DEPRESSION AMONG NAVAL PERSONNEL AND THEIR SPOUSES AT PHANG-NGA NAVAL BASE, PHANG-NGA PROVINCE, SIX MONTHS AFTER THE TSUNAMI

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ABSTRACT

The tsunami, one of the world greatest natural disasters, struck Phang-Nga Naval Base in Phang-Nga Province on 26th December 2004. It was devastating and left the base in ruins. The study sought to assess the magnitude and severity of depression in naval personnel and their spouses who survived and continued living as residents of Phang-Nga Naval Base 6 months after the disaster.

A total of 250 of 614 persons who survived and were still living as residents of Phang-Nga Naval Base were included in this study. Subjects were interviewed by using the Montgomery Asberg Depression Rating Scale (MADRS) Thai version and also given a general questionnaire.

The results show the mean age of the survivors was 35.76 years, most were married, and most had secondary school education. Nearly 80% of the study group experienced the tsunami. The prevalence rate for depression among the study group was 28%, 15.8% for males and 54.4% for females. The significant risk factors for depression were female gender, older age, lower education, not being married, having a lower income after the disaster, having lost family members, having lost property in the disaster, being in need of social support and having personally experienced the tsunami.

This study found prevalence rates for depression in naval personnel and their spouses who survived and still living as residents that were higher than normal. Clinical evaluation and therapeutic intervention should include specific attention to this high incidence of depression and the particular circumstances. Early mental health intervention is recommended to prevent the development of chronic depression.

KEY WORDS : DEPRESSION / TSUNAMI DISASTER / NAVIES / SPOUSES / SURVIVORS

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การศึกษาภาวะซึมเศร้าของทหารประจำการและคู่สมรส ณ ฐานทัพเรือพังงา จังหวัดพังงา 6 เดือนภายหลังจากประสบภัยธรณีพิบัติคลื่นยักษ์สึนามิ (DEPRESSION AMONG NAVAL PERSONNEL AND THEIR SPOUSES AT PHANG-NGA NAVAL BASE, PHANG-NGA PROVINCE, SIX MONTHS AFTER THE TSUNAMI)

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บทคัดย่อ

สึนามิที่เกิดขึ้น เมื่อวันที่ 26 ธันวาคม 2547 ณ ฐานทัพเรือพังงา จังหวัดพังงา นับเป็นภัยพิบัติทางธรรมชาติที่ร้ายแรงที่สุดครั้งหนึ่งที่เคยเกิดขึ้นในโลก ซึ่งได้ก่อให้เกิดความเสียหายทั้งชีวิต และทรัพย์สิน หลงเหลือไว้เพียงซากปรักหักพัง การศึกษาในครั้งนี้จึงมีวัตถุประสงค์เพื่อ ศึกษาถึงขนาดและความรุนแรงของภาวะซึมเศร้าในทหารประจำการและคู่สมรสที่ประสบภัยและรอดชีวิต และยังคงพักอาศัยอยู่ในบ้านพักสวัสดิการของฐานทัพเรือพังงา 6 เดือนภายหลังจากเหตุการณ์

กลุ่มตัวอย่างทั้งหมด 250 คน จาก 614 คน ที่รอดชีวิตและยังคงพักอาศัยอยู่ในบ้านพักสวัสดิการของฐานทัพเรือพังงา ถูกสัมภาษณ์โดยใช้แบบสอบถามทั่วไป และแบบสอบถามเพื่อประเมินภาวะซึมเศร้า (Montgomery Asberg Depression Rating Scale : MADRS) ฉบับภาษาไทย

ผลการศึกษาพบว่าอายุเฉลี่ยของกลุ่มตัวอย่าง คือ 35.76 ปี ส่วนใหญ่แต่งงานแล้วและระดับการศึกษาสูงสุดคือมัธยมศึกษา มีถึง 78.8% อยู่ในเหตุการณ์ครั้งนี้ อัตราความชุกของภาวะซึมเศร้าของทหารประจำการและคู่สมรสทั้งหมด คือ 28% อัตราความชุกของภาวะซึมเศร้าในเพศชาย คือ 15.8% และเพศหญิง คือ 54.4% ปัจจัยที่มีผลต่อการเกิดภาวะซึมเศร้า คือ เพศหญิง, ระดับการศึกษาสูงสุด, สถานภาพสมรส, รายได้หลังประสบภัย, การสูญเสียบุคคลในครอบครัว, มูลค่าการสูญเสีย, ความต้องการการช่วยเหลือ และการอยู่เผชิญหน้ากับเหตุการณ์

จากการศึกษาในครั้งนี้พบภาวะซึมเศร้าเกิดขึ้นในทหารประจำการและคู่สมรสที่รอดชีวิตและยังคงพักอาศัยในบ้านพักสวัสดิการของฐานทัพเรือ จึงมีข้อเสนอแนะว่าควรมีการเข้ามาประเมินและบำบัดรักษา เพื่อป้องกันการเกิดภาวะซึมเศร้าเรื่อรัง

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CHAPTER I
INTRODUCTION

Rationale and Justification

At about 07.58 a.m. (Thailand time) on last 26th December 2004, the Tsunami disaster that was one of the world greatest disaster and caused a great lost of lives and properties totally 232,403 people died and 124,057 people injured (1). For Thailand, it effected in the six provinces along the coast of Andaman sea in Phang-Nga, Krabi, Phuket, Ranong, Trang, and Stoon Province. The report showed 8,457 injured victims, 5,305 died, and 3,498 were lost from the disaster (2). Beside physically effects there were also mentally effects. From the study on the effect of flood and psychiatric problem found that incident rate of psychiatric problem in exposed disaster 42% severed more than unexposed disaster (3). Due to the event, except the physical impact that affected to many people. There was the one important effect likewise that was the psychiatric impact. One of those symptoms that occur after the disaster, called Post Traumatic Syndrome, is depression (4).

Depression is one of the main problems that Ministry of Public Health realized and find increasingly. Lifetime prevalence of depression is 15% (5) and World Health Organization (WHO) predicted that in the year 2020 depression will be the 2nd leading cause of health impairment worldwide next to Cardiovascular disease (6) and depression yet is risk factor to cause Coronary Artery Disease (CAD) also. According to study found that palients who reported clinical depression more likely to develop CAD or suffer a heart attact than non-depressed counterparts (7). And from the study of burden of disease and injury in Thailand in 1999 found that depression could cause Disability Adjusted Life Years (DALYs) in number 15th for males and 4th for female. If consider the specific by study of psychiatry found that DALYs indicate at highest point (8). These are showed that even if people who depressed were not died before

the suitable age, but they suffered from their symptoms longer than the other psychiatic diseases. And at the present, there are depressed patients tend to increase compare with out patients of psychiatry in the year 2000–2002. By the year 2001 it will increased to 26.70 and 85.62 in 2002 (9). From the epidemiology survey of psychiatric illness in Thai population in 2003, rate of depressed patient was 3.2% in Thai population, 3.98% in female, and 2.43% in male (5). And from the two latest record of 2004 and 2005, Thai population got depression 140.55 per 100,000 of population (10) and 149.90 per 100,000 of poppulation (11), respectively. This report excluded population who did not know that they have depression in this condition. If they got the right diagnosis and treatment in time they will be able to turn to normal (12). Furthermore, depression can affect quality of life and have a tendency to commit suicide (13). According to many reports found population around the world commited suicide 1 million people each year. And WHO forecasted that there will be increasing up to 1.5 million people in 2020 (14). Although, reported of commit suicide by Department of Mental Health in the year 2003 decreased from 7.11 per 100,000 of population (15) to 6.93 per 100,000 of population in 2004 (10). But 1/3 or 60% of the top 3 main reasons of commit suicide of Thai poppulution caused from depression (14).

