations. Only one respondent (0.49%) stated of having lost complete interest in others, while the majority showed to have a good social status (Table 6).

According to the addition of these results, the overall picture reveals that the respondents show to have good mental health status. 80 percent have no depression symptoms, 18 percent have moderate to low depression. Only 6 respondents (3%) stated to have high depression levels (major depressive disorders) (Table 7).

Table 6 Distribution of depression symptoms indicator

Thai Depression Inventory Rating	Distribution 0 Never %(n)	1 Sometimes %(n)	2 Often %(n)	3 All the time %(n)	Mean	SD
1. Disappointed in the Future	34.63(71)	61.96(127)	1.95(4)	1.46(3)	0.702	0.581
2. Feel Worthless	45.36(93)	38.54(79)	11.22(23)	4.88(10)	0.756	0.840
3. Motivated	74.63(153)	18.05(37)	6.34(13)	0.98(2)	0.337	0.641
4. Feel Restless	64.39(132)	22.44(46)	12.19(25)	0.98(2)	0.498	0.741
5. Sad	68.29(140)	23.91(49)	3.41(7)	4.39(9)	0.439	0.762
6. Worry about things	50.24(103)	30.74(63)	15.61(32)	3.41(7)	0.722	0.849
7. No interest	43.42(89)	50.24(103)	3.41(7)	2.93(6)	0.659	0.686
8. Violent	45.85(94)	46.83(96)	6.34(13)	0.98(2)	0.624	0.650
9. Sleepless	50.24(103)	40.98(84)	7.80(16)	0.98(2)	0.595	0.677
10. Stay awake at night	68.78(141)	24.39(50)	4.88(10)	1.95(4)	0.400	0.676
11. Loss of appetite	81.95(168)	8.30(17)	7.80(16)	1.95(4)	0.298	0.696
12. Lazy	59.02(121)	29.76(61)	10.73(22)	0.49(1)	0.527	0.704
13. Difficult to make decisions	26.83(55)	63.90(131)	9.27(19)	- (0)	0.824	0.576
14. Worry about health	46.83(96)	47.31(97)	2.93(6)	2.93(6)	0.663	0.798
15. Lack of concentration	51.21(105)	34.15(70)	11.71(24)	2.93(6)	0.663	0.798
16. Cannot study	75.61(155)	17.56(36)	6.34(13)	0.49(1)	0.371	0.612
17. Trembling/palpitations	47.80(98)	46.83(96)	4.39(9)	0.98(2)	0.585	0.625
18. Lack of interest in others	85.37(175)	10.73(22)	3.41(7)	0.49(1)	0.190	0.503

The prevalence rate of major depressive disorder was found to be as high as 29.3 percent among high school students in Phang-Nga.

Table 7 Distribution of depression symptoms of the respondents

Depression Score	Symptoms	Frequency (n=205)	%
0-14	No Depression	162	79.02
15-19	Low Depression	21	10.24
20-28	Moderate Depression	16	7.80
29-33	Major Depressive Disorders	6	2.94

The following tables show the distribution of depression level by high schools. The tables reveal that of the six respondents who have major depressive disorders, four (3.77%) were from Taput Wittaya, a high school sheltered from the tsunami (Table 8 and 9). When considering individual high schools, a prevalence rate of

major depressive disorders was found to be 20.2 percent for Takua Pa Senanukul and as much as 56.6 percent for Taput Wittaya.

Table 8 Distribution of depression symptoms among high school students in Takua Pa Senanukul

Depression Score	Symptoms	Frequency (n=99)	%
0-14	No Depression	83	83.84
15-19	Low Depression	9	9.09
20-28	Moderate Depression	5	5.05
29-33	Major Depressive Disorders	2	2.02

Table 9 Distribution of depression symptoms among high school students in Taput Wittaya

Depression Score	Symptoms	Frequency (n=106)	%
0-14	No Depression	79	74.53
15-19	Low Depression	12	11.32
20-28	Moderate Depression	11	10.38
29-33	Major Depressive Disorders	4	3.77

4.3 Association between independent and dependent variable

4.3.1 Socio-demographic characteristics and depression symptoms

The process of statistical analysis, was to identify whether socio-demographic factors had significant relationships with depression symptoms. Depression did not seem to be correlated to these socio-demographic characteristics (Table 10).

Significant relationship was only found with depression scores and grade in Taput Wittaya (χ^2=6.470, df=2, P=0.039) (Table 11) and the marital status of the respondents' guardian (χ^2=5.589, df=1, P=0.018) (Table 12).

Table 10 Association between personal factors and depression scores

Socio-demographic Factors	χ^2	df	P-Value
Gender	0.254	1	0.615
School	2.677	1	0.102
Grade in Takua Pa Senanukul high school	2.928	2	0.231
Grade in Taput Wittaya high School	6.470	2	0.039*
Grade	4.696	2	0.096
Number in Household	0.604	2	0.739
Household Structure	1.795	1	0.180
Marital Status of Guardian	7.745	1	0.018*
Unemployment of Guardian 2004†	-	-	0.470
Unemployment of Guardian 2007†	-	-	0.742
Income 2004	0.409	3	0.938
Income 2007	1.220	2	0.543

† Fisher Exact Test Used

Table 11 Depression symptoms and grades in Taput Wittaya and Takua Pa Senanukul high schools

Grades	Depression Symptoms Mid/High n=43(%)	No/Low n=162(%)	χ^2 (df)	P-Value
Grade in Taput Wittaya				
10	11(25.6)	23(14.2)		
11	4(9.3)	33(20.4)		
12	12(28.0)	23(14.2)	6.470 (2)	0.039*
Grade in Takua Pa Senanukul				
10	9(21.0)	30(18.5)		
11	5(11.5)	28(17.3)		
12	2(4.6)	25(15.4)	2.928 (2)	0.231

Table 12 Depression symptoms and marital status of respondent's guardian

Marital Status	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	χ^2 (df)	P-Value
Marital Status				
Married	14(63.64)	154(84.15)		
Not Married	8(36.36)	29(15.85)	5.589 (1)	0.018*

4.3.2 Situational factors and depression scores

This section correlates mental health status of the respondents with situational factors, which are; damage to household due to the tsunami and relocation of respondents to alternate household. This section also seeks to find relationship between help received, whether the help was sufficient, as well as the number of mental health professionals and their accessibility to depression symptoms. There is no statistical significance that either of the above situations were linked to depression symptoms two years following the tsunami event (Table 13).