Phang-Nga, the province hardest hit by the Tsunami in Southern Thailand. Most of the deaths occurred in this province. The Tsunami killed appoximatedly 5,395 people (at least 2,213 foreigners), 2,845 missing and 5,597 injured (data included 1,253 foreigners) (2) and from reports of Department of Mental Health found that in Phang-Nga Province there were depressed patients increased from the year 2003 at 60.23 per 100,000 population (15) to 204.97 per 100,000 population in 2004 (10) and decreased to 44.73 per 100,000 population in 2005 (11). There was report of Department of Mental Health after the event three months found that people in Phang-Nga still have depressed condition 20% and yet unable to accept of the disaster. Although the cause of depression is so much seriously mentally shock that unable to bear that situation. Even, from talking to the victim from the disaster who did not know that they got any mental health problems. Part of them were found that depression caused from sadateness and desperation to receive help from the

government (16) this finding agree with the study in Srilanga and India that many people are still sad and unable to accept the past event (17).

For Phang-Nga Naval Base, that located at Tambol Lamkaen, Taay Muang District Phang-Nga Province. The base has its area over 2,000 Rai. where Phang-Nga Naval base was used for setting the head quarter to guard the coast of Andaman Sea. At the present Phang-Nga Navy base has got damages from Tsunami almost 100% i.e. the head quarter of Phang-Nga Navy base golf court, arsenal, coast quard patrol boats 215, hospital, and navy's official residence and other properties total domage cost over 670 million baht. Beside this, there is a navy boat called Royal Navy boat Kraburi which the huge wave swashed up to the area over Chulaporn dam, with in Phang-Nga Navy base zone. Also a coast guard boat 125 (ROH-TOH.215) which operated for protect Princess Chulaporn had drown and lost unable to find yet. The navies and their families about 480 families got suffer from the losts and damages each family over 100,000 baht, four navy officers and 1 employee died, 19 of navy's family members died, and 2 navies were lost (18). Even got such damages but duty of navies here not only seeking their relatives, or friends who live in naval base and were lost in the disaster. Some of navies yet kept going on working on the ship and or boat seeking to help the lost people or picking the dead bodies of the victims in the Sea. Further more, even there were reports of some navy officers died. But in fact many of the children who are relatives or dependents of the naval base were dead (19). Not only the disaster of the naval base as mentioned also mentally effected to navy and family who live and work in the naval base. But also effected to socioeconomic especially their families. Depression is found from the ones who has family problems (20). And from the study of Chaudhry et al. (21), depression is common after the death of spouse or the love one. Even worse, there were occurrences of eartquakes now and again including spread rumours about repeating disaster caused fear to people who live in the epidemic areas. Therefore reseascher team consider that depression of navy and their families survived and suffer from the disaster of Tsunami is to be an important study case as well. In order to, provide some sorts of help or treatment, for prompness of the Royal navy to perform routine duties properly and to protect the country efficiently.

Research Objectives

General Objective

To determine magnitude and severity of depression in navies or their spouses after 6 months past of Tsunami disaster at Phanga-Nga Naval Base, Phang-Nga Province.

Specific Objective

To determine the relation between factors, included demographic data, characteristic of loss, Tsunami experience, characteristic of social support, and depression in navies or their spouses.

Research Hypothesis

After the disaster, there was depression in navies or their spouses. The factors that related to depression were demographic data, characteristic of loss, Tsunami experience, and charecteristic of social support.

Scope of the study

Study on case of navies or their spouses who survived from the disaster of Tsunami and continued living as residence of Phang-Nga Naval Base, Tambol LumGaen, Taay Muang District, Phang-Nga Province.

Variables in the study

Independent variables consists of

1. Characteristics of loss
    1) Family members
    2) Properties
2. Tsunami experience
3. Characteristics of social support
    1) Needed support
    2) Received support
    3) Satisfaction of support
4. Demographic data
    1) Gender
    2) Age
    3) Pre/post income
    4) Marital status
    5) Education level
    6) Occupation
    7) Part-time job
    8) Physical illness

Dependent variable is Depression.

Operational Definitions

1. Depression refers to apparent sedness, reported sadness, inner tension, reduced sleep, reduced appetite, concentration difficulties, lassitude, inability to feel, pessimistic thoughts, suicidal thoughts.
2. Navies refer to military officers that work for government under the command of Phang Nga navy base. In this research included conscripts as well.
3. Tsunami experience refers to everyone who was faced to the event or received disaster from the event.

CHAPTER II
LITERATURE REVIEW

This research studied the depression among the navies or their spouses who survived in six months after the Tsunami disaster and continued living as residence in Phang-Nga Naval Base, Phang-Nga Province. So, the literatures and researches that concern to this research are as follows:

2.1 Depression
- 2.1.1 What is depression?
- 2.1.2 Types of depression
- 2.1.3 Symptoms
- 2.1.4 Diagnosis
- 2.1.5 Comorbidity
- 2.1.6 Causes and risk factors
- 2.1.7 Disaster and depression
- 2.1.8 Psychiatric rating scales

2.2 Montgomery-Asberg Depression Rating Scale (MADRS)

2.3 Tsunami

2.4 Related studies and researches

2.1 Depression (22-29)

What is depression?

Depression is a mood disorder that causes a disturbance in an individual's emotions and feelings; if someone has depression, or a depressive illness, their experience a pervasive and sustained change in mood which leaves them feeling persistently sad, worthless and helpless. These feelings may be triggered by a life event, such as the death of a loved one, or can occur for no identifiable reason. It affects the way of person eats and sleeps, the way one feels about oneself, and the way one thinks about things. A depressive disorder is not the same as a passing of the able mood. It is not a sign of personal weakness or a condition that can be willed or wished away. People with a depressive illness cannot merely pull themselves together and get better. Without treatment, symptoms can last for weeks or even years, rendering life meaningless and hopeless for the sufferer.

Types of depression

Depressive disorders or depression come in different forms, just as the case with other illnesses such as heart disease. This pamphlet briefly describes three of the most common types of depressive disorders. However, within these types there are variations in the number of symtoms, their severity, and persistance.

1. **Major depression** is manifested by a combination of symtoms that interfere with the ability of work, study, sleep, eat, and enjoy once pleasurable activities. Such a disabling episode of depression may occur only once but more commonly occurs several times in a lifetime.

2. **Dysthymia** is a less severe type of depression, involves long-term, chronic symptoms that do not disable, but keep one from functioning well or from feeling good. Many people with dysthymia also experience major depressive episodes at some time in their lives.

3. **Bipolar disorder** is another type of depression, also called manic-depressive illness. Not nearly as prevalence as other forms of depressive disorders, bipolar disorder is characterized by cycling mood changes: severe high (mania) and lows (depression). Sometimes the mood swithes are dramatic and rapid, but most often they are gradual. When in the depress cycle, an individual can have any or all of the symtoms of a depressive disorder. When in the manic cycle, the individual may be overactive, overtalkative, overly-inflated self-estreem, and have a great deal of energy. Mania often affects thinking, judment, and social behavior in ways that case serious problems and embarrassment. For example, the individual in a manic phase may feel elated, full of grand schemes that might range from unwise business decisions to romatic sprees. Mania, left untreated, may owing to a psychotic state.