The only variable which show to be statistically significantly correlating with depression is whether the respondents found that the number of psychiatrists and psychologists were of adequate quantity (χ^2=6.946, df=1, P=0.008) (Table 14). However when comparing both schools, relationship with depression was only found in availability of mental health professionals in Taput Wittaya (P=0.048) (Table 16).

Table 13 Association of situational factors and depression scores

Situational Factors	χ^2	df	P-Value
Damage to household†	-	-	0.201
Family/respondent relocation†	-	-	1.000
Help received	3.079	1	0.079
Sufficient help	3.454	1	0.063
Outside help from family/friends	3.711	1	0.054
Number of psychiatrists and psychologists	6.946	1	0.008*
Accessibility of psychiatrists and psychologists†	-	-	0.103

† Fisher Exact Test Used

Table 14 Depression symptoms and number of psychiatrists and psychologists

Number of Psychiatrists/ Psychologists	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	χ^2 (df)	P-Value
Enough Mental Health Professionals				
Enough	5(22.73)	96(52.46)		
Lack	17(77.27)	87(47.54)	6.946 (1)	0.008*

Table 15 Depression symptoms and adequate numbers of mental health professionals in Takua Pa Senanukul and Taput Wittaya high schools

Enough Mental Health Professionals	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	χ^2 (df)	P-Value
Takua Pa Senanukul				
Enough	1(4.5)	50(27.3)		
Lack	6(27.3)	42(23.0)	-	0.055
Taput Wittaya†				
Enough	4(18.2)	46(25.1)		
Lack	11(50)	45(24.6)	2.947 (1)	0.086

† Chi² Test Used

Table 16 Depression symptoms and availability of mental health professionals in Takua Pa Senanukul and Taput Wittaya high schools

Availability of Mental Health Professionals	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	P-Value
Takua Pa Senanukul			
Available	5(22.7)	82(44.8)	
Unavailable	2(9.1)	10(5.5)	0.200
Taput Wittaya			
Available	11(50)	84(46.0)	
Unavailable	4(18.2)	7(3.7)	0.048*

4.3.3 Life events and depression symptoms

Recent life events are likely to be direct effects of depression symptoms. The following table assesses whether recent life events have association to depression scores. It shows that having problems with a partner or lover, undergoing stress at school, conflict with friends and family, as well as financial problems to be associated with depression symptoms (Table 17).

Table 17 Association with life events and depression scores

Life Events	χ^2	df	P-Value
Problems with Partner/Lover	10.854	1	0.001*
Stress at School	8.479	1	0.004*
Conflict with Friends	9.138	1	0.003*
Conflict with Family Member	18.600	1	<0.001*
Loss of Family Member/Friend	0.848	1	0.357
Financial Problems	6.079	1	0.014*
Other†	-	-	0.067

† Fisher Exact Test Used

4.3.4 Life events and depression symptoms among high schools

The two high schools selected were compared to show whether association with depression and life events differ between the two. The following tables intend to

demonstrate the relationships between life events experienced in the past two weeks and depression symptoms in each high school (Table 18-23). Significant association was found with problem with partner or lover in Takua Pa Senanukul (P=0.024) (Table 18) and financial problems in Taput Wittaya (χ^2=7.605, df=1, P=0.006) (Table 23).

Table 18 Depression Symptoms and problems with partner/lover by high school

Problems with Partner/Lover	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	P-Value
Takua Pa Senanukul			
Problem	4(18.2)	15(8.2)	
No Problem	3(13.6)	77(42.1)	0.024*
Taput Wittaya			
Problem	8(36.4)	24(13.1)	
No Problem	7(31.8)	67(36.6)	0.064

Table 19 Depression Symptoms and stress at school by high school

Stress at School	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	P-Value
Takua Pa Senanukul			
Stress	4(18.2)	51(27.8)	
No Stress	3(13.6)	41(22.4)	1.000
Taput Wittaya			
Stress	14(63.6)	64(35.0)	
No Stress	1(4.5)	27(14.8)	0.110

Table 20 Depression Symptoms and conflict with friend(s) by high school

Conflict with Friend(s)	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	P-Value
Takua Pa Senanukul			
Conflict	2(9.1)	23(12.6)	
No Conflict	5(22.7)	69(37.7)	1.000
Taput Wittaya			
Conflict	5(22.7)	16(8.7)	
No Conflict	10(45.5)	75(41.0)	0.171

Table 21 Depression Symptoms and conflict with family member(s) by high school

Conflict with Family Member(s)	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	P-Value
Takua Pa Senanukul			
Conflict	2(9.1)	18(9.8)	
No Conflict	5(22.7)	74(40.4)	0.627
Taput Wittaya			
Conflict	5(22.7)	24(13.1)	
No Conflict	10(45.5)	67(36.6)	0.755

Table 22 Depression symptoms and loss of family member or friend by high school

Loss of Family Member or Friend	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	P-Value
Takua Pa Senanukul			
Loss	2(9.1)	18(9.8)	
No Loss	5(22.7)	75(41.0)	1.000
Taput Wittaya			
Loss	1(4.5)	4(2.2)	
No Loss	14(63.7)	86(47.0)	0.625

Table 23 Depression Symptoms and financial problems by high school

Financial Problems	Depression Symptoms Mid/High n=22(%)	No/Low n=183(%)	χ^2 (df)	P-Value
Takua Pa Senanukul				
Problem	4(18.2)	43(23.5)		
No Problem	3(13.6)	49(26.8)	-	0.705
Taput Wittaya†				
Problem	13(59.1)	44(24.0)		
No Problem	2(9.1)	47(25.7)	7.605 (1)	0.006*

† Chi² Test Used

CHAPTER 5
DISCUSSION

The present study was aimed at identifying the mental health status of high school students in Phang-Nga Province, as well as identifying their characteristics and alternate factors that may affect their mental health and depression scores. The following chapter discusses how this study correlates with other studies previously carried out.

5.1 Characteristics of respondents

5.1.1 Socio-demographic characteristics of respondents

The study sample consisted of students on the latter three grades of high school (10^{th}, 11^{th}, and 12^{th} grade) of which 35 percent (35.61%) were studying in grade 10, 34.15 percent in 11^{th} grade, and 30.24 percent in grade 12. Out of the studied respondents, nearly 70 percent (68.29%) were female. Phang-Nga is a province where most of the workforce is in agriculture and fishery. We could expect that many male children are already working with their parents and therefore are not sent to high schools, this would explain why there is a large majority of female attendants in this study.

The Thai national average family size was in 2000 a total of 3.9 persons, while the average household size in Phang-Nga was 3.7 persons (56) in the same year. This study revealed that over two-thirds (70.73%) lived in a household housing between 4 to 6 residents, with an average of 4.37 residents. This figure is shown to be largely above the provincial and national average. However these studies were conducted long ago and it is possible that family structures have largely changed over seven years where family have changed from extended families to nuclear or single families. Another explanation for this figure could be that several families may have invited other family members or friends to live with them following the tsunami.