Subtypes of depression

1. **Primary and Secondary Depression** are a classification based on the supposed aetology of the depressive symptoms. It distinguishes:
    - primary depression - depression that has no obvious physical or psychological cause.
    - secondary depression - depression that seems to be caused by some other underlying condition.

This classification was developed originally for research reasons, when it was expected that the two types might differ in their symptoms and response to treatment. In practice this has not been found to be the case. And, for this reason, the classification is no longer widely used.

2. **Endogenous and Reactive Depression** is another aetiological classification. It identifies:
    - endogenous depression, which - like primary depression - arises 'from within'
    - reactive depression (sometimes called exogenous depression), which arises following an unhappy life event such as bereavement, divorce or redundancy.

This scheme is a few used by psychiatrists these days, because in practice the causes of most cases of depression seem to include both endogenous and reactive factors. Some physicians use it. Many of the depressions that identify as 'reactive' are likely to lift spontaneously, without drug treatment.

3. **Psychotic and Neurotic Depression** is a classification based on symptoms. It differentiates between:
    - psychotic depression, where the patient experiences intense symptoms such as hallucinations or delusions and is therefore felt to have lost touch with reality
    - neurotic depression, where psychotic symptoms are absent, but which is accompanied by neurotic symptoms such as anxiety and phobia and some biological symptoms.

This scheme is still used by some physicians, and is widely understood, although its usefulness is frequently questioned.

4. **Postnatal Depression** is depression that follows the birth of a child is called postnatal or postpartum depression. Episodes of mood disturbance following the birth of a child are common and may well take the form of either manic depression or major depressive disorder. The treatment and clinical presentation are very similar to typical cases of mania or depression, but the treatment is complicated by several issues. The first is that the woman may be breast-feeding and this may impact on the therapeutic options chosen, particularly those regarding medication. Second, not only does the

woman's functional capacity and the ability to care for herself have to be evaluated, but her ability to look after her new baby and to establish a bond with the child must also be evaluated. Third, this is a time of tremendous social and physical stress. In fact, episodes of mania or depression are almost as common in fathers as they are in mothers following the birth of a child. These conditions are often missed because of the great disruption in sleep and activity that comes with having a new baby.

5. **Atypical Depression** is a specific subtype of depression that does not fulfil other depression subtype criteria. Atypical depression is characterised by mood reactivity (when a patient's mood reacts sharply to a specific situation, good or bad), significant weight gain or increased appetite, hypersomnia (excessive sleeping), psychomotor retardation and high sensitivity levels of interpersonal rejection resulting in social or occupational impairment. These patients respond slowly to antidepressant treatment and upon failing to respond to selective serotonin reuptake inhibitor (SSRIs) often patients respond well to monoamine oxidase inhibitors (MAOIs).

6. **Psychotic Depression** is a type of major depression, when the person also has depressive thoughts or beliefs that do not conform to reality. Thinking is much disorganised and delusions may occur. Sometimes, hallucinations are present. In psychotic depression, delusions or hallucinations are 'mood congruent'. That means the hallucinations and delusions harmonise with aspects of the person's mood. For example, the unrealistic belief that someone else may want to harm them fits with the symptoms of low self-esteem and feelings of worthlessness. Psychotic depression can be episodic or chronic. About 1 in 10 people with major depression will have psychotic symptoms. Psychotic depression is characterised by greater severity, higher rate of recurrence, greater impairment, more frequent hospitalisation, and longer episodes than non-psychotic depression. The use of combined TCAs and antipsychotic medication as well as electroconvulsive therapy, has been proven effective. There is also evidence for efficacy of SSRIs, alone and in combination with antipsychotics, in psychotic depression.

Symptoms

Many people still believe that the emotional symptoms caused by depression are not real. Symptoms include the following:

1. Persistant sad, anxious, or empty mood
2. Feelings of hopelessness, pessimism
3. Feelings of guilt, worthlessness, helplessness
4. Loss of interest or pleasure in hobbies and activities that were once enjoyed, including sex
5. Lack of interest or enjoyment in everyday life
6. Withdrawal from the outside world
7. Decrease energy, fatigue, being slowed down
8. General slowing of mental activity
9. Difficulty concentration, remenber, decision making
10. Indecision and difficulty in thinking clearly
11. Insomnia, early-morning awakening, or oversleeping
12. Appetite and/or weight loss or overeating and weight gain
13. Feeling that there is no future, thoughts of death or suicide; suicide attempts
14. Restlessness, irrtability
15. Persistent physical symptoms that do not repond to treatment, such as headaches, digestive disorder, and chronic pain
16. Hypochondria
17. Loss of libido
18. Restless preoccupation with morbid, pessimistic thoughts

Diagnosis

A good diagnostic evaluation will include a complete history of symptoms, i.e., when they started, how long they have lasted, and should include a mental status examination to determine if speech or thought patterns or memory have been affected, as sometimes happens in the case of a depressive or manic illness. DSM-IV was a good diagnostic criteria for major depressive disorders and the criteria include the following : (30)

1. Five or more of the following symptoms have been present during the same 2-week period and represent a change from previous function; at least one of the symptoms is either depressed mood or loss of interest or pleasure.

1) Depressed mood
2) Markedly diminished interest or pleasure
3) Significant weight loss or weight gain or decrease or increase in appetite
4) Insomnia or hypersomnia
5) Psychomotor agitation or retardation (observable by others)
6) Fatigue or loss of energy nearly every day
7) Feelings of worthlessness or excessive or inappropriate guilt
8) Diminished concentration or indecisiveness
9) Recurrent thoughts of death (not just fear of dying) or suicide

2. The symptoms cause clinically significant distress or impairment in social, occupation, or other important areas of functioning.

3. The symptoms are not due to the direct physiologic effects of a substance or a general medical condition.

4. The symptoms are not better accounted for by bereavement.

Comorbidity

Depression is often associated with anxiety and anxiety is a common symptom of depression. The relationship between these two disorders is still being established and will undoubtedly receive further attention in the future, but the overlap is significant. Nearly half of depressed patients have anxiety symptoms and half of anxiety patients have depressive symptoms. Anxiety is not a requirement for the diagnosis of major depression, bipolar disorder or dysthymia, as presented in either DSM-IV or ICD-10, in which mood and anxiety disorders are recognised as separate and distinct diseases. However, the idea that they may lie on a continuum has never been completely abandoned and the concept is supported by the fact that a group of 'in-between' patients with symptoms of both anxiety and depression has repeatedly been described. There are indications that anxiety is one of the most prevalent symptoms in clinical depression and that both the assessment and treatment of severe anxiety are of vital importance in the successful treatment of depression. A recent epidemiological study, carried out under the auspices of the World Health Organisation, the association between anxiety and depression, confirmed the associations between the two disorders. The anxiety symptoms also seem to be more pronounced in the depressed elderly and in patients with concomitant medical disease. (31) Another authority confirmed the co-occurrence of the two disorders and suggested that anxiety symptoms should be taken into account when assessing which antidepressant is most appropriate for an individual patient to optimise treatment outcome and speed of recovery (32).

Anxiety occurs frequently as a comorbid disorder with depression, with 42-72% of depressed patients reporting symptoms of worry, psychic anxiety and somatic anxiety of at least moderate severity (33); these depressed patients with higher anxiety levels experience significantly longer time to recovery, a higher rate of multiple drug treatments, a higher incidence of suicide, and more frequent episodes of depression. This pattern has been confirmed in other reviews (34). The increased severity of depressive illness associated with anxiety symptoms was also highlighted in a study by Coryell W., et al. in which the depressive symptoms of patients were reported to be

significantly more severe in those reporting panic attacks than in those patients who did not report such attacks (35). In another study, there was a significant delay in the recovery time from major depression in patients with comorbid obsessions and compulsions (36).