93.17 percent of respondents were living with their biological parents, while 6 percent (5.37%) were living solely with other family members such as uncles, aunts and/or grandparents. UNICEF reported that 1,221 Thai children in the six affected provinces had lost either one or both parents and 1,172 children were rendered orphan due to the tsunami (57). 32 caregivers had been married but were not when the data was collected. 17 (53%) of these single caregivers were widows due to the tsunami.

Among the respondents only 5.37 percent had caregivers who were divorced, this is considerably lower than the national average, which stands at 10.0 percent (58). Children from broken families have higher risks to develop depression (42). The low levels of depression identified could be a result of the family structure they live in. However, the study identified as many as 18 percent of the students living in a household with only one caretaker.

This study revealed that over a third had breadwinners working in farming and/or gardening. Phang-Nga's local product is largely shrimp paste and dried shrimp, however only 3.41 percent of the respondents' caregivers were currently working in the fishery industry or aquaculture. This is marginally lower then the average in southern Thailand which is recorded to be as high as 54.66 percent (56). The reason for this is possibly due to the fact that families who are working in the fishery industry need man power and so are less likely to send their children to high schools. As they are prone to continue their guardians' business, they do not need formal education, but rather the manual experience. Nearly 14 percent (13.66%) had breadwinners who worked for the government, with occupations such as public administration, defence, social security and education. This figure is shown to be comparable to the national average which is 12.77 percent (56). If the student's parents are working in governmental offices, they may require their children to attend high school in order for them to further their education. This study was conducted among high school students which normally are selected groups. Only a small proportion of youth, especially in rural areas have the opportunity to continue school past the compulsory age.

The average GDP per capital in Thailand is US$9,100 (307,361 Baht) per year (59), which is equal to 25,613 Baht per month. The minimum wage in Phang-Nga is 145 Baht/day, compared to 170 Baht/day in Bangkok and 168 Baht/day in Phuket (60). This study showed that the majority of respondents live in a household which is found to be below the national average, with a mean of nearly 11,000 Baht/month. This may suggest that this study population is in the lower income group when compared to the national average. As stated above over 36 percent of the respondents' caregivers are working in farming or gardening and 23 percent are merchants or have their own business.

5.1.2 Situational factors of respondents

Out of a total of 205 high school students, 16 students (7.80%) lived in a home that got either completely destroyed or sustained some level of damage. In Phang-Nga alone, 1,904 houses were destroyed beyond repair and 604 were largely damaged. This study reported that 3.41 percent of respondents were relocated of which 2 moved with relatives, 1 to foster parents and 4 to other locations such as new homes built by relief agencies. The Thai Cement group and the national television channel ITV have provided food and building materials to displaced and affected persons. The Ministry of Social Development and Human Security coordinated with the Defence Ministry and Housing Authority to construct shelters and permanent housing. The Ministry of Interior (MOI) stated on May 13th 2005 that 2,610 families were relocated to temporary houses, while 791 permanent houses had been built and 2,067 were under construction in Phang-Nga Province (61). The Royal Thai Government has donated approximately 812 million Baht in relief aid to the six affected provinces.

The Thai government, the Royal Thai Monarchy and other international and national relief agencies have done tremendous work in order to provide adequate aid and assistance to the victims and survivors of the 2004 tsunami event. This study revealed that 32 respondents (15.61%) had received help following the tsunami disaster which was in form of food, clothes, money and/or shelter. 27 (84.38%) of these 32 respondents reported that the help and assistance received was sufficient.

Major aid was provided from the national government, foreign governments, and private donors in order to try and restore normalcy as quickly as possible to all six affected provinces.

The tsunami event was so devastating and dramatic that support groups did not underestimate the importance of possible mental health drawbacks on the affected population and so, many mental health workers, clinics and centres were deployed in many of the affected areas. The emergency response to South Thailand was swift and the MOPH sent 200 doctors to Phuket almost immediately. The issue concerned whether adequate numbers of mental health professional was sufficient was identified. This revealed that half of the respondents (49.27%) found that psychiatrists and psychologists were of sufficient amount. However, the remaining 104 respondents stated that the number of these mental health professionals were scarce and inadequate in number. Over 1000 children attended first-aid psychosocial sessions by April 2005, however this only reached a fraction of the affected children. It was reported that there was a lack of efficient follow-up and limited numbers of home visits to assess the children's well-being (57). Depression is an illness which cures itself through self recovery within a year if the event was not too effective or dramatic, the low depression symptoms recorded are certainly due to self recovery and good mental health professional advice and support. The MOPH is being assisted by WHO in over 30 projects which include mental health projects paying particular attention on the long-term psychological impact on children in tsunami affected areas (62).

Agencies concerned with mental health such as the MOPH were in charge of ensuring appropriate accessibility and availability of psychiatrists and psychologists to disaster affected victims. This study revealed that this goal was largely accomplished as 182 students (88.78%) said that these mental health workers were accessible and available in times of need.

5.1.3 Satisfaction of professional consultation

Only 3.41 percent (7 respondents) had ever consulted a psychiatrist and/or psychologist, however 100 percent of these found the consultations to be effective and all were satisfied with the advice and counselling received. This is due to the excellent efforts done by professional and competitive mental health workers Thailand has to offer. However many children were dissatisfied with the numbers of psychiatrists or psychologists and many reported that mental health professional were poorly distributed, often based in urban areas not reaching people with less accessibility.

5.1.4 Life events of respondents

This study included a list of possible life events which the respondents may or may not have endured within two weeks prior to the data collection. The age group used in this study was currently going through adolescence and soon entering adulthood. This may be a very stressful moment in life, as they increasingly seek independence and try to shape their lives to ensure a prosperous future. Nearly two-thirds (64.88%) revealed they were experiencing stress at school and over half the respondents (50.73%) showed to have financial problems. Between 22 and 25 percent said to have problems with their partner or lover, conflict with friend(s), and conflict with family member(s). As a child leaves childhood and enters adulthood, many pressures are created on their psychological well-being. Adolescents are often seen to report the events stated above. If a student states he/she has financial problems, it does not necessarily suggest they are poor, most of the Thai population is currently reporting to have financial problems and these will be reported across all socio-economic groups.

5.2 Mental health status of respondents

This study reported that 89.26 percent had no or low levels of depression, while 7.8 percent and 2.94 percent had moderate and clinical depression symptoms respectively. The prevalence rate of depression was recorded to be as high as 29 percent. On the national average nearly 20 percent (19.9%) percent are diagnosed

with clinical depression (19). Griesven stated that 30 percent of people who had been displaced following the tsunami revealed high symptoms of depression (38). This figure is very much alike what was found in Phang Nga. Griesven's reported that the prevalence rate of depression among non-displaced groups was as high as 21 percent (38). This shows that depression in Phang Nga is still high, however the depression symptoms recorded may not be directly due to the tsunami event but rather from alternate stressors such as recent life events. Griesven's study revealed high levels of depression however his study did not concentrate solely on high school students. Another study concerned with depression was conducted by Wacharasindhu and Panyyayong. It was aimed at finding the prevalence rate of psychiatric disorders among school-aged children in Thailand. The study revealed that 7.1 percent were diagnosed with depressive disorders (23). This is much lower then what was seen in Phang-Nga high schools, the reason for this may be due to the fact that Wacharasindhu and Panyyayong conducted their study on the whole nation and did not study Thai school aged children who had experienced a dramatic event. The results of this study showed that two-thirds of the students who reported major depressive disorders were found in the district which had not been affected by the 2004 tsunami, therefore we may not conclude that the high rate of depression was due to the tsunami. Table 11 shows that the students in Taput Wittaya grade 10 and 12 had the highest number of students with depression. The reason for this may be due to the fact that children in 10^{th} grade have to adapt to a new environment while students in 12^{th} grade are worried about their university entry examination.

5.3 Factors associated with depression

5.3.1 Socio-demographic factors and depression symptoms

As stated above, the studied population was found to be below the national average when considering total household income. David Gunnell stated in his study that low income is a major factor to mental unwell-being and is strongly linked to depressive disorders and suicide (44). The income rate pre- and post-tsunami was not seen to be associated with depression (Table 10), however statistical significance

association was shown with depression levels and whether the respondent reported to undergo financial problems (P-Value = 0.014) (Table 17).

5.3.2 Situational factors and depression symptoms

The reason why damage to household, relocation, or help received was not shown to be statistically associated with depressive disorders may be due to the fact that very few respondents had been directly affected by the tsunami. Only 3.41 percent of respondents were relocated, of which all were from Takua Pa Senanukul.

5.3.3 Historical life events and depression

This study found significant relationship with depression levels and recent events such as having problems with a partner or a lover, undergo stress at school, conflict(s), and financial difficulties. A life partner is seen to be positive for mental support, therefore if one has recently gone through difficult time with such a person, depression levels are expected to rise. This is also the case with conflicts occurred with friends or family members who are thought to be good counsellors and positive individuals for strong mental health development. And so, having conflicts with a friend or a family member is seen to be linked to depression levels. As stated above, financial comfort is strongly associated with depression, as one is seen to have fiscal difficulties depression rates are likely to increase (25). Interestingly, to have lost a family member or friend in the past two weeks did not reveal to be associated with depression symptoms. The reason for this may be because only a low number (12.20%) revealed to have experienced such an event. Another reason why no statistical significance was shown between those variables may be because it was a distant relative or friend and so the loss may be less traumatic.

CHAPTER 6
CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study was carried out to assess depression levels and its correlating factors among high school students in Phang-Nga Province in Taput District and Takua Pa District during late January 2007, two years following the tsunami disaster. A total of 205 students in grades 10, 11, and 12 were given structured questionnaires to obtain information on their mental health status, socio-demographic characteristics, situational factors, and additional life events. The Thai Depression Inventory was used to determine the depression levels of the respondents. The following is a list of conclusions drawn;

The study revealed that 79.02 percent of high school students had no signs of depression, 10.24 percent showed low levels of depression, 7.80 percent revealed mild symptoms of depression, while the remaining 2.94 percent were diagnosed as having clinical depression. The prevalence rate of depression among the respondents was as high as 29.3 percent.

The socio-demographic characteristics of the study population showed to reveal differences with national and provincial averages. Firstly, the household size (4.37) was largely above the provincial (3.7) and national average (3.9). Secondly, the divorce rate of the study population (5.37%) was lower than the national average (10.0%). Thirdly, the proportion of caretakers working in fishery or aquaculture (3.41%) was seen to be much lower then the proportion found in southern Thailand (54.66%). Finally, the respondents' average household monthly income (11,000 Baht) was seen to be much lower than the national average (25,000 Baht).

Over half the respondents reported that mental health workers were of insufficient numbers and poorly distributed throughout the province. 53 percent of students in Taput Wittaya and 48 percent of student in Takua Pa Senanukul stated that there is a lack of mental health professionals in their district.

Nearly 16 percent of the respondents had received help following the tsunami disaster, of which nearly 85 percent were satisfied with the help received. 91 percent of the help received was given to students in Takua Pa Senanukul.

Only 3.41 percent of the respondents had consulted professional mental health workers, such as psychiatrists and psychologists, of whom all reported these sessions were effective and satisfactory. Only one respondent from Taput Wittaya had consulted a mental health professional following the tsunami, the rest of the consultations were given to the students in Takua Pa Senanukul.

Over half of the respondents stated that the number of mental health professionals is inadequate and reported that there was a lack of hospitals. The decentralisation of doctors was also reported to be inadequate, where students found it difficult to contact mental health professionals in rural areas.

Most of the direct aid received by the students was in monetary form and food of which the large majority found the aid to be sufficient. All the respondents who stated the aid was insufficient said they currently lack funds.

Nearly two-thirds revealed they were experiencing stress at school and over half the respondents demonstrated to currently have financial problems. A quarter of the respondents reported to have problems with their partner or lover, nearly 60 percent found it slightly harder to make decisions and were disappointed about the future. 16 percent worried a lot about things in general and 12 percent found it difficult to concentrate. 5 percent felt worthless all the time while 9 respondents (4.4%) were sad everyday. On a brighter note, 80 percent felt no lack of interest in others and no loss of appetite, while nearly 70 percent did not stay awake at night.

Sleep and appetite disturbances are seen to be directly linked to depression (22), and so it is reassuring to see that the respondents did not reveal to have problems with either of these issues.

Situational factors such as damage to household, relocation of student, or whether the student had received help following the tragedy did not show to be statistically linked to depression symptoms. However, it is interesting to note that all the students who were relocated were studying in Takua Pa Senanukul high school. Relocation to alternate household was not linked to depression, of six respondents with the highest levels of depression, four were from Taput Wittaya a school not affected by the tsunami.

Life events such as problems with a partner or lover, academic difficulties, conflict with friend(s) and family member(s), as well as financial problems affected the students' depression levels in both high schools. Interestingly enough, a loss in a family member or friend in the past two weeks did not show to correlate with depression symptoms.