Suicide rates are also influenced by comorbidity. In Walinder studies, the suicide rates of depressed patients were found to be 5-7%, of panic disorder patients 4-7% and the suicide rates of patients suffering from both depression and panic disorder were 19%. (37)

Mood and anxiety disorders frequently overlap, and the extent of this overlap is now being recognised more clearly. This can be attributed to the efficacy of the SSRIs in the treatment of both the mood and the anxiety disorders. It is important that we recognise the impact that anxiety symptoms may have on treatment duration and outcome in depressed patients.

Causes and Risk Factors (22-23, 28-29, 38-40)

According to the National Institute of Mental Health and the American Psychiatric Association, depression can affect anyone, even a person who is considered normal and healthy. The cause of depression uaually relate to several factors. And risk factor is something that increases a likelihood of getting a disease or condition.The following is a summary of factors that may lead to depression.

Biochemical Factors

The dominant theory is that it is a result of low levels of certain neurotransmittiters (messenger chemicals that carry signals from one nerve cell to the next) in the brain. This is called the ‘monoamine theory’ of depression. The neurotransmittiters thought to be involved are serotonin (which helps regulate emotion, sleep and appetite), noradenaline (which is linked to arousal and alertness), and dopamine (which is associated with pleasure and reward). Deficiencies of the

chemicals in brain are thought to be responsible for certain symptoms of depression, including anxiety, irrtability, and fatigue.

Genetic Factors

Depression can run in familied; in some families, major depressed seems to occur from generation. People with a family history of depressive disorder tent to be at increased risk of developing depression. Statistics show that the children of parents who suffer from depression are likely to develop the disorder. A person has a 27% chance of inheriting a mood disorder from one parent, and this chane doubles if both parents are affected. Studies of the occurrence of depression in twins show a 70% chance for both identical twins to suffer from depression, which twice the rate of occurrence in fraternal twins. (27) However, genetic anomalies may also cause depression in people who have no familly history of depression.

Personality/Psychological Factors

Certain psychological factor put prople at risk for depression. People with low self-esteem, who consistently view themselves and the world with pessimism, or who are easily overwhelmed by stress, are prone to depression. Other psychological factors, such as perfectionism, not just striving to excel, but having unrealistically high expectations of oneself, being unable to accept fault or failure, and a constant lack of satisfaction, irrespective of performance, and people who sensitivity to loss and rejection have been associated with an increased risk of depression, particularly in the face of work or school related stress. Whether this represents a psychological predisposition or an early form of the illness is not clear.

Low Socioeconomic Status

Being in low socioeconomic (including income, education, welfare, and occupation) group is a risk for depression. This may be due to factors such as perceives low social status, cultural factors, low income, financial problems, stressful environments, social isolation, and greater daily stress. Furthermore having few or no supportive relationships can increase the risk of depression in both men and women. The study has shown that people with lower socioeconomic status are more likely to develop a depressive illness and that their depression is more severe than that of people higher on the socioeconomic status scale. (41) And studies of women on public assistance that have used comparable and reliable measures of major depressive disoeder to evaluate high levels of depressive symptoms find that 12 months prevalence rates of major depressive disoeder between 12% to 36% (median: 22%), high levels of depressive symptoms exist in 25% to 57% (median: 47%). These levels of depression and its symptoms are quite high in welfare samples, as compared to community samples (42).

Marital Status (43-45)

Regrading marital status, marriage is associated with low rates of depression because it shields the individual from exposure to stress, in general currently married persons had lower rates of both depressive and bipolar disorders than those who had never married or were currently seperated, divorced, or widowed. Age interacted with marital status, with the young unmarried persons showing high levels of depressive symptoms than older unmarried persons and the married of all ages.

Age

Althogh depression can occur at any age, its onset is typically between the ages 24 and 44. The elderly are at a particularly higher risk for depression. Furthermore, they are notoriously undertreated for depression. 50% of people with major depressive disorder experience their first episode of depression at about age 40, but this may be shifting to the 30s. studies find that the rate of incidence is higher among middle-aged people (27). Teenagers are at risk for depression. The evidence is in teen suicide rates, which are increasing yearly. The growing rate of depression in this group may reflect growing pressure on young people to attend college and meet the high expectations of their peers and parents.

Marital Status and Age

In the depressed patient in Ethiopia from the study by Kebede et al. (46), there was the association beween depression and age ≥35 years (adjusted OR = 2.40; 95%CI 1.38-3.64), marital status was married (adjusted OR = 1.93; 95%CI 1.00-3.70). Among the patients who were married and age 16-24 years had more risk for depression (adjusted OR = 3.52; 95%CI 1.96-6.32) this was contrast with the patient who were married and age 25-34 years, it was the protected factors for depression (adjusted OR = 0.50; 95%CI 0.28-0.88).

Gender

Major depressive disorder affects 10% of men and 20% of women (27). Women experience depression about twice as often men. Many risk factors for depression in women such as, family history of mood disorders, personal past history of mood disorders in early reproductive years, loss of a parent before the age of 10 years, childhood history of physical or sexual abuse. Hormonal factors may contribute to the increased rate of depression in women, particularly such factors as premenstrual changes, pregnancy, miscarriage, postpartum period, pre-menopause, menopause, use of an oral contraceptive, especially one with a high progesterone content, use of

gonadotropin stimulants as part of infertility treatment, and many women experience depression after giving birth. Many women face additional stresses, such as responsibilities at work and home, single parenthood, and caring for children and aging parents (13, 28). Do not mistaken that females are the only gender that can become derpessed; a good number of males can develop a unipolar mood disorder. In the average lifetime, 49% of all males will experience a depressive episode as compare with 63% of all females. Males will become sad and dejected for different reasons, such as intimate relationships. When an intimate relationships ends, males are more likely to become depressed at the loss than females (47). Although men are less likely to suffer from depression than women, a new study shows that depression is associated with an increased risk of coronary heart disease in both gender, but only men suffer a high death rate (25).

Medications

Certain medications have been implicated in depression, including:

1. Pain relievers
2. Sedatives
3. Sleeping pills
4. Cortisone drugs
5. Seizure drugs
6. NSAIDs (e.g. aspirin)
7. medications for heart problems, high blood pressure, high cholesterol, and asthma

Environmental Factors

Environmental causes of depression are situations that occur outside of people. They are directly related to events that happen in the everyday course of life and may include stress at home, school, or work. The ambiance of a family has the most weight and impact on a depressed individual. In the cse of spouses, the well being of one spouse will have a notable impact on the other spouse and on the welfare of their

marriage. For example, in 30% of all marriage problems, there is one spouse that can be described as clinically depressed. The reason why a spouse might have a unipolar mood disorder could be due to their relationship being characterized by friction, hostility, and a lack of affection (48). Aside from the martial distresses of spouses, the impact of depressed parents can have an effect on their children as well. In a study on the relation between depressed adolescences and depressed mothers, found that the depressed children of depressed mothers had more nagative interpersonal behavior as compared with depressed children of non-depressed mothers (49). Because of this negative interpersonal relation between kids and their parents, children can develop a negative view of their family. This negative view can lead to the feeling of lack of control and having a high risk of conflict, rejection, and low self-esteem (50).