6.2 Recommendation

6.2.1 Recommendation for further implementation

To focus on depression symptoms of younger population groups is an important issue. As discussed above, depression is a common and curable illness if treatment is sought for in a timely process. However a lack of depression symptom identification may lead to a risk of relapse and deteriorated depression levels can be expected. Depression is an illness which carries many aspects, it may lead to alcoholism, conflict, and suicide which will further lower the quality of a nation and its workforce. The following measures are recommendations as to limit the level of undiagnosed depression sufferers.

Six students revealed to have major depressive disorders which should be further studied. More interviews and talks should be carried out with these

respondents. Larger scale surveillance should be carried out by the MOPH or the MOI as well as providing better distribution of mental health professionals and limit the clustering of such health workers in urban areas. Follow up should also be strongly considered for long-term periods. As stated above people who have experienced depressive episodes or have suffered from depression symptoms are likely to re-live these feelings within the following 5 years. Therefore it is important to inform the population that mental health professional are available for consultations.

The needs of victims should be carefully identified and adequate and appropriate counselling and tutoring should be provided to all who are experiencing mental problems. Financial aid should be equally distributed throughout affected areas, and victims should be supplied with sufficient aid.

Social and mental or emotional support groups are strong assets to alleviate psychological impairment and so such groups should continue to work in disaster prone areas in order to limit the offsets of depression among the population.

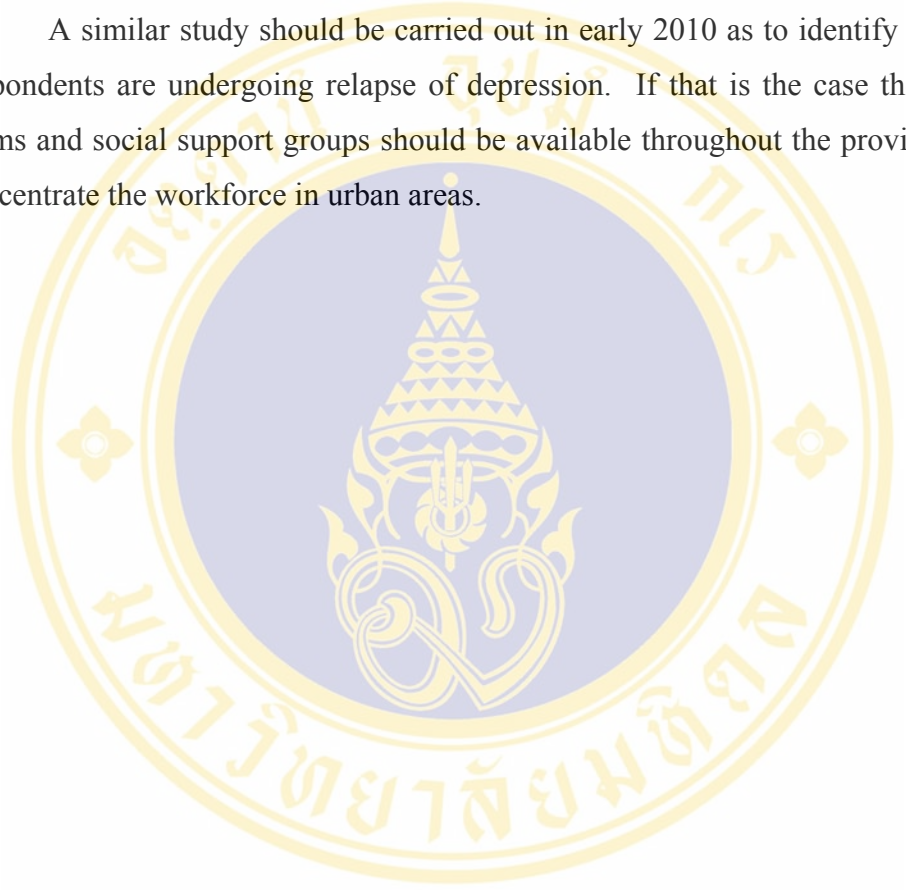
6.2.2 Recommendation for further studies

More studies should be carried out on adolescents, only limited numbers of studies of this scope have ever been done, and so, only limited information is available. Previous studies identified depression symptoms among the entire affected population, however adolescents show different signs and symptoms as they go through maturity, therefore school aged children should be given more attention in order to identify stressor leading to depression. A similar study could be conducted in other schools of Phang-Nga such as vocational or private schools.

Studies targeting all adolescents in Phang-Nga should be done and not solely concentrate on high school students. Further studies should be carried out directly following a disaster in order to identify the direct effects the traumatic event may have on adolescents.

Psychological balance is strongly related with local culture, traditions and the environment. It is recommended that further studies with a more qualitative approach should be engaged in order to clearly understand the factors related to mental health and depression.

A similar study should be carried out in early 2010 as to identify whether the respondents are undergoing relapse of depression. If that is the case then response teams and social support groups should be available throughout the province and not concentrate the workforce in urban areas.



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APPENDIX

APPENDIX A

QUESTIONNAIRE

Hello and good day,

My name is Jan-Erik Larsen, I am a student at Mahidol University in Bangkok, studying a Masters in Primary Health Care Management. I am here today to conduct a research on the 2004 Tsunami and so I would like you to answer a few questions.

This study is completely anonymous and the results will only be analysed in this research. Please complete the following questionnaire by answering all questions in all four parts. You only need to one ☐ unless instructed otherwise.

Part 1

1. Gender: *Female* ❑ *Male*❑
2. Who is your primary caretaker before December 2004?

   ❑ *Mother* ❑ *Father*

   ❑ *Other (Brother, Uncle, Grandparents…)*

   (please define)_____

3. Who is your primary caretaker today?

   ❑ *Mother* ❑ *Father*

   ❑ *Other (Brother, Uncle, Grandparents…)*

   (please define)_____

4. What is the marital status of your parents/caretakers today?

   ❑ *Married*

   ❑ *Re-Married*

   ❑ *Divorced*

   ❑ *Widowed*

   ❑ *Single*

   ❑*Other* (please define) _____

5. What was the occupation of your parents/caretakers before December 2004?

_____

6. What is the occupation of your parents/caretakers today?

_____

7. Who are you currently living with? (can be multiple answer)

- ❑ *Direct Family*
- ❑ *Indirect Family*
- ❑ *Friends*
- ❑ *Fosters*
- ❑ *Other* (please define) _____

8. How many residents are currently living in your household? _____

9. What was the total income of your household per month before December 2004?

(estimate) _____ Baht/month

10. What is the total income of your household per month today?

(estimate) _____ Baht/month

Part 2

Please circle the choice that most explain you/your behaviour within the past week

1. a. Very disappointed about the future – feeling like there is no hope
   b. Discouraged – having pessimistic view of the future
   c. Sometimes feeling discouraged
   d. Not discouraged

2. a. Always feeling as I am worthless
   b. Frequently feel as if I am worthless
   c. Fee guilty – occupied with own mistake in the past
   d. Not feeling of guilt or that I am a bad person at all

3. a. Not at all motivated
   b. Less motivated then usual
   c. A little less active than used to be
   d. No change in action

4. a. Always fidget and feel restless
   b. Fidget and feel restless
   c. Nervous
   d. Easy going

5. a. Very sad, constantly cry
   b. Sad quite often
   c. Feeling unhappy
   d. Feeling fine

6. a. Always worry about things
   b. Frequently anxious
   c. More anxious than used to be
   d. Not anxious

7. a. Bored of everything, nothing interests me
   b. Bored and gloomy
   c. Easily bored but still able to enjoy myself
   d. Enjoyable

8. a. Very violent – always have argument or destroy things
   b. Easily irritated
   c. Easier irritated than used to be
   d. Not irritated

9. a. Always having difficulties trying to sleep – need medication
   b. Always have difficulty trying to go to sleep
   c. Have difficulty trying to sleep sometimes
   d. Have no difficulty trying to sleeping

10. a. Wake up in the middle of the night every night
    b. Always wake up in the middle of the night, having difficulty going back to sleep
    c. Have difficulty sleeping
    d. Have no difficulty sleeping

11. a. Lose appetite, having difficulty eating
    b. Lose appetite but still be able to eat
    c. Less appetite than used to be
    d. No appetite lost

12. a. Very lazy – cannot do anything
    b. Exhausted and fatigue
    c. Easier exhausted than used to be
    d. No exhaustion

13. a. Hardly being able to make any decision
    b. Very hesitant – having difficulty making decisions even on small matters
    c. Having hesitation – do not want to make any decisions
    d. No hesitation

14. a. Very certain of having physical health problems
b. Worried that physical health problem exists
c. Become more health concern than used to be
d. Not worried of having any physical health problems

15. a. Very absent-minded – cannot concentrate
b. Absent-minded – difficult to concentrate
c. Sometimes absent-minded – more difficult to concentrate than used to be
d. Can concentrate as usual

16. a. Not able to study at all
b. Less quality of work – have to force myself to study
c. Have to force myself to start studying or doing something
d. Able to study as usual

17. Having these symptoms: trembling, shaking, difficulty breathing, having gas in the stomach, tickling hands, headache
a. Always
b. Frequently
c. Sometimes
d. Never

18. a. Not interested in others
b. Have very little interest in others – hardly want to socialize
c. Less interested in others than used to be
d. No change in interest in others

Part 3

1. Did your home sustain damage during the tsunami?

❑ Yes ❑ No

2. Were you and your family relocated following the tsunami?

❑ Yes ❑ No

(if only you were relocated please give reason) _____

_____

3. *If yes to Q.2*, Where were you and your family relocated to?

❑ Relatives

❑ Foster Home

❑ Temporary Shelter/Camp

❑Other_____

4. Did you receive help or aid after the tsunami?

❑ Yes ❑ No

5. *If yes to Q.4*, What form of help was it? (can be multiple answer)

❑ Food

❑ Shelter

❑ Clothes

❑ Money

❑ Other_____

6. Was the aid given sufficient?

❑ Yes ❑ No

if no, can you explain what was wrong or inadequate with the aid? _____

_____

7. Do you have relatives and/or friends outside Phang-Nga that helped you after the tsunami?

❑ Yes ❑ No (if No please skip to question 9)

8. *If yes to Q.7*, What kind of help did you receive? (can be multiple answer)

❑ Food

❑ Shelter

❑ Clothes

❑ Money

❑ Other_____

9. Do you find psychiatrists and psychologists are easily available?

❑ Yes ❑ No

10. Do you find that there is an adequate number of mental health facilities in Phang-Nga?

❑ Yes (give reason)_____

❑ No (give reason)_____

11. Have you ever consulted a psychiatrist/psychologist?

❑ Yes ❑ No (if No please skip to part 4)

12. *If yes to Q.11*, When and Why_____

_____

13. *If yes to Q.11*, How far did you have to travel to consult the Doctor(s)?

_____Km_____Minutes

14. *If yes to Q.11*, Are you satisfied with their support? (can give reason)

❑ Yes (give reason)_____

❑ No (give reason)_____

15. *If yes to Q.10*, Do you find these sessions are effective? (can give reason)

❑ Yes (give reason)_____

❑ No (give reason)_____

Part 4

In the Past Two Weeks did you experience…

1. … difficulties with your partner/lover or boyfriend/girlfriend	❑ Yes	❑ No
2. … stress at school? Or decreasing academic performance?	❑ Yes	❑ No
3. … a conflict with a friend?	❑ Yes	❑ No
4. … a conflict with a parent or another member of family?	❑ Yes	❑ No
5. … a loss of a family member/friend?	❑ Yes	❑ No
6. … financial problems?	❑ Yes	❑ No
7. … Are there any other personal problems not mentioned above	❑ Yes	❑ No

(Please specify)_____

_____

_____

****

Thank you so much for your time and cooperation

แบบสอบถาม

สวัสดีครับ ผมชื่อยังอีริค ลาร์เซ่น เป็นนักศึกษาหลักสูตรปริญญาโทบริหารสาธารณสุขมูลฐาน ที่มหาวิทยาลัยมหิดล กรุงเทพฯ ผมกำลังศึกษาเรื่องสึนามิที่เกิดในปี 2547 และผมใคร่ขอความร่วมมือจากท่านในการตอบคำถามของผมตามแบบสอบถามข้างล่างนี้

ข้อมูลที่ได้รับจากท่านจะใช้เฉพาะประโยชน์ในการศึกษาเท่านั้นและจะไม่นำไปเปิดเผย ดังนั้นจึงขอความกรุณาท่านตอบทุกข้อตามความเป็นจริง ด้วยการทำเครื่องหมาย ✓ ในกล่อง ☐ หน้าข้อความที่ท่านเลือกหรือทำเครื่องหมายวงกลม ○ รอบข้อที่ท่านเลือก กรอกข้อมูลในช่องว่างที่จัดไว้จะเป็นพระคุณยิ่ง

<u>ส่วนที่ 1</u>

1. เพศ ☐ หญิง ☐ ชาย

2. ก่อนเดือนธันวาคม 2547 ใครเป็นผู้เลี้ยงดูท่าน

☐ บิดา ☐ มารดา

☐ อื่น ๆ (โปรดระบุ เช่น พี่ ลุง ป้า น้า อา ปู่ ย่า ตา ยาย).....