Consequences of Loss and Trauma

Adverse events in life also trigger depression. Losing a spouse through divorce or death is a major risk factor for depression in anyone. In fact, recent loss of a loved one, ending a relationship, losing a family member or close friend, or losing a job can trigger depression in some people and the most frequently reported precipitant of acute depression. All major (and even minor) losses, however, cause grief reactions. People who develop acute or chronic depression after a loss may have predisposing factors, including genetic or biologic ones, which make them more vulnerable. The existence or absence of a strong social network of family, friends, or both also has a major positive or negative effect, respectively, on recovery. Most people are able to cope with the emotion pain and eventually move beyond it without becoming chronically depressed. Traumatic event such as abuse or even natural disaster can cause severe immediate or delayed depression from which recovery takes a long time.

Physical and Psychaitric Illness (22-23, 28-29, 38-40, 51-52)

There are many posible links of pshysical illness and depression. Psysical illness is a stressful life event in its own right. In recent years, researchers have found that physical changes in body can be accompanied by mental changes. Medical illness such as stroke, heart attack, cancer, diabetes, Parkinson's disease, osteoporosis, human immunodeficiency syndrome, thyroid disease, headaches, and hormonal disorders can increase the risk of depression. Chronic pain is know to be associated with depression. A history of one or more previous episodes of depression significantly increases the risk of a subsequent episode. And chronic sleep problems are strongly associated with depression.

Other psychiatric disorders that can be a risk factor for depression such as schizophrenia, anxiety disorders, eating disorders.

Psychiatric Rating Scales (23)

Depression severity is often simply defined as 'mild', 'moderate' or 'severe'. It is necessary to understand these descriptions in terms of the extent to which the patient's everyday life is affected, mild depression causes only minor impairment of the patient's work, social life and relationships with others. Remember that major depression can be of mild severity. Moderate depression is associated with more obvious symptoms and is likely to be noticable to others. Severe depression produces symptoms that affect the patient so badly that he or she may be unable to work or to relate socially to others.

The severity of depression can be measured objectively using depression-rating scales. There are many rating scales used for the measuring of the severity of disorders in psychiatry.

The common rating scales are the:

1. Hamilton Depression Rating Scale (Ham-D)
2. Montgomery-Asberg Depression Rating Scale (MADRS)
3. Geriatric Depression Scale (GDS)
4. Zung Self Rating Scale for Depression (ZRDS)

2.3 Montgomery-Asberg Depression Rating Scale (MADRS)

The MADRS was originally a subscale of the Comprehensive Psychopathological Rating Scale, developed by Montgomery and Asberg in 1979. This scale measures the effect of treatment on depression severity, and as such, requires a baseline assessment (before treatment) with subsequent assessments during the course of treatment. The MADRS measures the severity of a number of symtoms on a scale from 0 to 6, including mood and sadness, tension, sleep, appetite, energy, concentration, suicidal ideation and restlessness. (53)

Sample of studies and researches that used MARDS as follows:

Benazzi gradated severity of the Montgomery-Asberg Depression Rating Scale (MADRS) in major depressive episode in unipolar/bipolar depressed outpatients (DSM-IV criteria). He found the MADRS cut-off for severity of 35 had a low sensitivity, meaning that many patients were classified as false negatives, while a MADRS cut-off of 30 had a high sensitivity. From a clinical point of view, as it is important not to miss severe depression, a MADRS cut-off of 30 seems more useful than one of 35, because few false negatives result (54).

Berlin and Lavergne studied the relationship between symptoms of depression and body weight in 1,694 patients seeking medical help and fulfilling DSM-IV criteria for a major depressive episode. And assessed symptoms of depression by the Montgomery-Asberg depression rating scale (MADRS). They found in patients with major depression higher body weight is likely to be associated with less reduction in appetite and less pessimistic thoughts. (55)

Corruble et al. studied the inter-rater reliability of French versions of the Montgomery-Asberg Depression Rating Scale (MADRS) on the basis of 58 videotape records of structured standardised interviews of depressed in patients under antidepressant treatment. The inter-rater reliabilitv of total scores of MADRS was high (intra-class correlation coefficients: 0.86). And the inter-rater-reliability for individual items was higher and homogeneous (56).

Fineberg et al. compared the depressive symptom profile of a group of 52 obsessive compulsive disorder (OCD) patients, with comorbid depression, to a group of 52 patients with major depressive disorder (MDD). Each group matched on severity of depression as measured by the Montgomery and Asberg depression rating scale (MADRS) (mean 24.3 for each group). They found the OCD group was significantly more symptomatic on items 3 (inner tension) and 9 (pessimistic thoughts) and significantly less symptomatic on items 4 (sleep) and 5 (appetite) (57).

Kersting et al. (58) studied maternal psychological stress responses after the birth of a very low-birth-weight (VLBW) infant in 50 mothers of VLBW infants and used Montgomery-Asberg Depression Rating Scale (MADRS) to assessed depression. They found the mothers of the premature infants recorded significantly higher values for traumatic experience and depressive symptoms necessitating ongoing emotional support extending beyond the period immediately after the birth.

Kongsakon et al. assessed the reliability and validity of the Thai version of Montgomery Asberg Depression Rating Scale in 70 patients with depressive disorders. The result showed the reliability with interrater reliability Kappa correlation was equal to 0.78, and the internal consistancy for all scale was 0.80 (Cronbach’s alpha) (59).

Legendre et al. (60) studied the prevalence of depression and anxiety in 42 patients receiving follow-up in France for systemic sclerosis using the Montgomery-Asberg Depression Rating Scale (MADRS) to assessed depression. They found systemic scleroderma is associated with a high prevalence of depression and anxiety. These disorders should be looked for routinely and the need for specific treatment evaluated.

Lobo et al. (61) validated Spanish version of Montgomery-Asberg depression rating scale (MADRS) in observational prospective multicentre two cohort studies, patients diagnosed from anxiety or depressive disorders (DSM-IV criteria). They found Spanish versions of MADRS have shown adequate validity and reproducibility for use in clinical research and in the clinical assessment of patients with depressive disorders.

Meningaud et al. studied depression, anxiety and quality of life 9 months after facial cosmetic surgery in 103 patients scheduled for facial cosmetic surgery from three different hospitals. And used The Montgomery and Asberg depression rating scale (MADRS) measured the existence and intensity of depression. They found the initial MADRS index was high ($p<0.05$), it did not change after surgery ($p>0.1$). The best indications for facial cosmetic surgery seem to be a lack of self-confidence associated with a desire for social interaction, and a request focused on a specific physical feature (62).

Mittmann et al. examined the effectivess of antidepressants in 213 elderly depressed outpatients with Montgomery-Asberg Depression Rating Scale (MADRS) to assessing depression prevelence and recording adverse event over time. The study showed that MADRS scores for 85.8% of patients declined to below 18 within 2 months of antidepressant treatment. MADRS scores above 18 for 37.3% of patient after 6 months and for 37.1% after 2 years (63).

Muller et al. studied the cut-off scores of the Montgomery-Asberg Depression Rating Scale (MADRS) to separate moderate from severe depression and used Clinical Global Impressions Scale (CGI) as a criteria in 85 patients with major depression. They found the best separation between moderate and severe depression according to CGI criteria was achieved with a MADRS score of 31 (sensitivity 93.5%, specificity 83.3%). So this cut-off scores to separate moderate from severe depression severity ratings in patients with major depression were yielded (64).