3. ปัจจุบันใครคือผู้เลี้ยงดูท่าน

☐ บิดา ☐ มารดา

☐ อื่น ๆ (โปรดระบุ เช่น พี่ ลุง ป้า น้า อา ปู่ ย่า ตา ยาย).....

4. สถานะภาพสมรสของผู้ที่เลี้ยงดูท่านในปัจจุบัน

☐ สมรส ☐ สมรสใหม่

☐ หย่า

☐ หม้าย

☐ โสด

☐ อื่น ๆ โปรดระบุ .....

5. ก่อนเดือนธันวาคม 2547 บิดา มารดา/ผู้ที่เลี้ยงดูท่านประกอบอาชีพอะไร

.....

6. ปัจจุบัน บิดา มารดา/ผู้ที่เลี้ยงดูท่านประกอบอาชีพอะไร

.....

7. ปัจจุบันท่านอาศัยอยู่กับผู้ใด (ตอบได้หลายข้อ)

☐ พ่อ แม่ พี่ น้อง ของท่านเอง

☐ ญาติ ลุง ป้า น้า อา ปู่ ย่า ตา ยาย

☐ ครอบครัวของเพื่อน เพื่อนบ้าน เพื่อนของพ่อแม่

☐ ครอบครัวอุปถัมภ์ คนอื่นที่รับท่านไปเลี้ยงดู

☐ อื่น ๆ ระบุ .....

8. ในบ้านของท่านมีผู้อาศัยอยู่ทั้งหมดจำนวนเท่าไร

จำนวน.....คน

9. ก่อนเดือนธันวาคม 2547 รายได้ทั้งหมดของครอบครัวท่านมีประมาณเท่าไหร่ต่อเดือน

จำนวน.....……บาท/เดือน

☐ ไม่ทราบ

10. ปัจจุบัน รายได้ทั้งหมดของครอบครัวท่านมีประมาณเท่าไหร่ต่อเดือน

จำนวน……..……บาท/เดือน

☐ ไม่ทราบ

<u>ส่วนที่ 2</u>

กรุณาวงกลมรอบข้อที่ตรงกับท่าน หรือใกล้เคียงมากที่สุดเพียงข้อเดียว ในช่วง 1 สัปดาห์ที่ผ่านมา

1. ก. ท้อแท้ใจมาก หมดหวังในอนาคต
   ข. ท้อแท้ใจ มองอนาคตในแง่ร้าย
   ค. ท้อแท้ใจบ้างบางครั้ง
   ง. ไม่หมดหวัง
2. ก. รู้สึกตลอดเวลาว่าตัวเองเป็นคนไม่ดี หรือไม่มีค่าเลย
   ข. รู้สึกตัวเองเป็นคนไม่ดีอยู่บ่อยๆ
   ค. รู้สึกผิด คิดแต่เรื่องความผิดของตัวเองในอดีต
   ง. ไม่รู้สึกผิด หรือคิดว่าตัวเองไม่ดี
3. ก. ไม่สนใจที่จะทำอะไรเลย
   ข. คิดอะไร ทำอะไรเชื่องช้าลง
   ค. คิดอะไร ทำอะไรเชื่องช้าลงกว่าเดิมบ้าง
   ง. ความคิด การกระทำยังเหมือนเดิม
4. ก. งุ่นง่าน เดินไปมา อยู่ไม่ติดที่ เป็นบ่อย
   ข. กระสับกระส่าย อยู่นิ่งไม่ค่อยได้
   ค. ร้อนใจ กระวนกระวาย
   ง. สบายๆ ไม่ร้อนใจ