Muller-Thomsen et al. studied the prevalence of depression dependent on the severity of dementia by Montgomery-Asberg Depression Rating Scale (MADRS) in 316 patients with Alzheimer's disease from a psychiatric out-patients memory-clinic. They found prevalence of depression ranged between 27.5% and 53.4% in mild Alzheimer's disease and between 36.3% and 68.4% in moderate to severe Alzheimer's

disease. Internal consistency was good in all scales (Cronbach's alpha 0.63 – 0.85). And they conclude that in their study population MADRS were the most consistent tools for detecting depression in AD independently of the severity of dementia (65).

Mundt et al. validated an Interactive Voice Response (IVR) version of the Montgomery-Asberg Depression Rating Scale (MADRS) in 60 patients (endorsed symptoms of depression during a brief telephone). They found the total MADRS scores obtained by each method were statistically equivalent and highly correlation. So the results of this study were very promising, but re-flect assessment of a relatively small number of subjects across a wide range of depression severity. Further research is warranted to evaluate the equivalence between assessment methods using a wider cohort of clinicians and ability of each version to detect change over time and signal detection (66).

Sławek et al. (67) studied the factors associated with poor quality of life (QoL) in 100 patients with idiopathic Parkinson's disease (PD) in a clinic-based sample. The Montgomery-Asberg Depression Rating Scale (MADRS) was used to evaluate depression and MADRS scores were the most important predictive factor. They found the recognition of depression should become an important part of treatment of PD.

Svanborg and Asberg compared Beck Depression Inventory (BDI), the most often used self-rating instrument for depressive symptom, with self-rating version of Montgomery-Asberg Depression Rating Scale (MADRS-S) in 86 psychiatric patients with mainly affective and anxiety disorders. They found MADRS-S was equivalent to the BDI as a self-assessment instrument for depression, but the MADRS-S focused on core depressive symptoms (68).

Westrin et al. studied concentrations of somatostatin and corticotrophin releasing hormone (CRH), measured in cerebrospinal fluid (CSF) in suicidal patients with major depressive. And used Montgomery-Asberg Depression Rating Scale (MADRS) to performed while patients were drug-free (baseline) and after a median of 7 (5 to 9) months. They found MADRS scores were significantly decreased ($p<0.05$), whereas CSF–somatostatin was significantly increased ($p=0.013$) and CSF–CRH had not changed significantly (69).

Montgomery Asberg Depression Rating Scale (MADRS) were used wide-spread as for developed the quationare to many versions or it was used to collect data in the other research. And this research use Thai-version of MADRS (59).

Disaster and Depression (70-75)

Disaster is an occurrence and may be human made, caused by delibrate intention, as with terrorism, civil unrest, and war experiences, or caused by people through mishap or neglect, such as explosion, hazardous materials accient, transportation accident, or a building fire. In addition disasters may be caused by nature, such as a hurricane, flood, earthquake, tsunami, tornadoes, famine, wildfires, or epidemic. Disaster occur commonly and affect individuals as well as their communities. After a disaster, it is normal to experience a number of stress reactions that may continue for a significant period.

After a disaster, there is a wide range of effects. Most servivors experience some of the stress reactions. They may last for many months after the disaster has ended, or even longer. PTSD is not the only trauma-related disorder, nor perhaps the most common. So the common reactions and the trauma-related disorders include:

1. **Emotion (feeling) reaction**: feelings of shock, disbelief, anxiety, fear, grief, anger, resentment, guilt, shame, despair, helplessness, hopelessness, betrayal, depression, emotional numberness (diffulty having feeling, including those of love and intinacy,or taking interest and pleasure in day-to-day activities)

2. **Coginitive (thinking) reactions**: confusion, disorientation, indecisiveness, worry, shortened attention span, difficulty concentrating, memmory loss, unwanted memmories, repeated imagery, self-blame

3. **Physical (bodily) reactions**: tension, fatigue, edginess, difficulty sleeping, nightmares, being startled easily, racing heartbeat, nausea, aches and pains, worsening, health conditions, change in appetite, change in sex drive, change in work functioning, change in heal care utilization, change in smoking, change in alcohol use

4. **Interpersonal reactions**: in relationships at work, home, in friendships, mariages, family, or others; neediness; dependency; distrust; irrtability; conflict; withdrawal; isolation; feeling rejected or abandoned; being distant; judgmental; or over-controlling

5. **Spiritual (meaning) reactions**: wondering why? why me? where was god? feeling as if life is not worth living, loss of hope

6. **Trauma-related disorders**: post-traumatic stress disorder, acute stress disorder, major depression, substance use disorder, generalized anxiety disorder, adjustment disorder, organic mental disorder, secondary (head injury, toxic exposure, illness, and dehydration), somatization, psychological factors affecting physical disease (in the injured)

Major depression, substance abuse, and adjusment disorder (anxiety and depression) may be relatively common in 6-12 months after a disaster and may reflect survivors'reactions to their injuries, to affects and feeling stimulated by the disaster, and/or to their attributions of the cause of the disaster.

Survivors are at greatest risk for severe stress symptoms and readjustment problem such as depression, if any of the following are either directly experienced or witnessed during or after the disaster:

1. Gender: female
2. Age: midle age
3. More severe exposure
4. Loss of loved ones or relatives
5. Life threatening danger or physical harm (especially to children)
6. Exposure to gruesome death, bodily injury, or dead or maimed bodies
7. Extreme environmental or human violence or destruction
8. Loss of home, valued possessions, neighbourhood, or community
9. Loss of communication with or support from close relations
10. Intense emotional demands (e.g., rescue personnel and caregivers searching for possibly dying survivors or interacting with bereaved family members)
11. Extreme fatigue, weather expose, hunger, or sleep deprivation
12. Extened exposure to danger, loss, emotional/physical strain
13. Exposure to toxic contamination (such as gas or fumes, chemicals, radioactivity)
14. Chronic poverty, homelessness, unemployment, or discrimination

This is consistent with other research found that female, lower education, lower socio-economic status and loss family members tend to be related to higher depression among survivors (76-78).

2.2 Tsunami (79-82)

The phenomenon that calls “Tsunami” is a series of traveling ocean waves of extremely long length generated by disturbances. Tsunami is a Japanese word means harbour wave. In present time to be used for calling group of the waves that have length many hundred of miles caused from huge quantity of sea water forced to move virtically that caused by moving of the earth plate under the deep sea sometimes it’s called Seismie wave. We may confuse between Tsunami and tidal wave but in fact Tsunami is not relate to tidal wave because the nature of Tsunami mostly caused from part of the earth plate move against to each other until become subduction The sea water over the huge broken earth plate moves to replace the moving plate. The sudden move of enormous sea water causes huge waves to all directions and hit everything when againsts the shore. This is the origin of “Tsunami”.

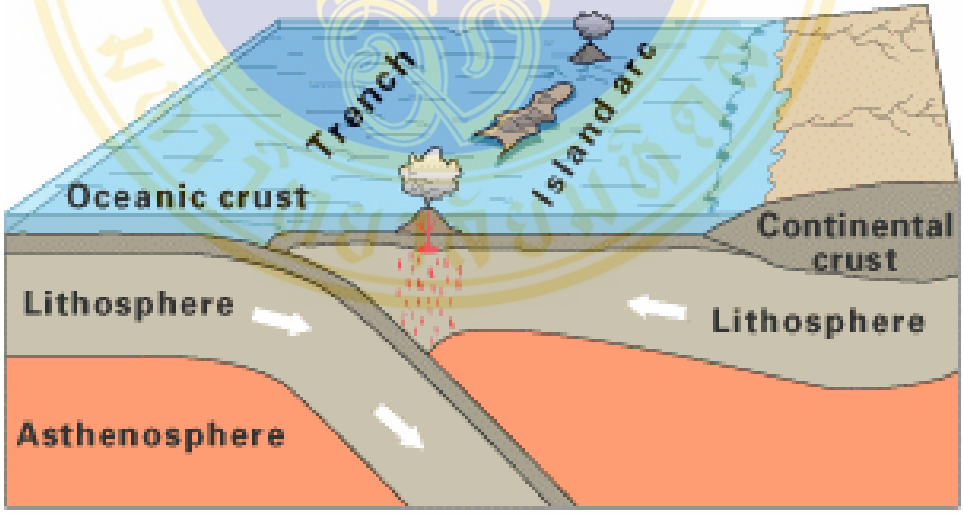


Figure 1 : Subduction

Source : Us Geological Survey : USGS

Tsunami in deep sea is not different from common waves even from a sea ship, boat in the sea one from the sky or the space. Beside this Tsunami may cause from earth quake under the sea or near the shore or explorsion of volcano. This can cause huge quantity of soil and rock (or lava) to replace and moves the sea water suddenly become huge waves as Tsunami such as explosion of Krakatua volcano in 1983 that caused Tsunami occurrence and killed more than 36,000 people as well as destroyed a lots of their properties. There are also possibility cases but rarely. That is a crash of meteoroid to earth as occured 65 million year ago which destroyed most living things on the earth. In brief, Tsunami occured when huge quantity of sea water was pushed or pressed to move from its place in vertical direction suddenly enormous power from the moving sea water then forms itself to be huge waves (Tsunami) move to the shore and destroy what they strike.

Tsunami is different from usual wave that caused from natural wind pushes sea water on its top level. The speed of moving at 20-30 seconds from one to another wave top or the lenght is only 100-200 meters. But Tsunami speed range from 10 minutes to two hours and the lenght could be over 500 kilometres.

At the area of narrow shore Tsunami could be very high up to several meters. If the wave top reaches the shore first there will occure what we call dragdown that the sea water 7 level decreases down suddenly. The sea water edge could be hundreds of meters away down from the usual edge and as soon as next wave top reaches the shore it can be like a very high wall moves towords the land. The height of the wave top also dependtion the shape and structure of the shore. Therefore, Tsunami from the same origin can make different result to the shore where being hit. Sudden flooding may goes up to 300 meters in to the land. But Tsunami could move along a river mouth around there. If people know the occurence of Tsunami then just evacuate from the shore for 15 minutes by walking and stay away from any water source that flowing to the sea.

The cause of Tsunami in Indonesia on 26 December 2004.

The Tsunami that ocured on 26 December 2005, northwest of Sumatra island was the worst natural disaster of mankind history in the area where local people who live there. The whole life can not tell when the last disaster was like that. Thai people believed wrongly that our country situates on the safe place from such natural disaster. The position of this lated Tsunami made geologists surprised because it occured on the zone of earth that had been non activate for more than a hundred years. The cause of this earth quake is from the earth plate called India plate and the Burma plate move against to each other. Then India plate moved to undeneath of Burma plate at the area called sunda Trench is the line of 3 earth plates jam, namely India Plate, Burma Plate, and Australia Plate. There is a long creck which geologists called trench. The area that the quake occured India plate moves 6 centimetres. per year if Burma plate no moving. The results that crush point made part of the broken plate move many hundred kilometers westward along Sunda Trench. The occurrence of this earth quake caused called trust- faulting.(as shown in Figure 2.)

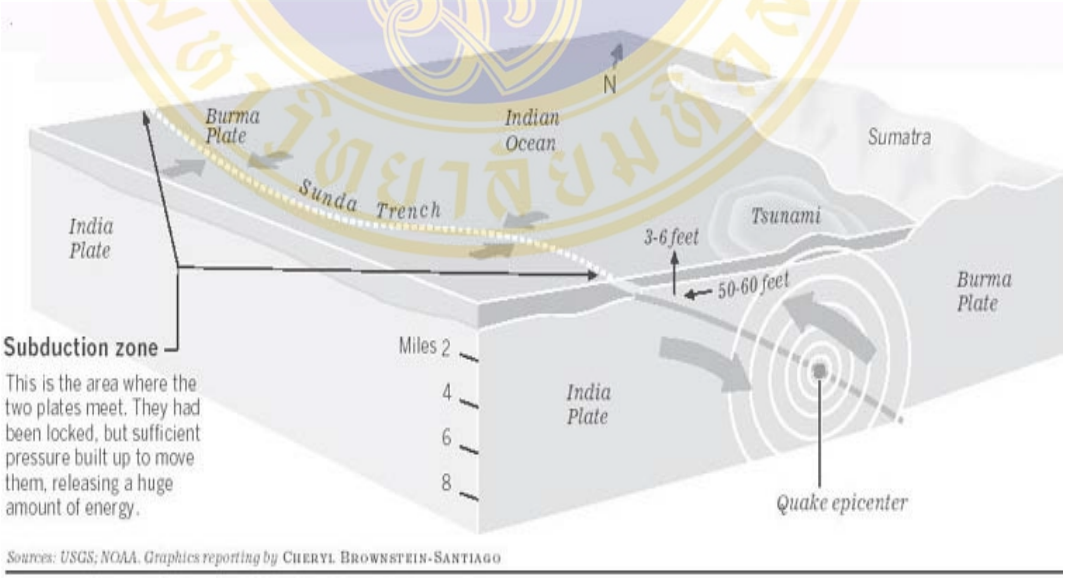


Figure 2 : trust-faulting

The quake center was in the west of Sumatra 10 kilometers deep from the earth skin about 580 kilometers from Phuket the severity was 9.0 rictor at 06.58 Hour local Indonesia time or 07.58 Hour Thailand time Tsunami hit Sumatra shore at 7.00 Hour Local Indo time caused 6 high wave in 1 hour moved to Ajeh Province North of Sumatra at 12.59 Hour Local Indo time and cause Tsunami disaster hit Thailand along Andaman coast destroyed houses and properties as well as human lives in large quantity.

There were 10 meters high waves structed on Andaman coast of each province as follows:

09.35 AM. Decreasing of sea water ocured about 100 meters down from usual level for 5 minutes

09.38 AM. 2-3 meters high structed the shore.

09.43 AM. 6-7 meters hit the shore

10.03 AM. Over 10 meters high waves hit the shore for 20 minutes.

10.20 AM. 5 meters waves hit the shore and kept flooding for 1 Hour

11.00 AM. The sea water got to normal

From the quake could feel in many province of Thailand especially where there are tall buildings the effects caused seriously damages in many province on Andaman coast is Phang-Nga, Krabi, Phuket, Trang, Satoon province. From this disaster cause people dead both Thai and foreigners 5305 people and injured 8457 people. Lost 3,498 people (2) and destroyed many buildings of hotels and other hauses also effected to many areas of beaches and so on.