5. ก. ซึมเศร้ามาก ร้องไห้บ่อย

ข. หดหู่ ซึมเศร้า จิตใจไม่สบายเลย

ค. รู้สึกไม่มีความสุข ไม่แจ่มใสเหมือนเคย

ง. จิตใจสบายดี

6. ก. คิดมาก กังวลใจ อยู่ตลอดเวลา

ข. คิดมาก กังวลใจบ่อย

ค. คิดมาก กังวลใจง่ายกว่าแต่ก่อน

ง. ไม่วิตกกังวล

7. ก. เบื่อไปหมดทุกอย่าง ไม่อยากทำอะไรเลย

ข. รู้สึกเบื่อ ไม่มีความเพลินใจ

ค. เบื่อง่าย แต่ยังพอมีความเพลินใจอยู่บ้าง เช่น เวลาดูโทรทัศน์ มีคนมาคุยด้วย

ง. มีความสนใจในเรื่องต่างๆ เหมือนเดิม

8. ก. หงุดหงิดมาก มีการทะเลาะกัน ทำลายข้าวของ

ข. หงุดหงิด ฉุนเฉียวบ่อย

ค. หงุดหงิดง่ายกว่าเดิม แต่พอคุมได้

ง. ไม่มีอารมณ์หงุดหงิด

9. ก. หลับยากทุกคืน หรือต้องกินยาให้หลับ

ข. หลับยากค่อนข้างบ่อย

ค. หลับยากบางครั้ง

ง. นอนหลับง่าย

10. ก. ตื่นกลางดึกทุกคืน แทบไม่ได้นอนเลย

ข. ตื่นค่อนข้างบ่อย หลับต่อยาก

ค. นอนหลับไม่สนิท

ง. หลับปกติดี

11. ก. เบื่ออาหารมาก กินแทบไม่ได้เลย

ข. เบื่ออาหารแต่พอฝืนกินได้

ค. ไม่เจริญอาหารเหมือนเดิม

ง. กินอาหารได้ตามปกติ

12. ก. เหนื่อยหรืออ่อนเพลียมาก จนทำอะไรไม่ได้เลย

ข. เหนื่อยง่าย อ่อนเพลีย ทำอะไรนิดหน่อยก็เหนื่อย

ค. เหนื่อย อ่อนเพลียง่ายกว่าที่เคย

ง. ไม่มีอาการอ่อนเพลีย

13. ก. ตัดสินใจอะไรไม่ได้เลย

ข. ลังเลใจ ตัดสินใจไม่ค่อยได้แม้แต่เรื่องเล็กๆ น้อยๆ

ค. ลังเลใจบ้าง ไม่อยากตัดสินใจ

ง. ไม่มีความลังเลใจ

14. ก. เชื่อว่าตัวเองมีโรคทางกายแน่

ข. กังวลใจ คิดว่าตัวเองน่าจะมีโรคทางกาย

ค. เป็นห่วงสุขภาพของตัวเองกว่าแต่ก่อน

ง. ไม่กังวลว่าตัวเองมีโรคทางกาย

15. ก. ใจลอยมาก ไม่มีสมาธิเลย

ข. ใจลอย สมาธิไม่ดี ต้องตั้งใจมาก เวลาจะทำอะไรสักอย่าง

ค. ใจลอยบ้าง สมาธิไม่ค่อยดีเหมือนก่อน

ง. สมาธิปกติ

16. ก. ทำงานไม่ได้เลย

ข. ทำงานแย่ลงกว่าเดิม ต้องบังคับตัวเองมากให้ทำงาน

ค. ต้องฝืนใจ เวลาจะทำงาน หรือเริ่มทำอะไรบางอย่าง

ง. ทำงานได้ตามปกติ

17. อาการทางร่างกาย เช่น ใจสั่น หายใจไม่อิ่ม แน่นท้อง มือชา ปวดศีรษะ

ก. มีอาการเหล่านี้บ่อยมาก

ข. มีอาการเหล่านี้ค่อนข้างบ่อย

ค. มีอาการเหล่านี้บ้างบางครั้ง

ง. ไม่มีอาการอะไรเลย

18. ก. ไม่สนใจใครเลย ใครจะเป็นอย่างไรก็ช่าง

ข. ไม่ค่อยสนใจใคร ไม่คิดอยากพูดคุยกับใคร

ค. สนใจคนอื่นๆ รอบข้างน้อยกว่าเดิม

ง. ความสนใจต่อคนอื่นเหมือนเดิม

<u>ส่วนที่ 3</u>

1. บ้านของท่านได้รับความเสียหายจากเหตุการณ์ภัยพิบัติสึนามิหรือไม่

☐ ใช่ ☐ ไม่ใช่

2. ท่านและครอบครัวของท่านโยกย้ายไปอยู่ที่ใหม่หลังจากเหตุการณ์ภัยพิบัติจากสึนามิใช่หรือไม่

☐ ใช่ ☐ ไม่ใช่

ถ้าใช่ เพราะสาเหตุใด…….....

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3. จากคำถามข้อ 2 ท่านโยกย้ายไปอยู่ที่ใด

☐ บ้านญาติ

☐ บ้านสงเคราะห์

☐ ที่อยู่ชั่วคราว / แคมป์

☐ อื่น ๆ ระบุ.....

4. ท่านได้รับความช่วยเหลือหรือการสงเคราะห์ภายหลังเหตุการณ์ภัยพิบัติจากสึนามิหรือไม่

☐ ได้ ☐ ไม่ได้ (ข้ามไปตอบข้อ 7)

5. จากคำถามข้อ 4 ท่านได้รับความช่วยเหลือในรูปแบบใด (ตอบได้มากกว่า 1 ข้อ)

☐ อาหาร

☐ ที่พัก

☐ เสื้อผ้า

☐ เงิน

☐ อื่น ๆ ระบุ .....

6. จากคำถามข้อ 4 ความช่วยเหลือที่ท่านได้รับเพียงพอหรือไม่

☐ เพียงพอ ☐ไม่เพียงพอ

ถ้าไม่เพียงพอ เป็นเพราะสาเหตุใด……....

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7. ท่านมีญาติหรือเพื่อนฝูงที่อยู่จังหวัดอื่นให้ความช่วยเหลือแก่ท่านหลังเหตุการณ์ภัยพิบัติจากสึนามิ หรือไม่

☐ มี ☐ ไม่มี (ข้ามไปตอบข้อ 9)

8. จากข้อ 7 ท่านได้รับความช่วยเหลือในด้านใด

☐ อาหาร

☐ ที่พัก

☐ เสื้อผ้า

☐ เงิน

☐ อื่น ๆ ระบุ .....

9. ที่จังหวัดพังงามีจิตแพทย์หรือนักจิตวิทยาที่ให้บริการแก่ผู้มีปัญหาหรือไม่

☐ มี ☐ ไม่มี

10. ท่านคิดว่าจังหวัดพังงามีบริการด้านสุขภาพจิตเพียงพอหรือไม่ (กรุณาให้เหตุผล)

☐ เพียงพอ เพราะ ..... ☐ ไม่เพียงพอ เพราะ .....

11. ท่านเคยไปปรึกษากับจิตแพทย์ / นักจิตวิทยาหรือไม่

☐ เคย ☐ ไม่เคย (ข้ามไปตอบส่วนที่ 4)

12. ถ้าเคย จากข้อ 11 ท่านไปพบเมื่อไหร่ และเพราะสาเหตุใด

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13. ถ้าเคย จากข้อ 11 ท่านต้องเดินทางไกลเท่าไหร่ในการไปขอคำปรึกษาจากแพทย์

.....กิโลเมตร.....ชั่วโมง

14. ถ้าเคย จากข้อ 11 ท่านรู้สึกพึงพอใจต่อการให้กำลังใจจากเจ้าหน้าที่หรือไม่ (กรุณาให้เหตุผล)

☐ พอใจ เพราะ ..... ☐ ไม่พอใจ เพราะ .....

15. ถ้าเคย จากข้อ 11 ท่านคิดว่าการให้คำปรึกษาเป็นประโยชน์แก่ท่านหรือไม่ (กรุณาให้เหตุผล)

☐ เป็น เพราะ .....

☐ ไม่เป็น เพราะ .....

ส่วนที่ 4

ในสองสัปดาห์ที่ผ่านมา ท่านเคยมีปัญหาเหล่านี้หรือไม่

1. มีปัญหากับ คู่รัก หรือแฟน ☐ มี ☐ ไม่มี
2. มีความเครียดที่โรงเรียน หรือ ผลการเรียนต่ำลง ☐ มี ☐ ไม่มี
3. มีความขัดแย้งกับเพื่อน ☐ มี ☐ ไม่มี
4. มีความขัดแย้งกับบิดา มารดา หรือสมาชิกคนอื่น ๆ ในครอบครัว ☐ มี ☐ ไม่มี
5. สูญเสียสมาชิกในครอบครัว /เพื่อน ☐ มี ☐ ไม่มี
6. มีปัญหาด้านการเงิน ☐ มี ☐ ไม่มี
7. ปัญหาอื่น ๆ นอกเหนือจากที่กล่าวมาข้างต้น ☐ มี ☐ ไม่มี

(โปรดระบุ) .....

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ขอบพระคุณที่ให้ความร่วมมือในการตอบแบบสอบถามนี้มากครับ

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