Procedure of Protection from Tsunami disaster (83)

1. When feel of the quake evacuate from sea side to higher place with out waiting for announcement.
2. When heard announce from the prepare to encounter the Tsunami situation promply.
3. Observe appearance of sea water decreasing unusually consider that it may occur Tsunami. So evacuate people and pets to the safe place.
4. In case of people are in a boat move the boats out to the sea and make some distance that safe from the shollow water.
5. Tsunami wave may occur many times from one earth quake because of swaying of sea water so should not reach to beach too soon after it occured.
6. Keep follow the government reports and news.
7. For resident building near the beach should build some kind of bunger wall woods or thing like so to reduce the force of sea water as well as the strong enough and suitable design.
8. Avoid making buildings in high risk zone of Tsunami.
9. Make training plan properly with curtain evacuation area, drinking water resources.
10. Place suitable city plan and keep residence houses suitable distance from the shore.
11. Annouce to public and provide knowledge about safety system and protect Tsunami and earth quake disaster procedure.
12. Plan prior (in case the Tsunami suitable occurs) in organize and co-operation with results organization in order make right steps of operation such as health care removing and reconstructon ete.
13. Do not go down at the beach to observe Tsunami because it's too late to run away when you see it.
14. Tsunami wave could be different size from another place so, do not neclected when there is an announcement of small Tsunami occurred. Be ready to encounter the situation that can be a serious one.

2.4 Related Studies and Researches

Adams and Boscarino studied the association between race and ethnicity and psychological health status. Following 1 year after exposure to the terrorist attacks on the World Trade Center among 2,368 Non-Hispanic White, Non-Hispanic African American, Dominican, Puerto Rican, and Other Hispanics. The result of the study showed that racial/ethnic differences for PTSD symptom severity, depression, general physical and mental health, and panic attack. Most of these associations were rendered non-significant. And no post-disaster racial/ethnic differences for PTSD, PTSD symptom severity, or physical health. African Americans and other Hispanics were less likely to meet criteria for major depression or to be classified as unhealthy compared to Whites. Only for panic attack were African Americans and Puerto Ricans more likely to meet criteria for this outcome. Thus, our study found little support for the hypothesis that Latinos or African Americans consistently suffered from poorer psychological and physical well-being in the aftermath of traumatic events, relative to Whites (84).

Armennian et al. studied risk factors for depression in 32,743 survivors of the 1988 earthquake in Armenia. The result of the study showed that depression was a common sequel to an earthquake. Loss, geographic location, and female were increased the risk of depression. But, being with someone during the disaster, receiving assistance and support after the earthquake, and alcohol use were protective for depression. (85)

Basoglu et al. (78) studied the prevalence of post-traumatic stress disorder (PTSD) and depression 14 months after the earthquake in Turkey in 2 randomly selected samples from the epicenter (n = 530) and a suburb of Istanbul 100 km. from the epicenter (n = 420). The result of the study showed that the rates of PTSD and depression were, 23% and 16% respectively, at the epicenter and 14% and 8% in Istanbul. The strongest predictor of traumatic stress symptoms was fear during the earthquake, whereas predictions with female gender, past psychiatric illness, damage to home, participation in rescue work, past trauma, and loss of close ones were significant but weak.

Boscarino et al. studied the prevalence and predictors of mental health service use in New York City 1 year after the World Trade Center disaster (WTCD) by telephone of 2,368 adults living in New York City on September 11, 2001. The result showed that the prevalence of PTSD and depression was 5.3% and 11.8%, respectively. Compared to the year before, WTCD-related visited was increase and association with WTCD event exposures ($p<0.0001$). So exposure to WTCD events was related to post-disaster PTSD and depression, as well as WTCD-related mental health service use (86).

CDC (87) studied the impact of September 11 attacks on workers employed in the vicinity of the World Trade Center (WTC). The study conducted surveys of workers at four workplaces , a high school (high school A) and college (college A) near the WTC site, and a high school (comparison high school B) and college (comparison college B) >5 miles from the WTC site to determine rates of physical and mental health symptoms. The result of the study showed that approximately one third (34%) of high school A and 24% of college reported symptoms consistent with major depression; 23% of high school A and 15% of college had symptoms consistent with PTSD. Rates for symptoms consistent with depression and PTSD from the survey were significantly higher in high school A and college A compared with high school B and college B.

Chou et al. assessed the development of psychiatric disorders among residents in a Taiwanese village near the epicenter of the earthquake 4-6 months after the catastrophic Chi-Chi earthquake occurred in September 21, 1999. A total of 442 of the 602 actual living residents Tong-Chi village who were over 16 year of age and were present in the community at the time of the earthquake were included in this population survey. The study showed that prevalence rate was 9.5% for current major depression, 2.8% for past major depressive episode, and PTSD. Females had sinificantly higher rate of most psychiatric disorders (88).

David et al. investigated psychiatric morbidity in previosly non-ill subjects from the area most affected by Hurricane Andrew at 6-12 months after. Result indicated that 31 from 61 subjects met creiteria for a new-onset disorder, including PTSD, major depression in 30%, and other anxiety disorder (89).

Dewaraja and Kawamura estimated the prevalence of PTSD and depression in 90 participants who exposure to Tsunami in Sri Lanka compare with 18 participants in control group. Result indicated that 45.8% participants were suffering from depression. A logistic regression analysis indicated that being without food and water, the destruction of a house or propoty beyond repair, as well as witnessing the death of the relatives, seperation from family, being injured and being close to death were powerful determinants of PTSD and depression (90).

Eun-Hee et al. studied levels of depression in 585 samples from Gangeung City and Yeoju Country who exposed to Typoon Russa No.15. The studies showed that the depression score for the Gangeung respondents was 42.47 before the flood as contrasted with 50.77 after the flood. The depression level increased significantly within the moderate range for the Gangeung respondents after the flood. Such an increase was more revealing when compared with the data from the control group. In Yeoju, the derpession score was 40.08 before the flood and 40.52 after the flood and in both instances remind in the mild range (91).

Farhood and Noureddine studied the effect of stressors on PTSD, depression, and health status in a sample of Lebanese civilians exposed to a church explosion and their comparison groups (33 victims, 30 family members, and 30 neighbors), 1 year after the event. The result showed that PTSD was present in 17.2% of the total sample, depression in 41.9% and the mean increase in doctors' visits was 2.05 ± 2.97. In the victims' group, 39% met PTSD diagnostic criteria, 51% were depressed, and 45% reported deterioration in their health status. These rates were significantly higher than those in the comparison groups. Also, females were 2.62 times more at risk than males for depression. Victims were 7.35 times and those with financial problems 2.67 times more at risk of having increased doctor's visits than their family or neighbor comparison groups (92).

Fullerton et al. studied the effects of trauma on 628 workers, comparison between exposed disaster and unexposed. The result of the study showed that exposed disaster workers were at increased risk of acute stress disorder, depression, or PTSD and seek care for emotional problems at an increased rate (93).

Galea et al. (94) studied the prevalence and correlates of acute post-traumatic stress disorder (PTSD) and depression among 1,008 residents of Manhattan, 5-8 weeks after the attacks of September 11, 2001 in New York City. The result of the study showed that 7.5% reported symptoms consistent with a diagnosis of current PTSD and 9.7% reported symptoms consistent with a diagnosis of current depression. Experiences involving exposure to the attacks were predictors of cuurent PTSD, and losses as a result of the events were predictors of current depression.

George et al. (95) studied physical and mental health of 1,500 New York City police officers, 18 months after the World Trade Center attacks. The result of the study showed that two-thirds were diagnosed with an anxiety disorder (for example, Post Traumatic Stress Disorder), and one-third were diagnosed with clinical depression. These results suggest that a high number of police officers continue to exhibit health and mental health problems, 18 months after the attacks. Further studies are needed to explore the specific nature of these problems.

Ginexi et al. (96) compared symptoms for depression in both the pre- and postflood in 1,735 Iowa residents who were victims of the 1993 Midwest Floods, participated in interviews 1 year prior to, and 30 to 90 days after, the disaster. They found that, among respondents with a preflood depression diagnosis, the odds of a post flood diagnosis increased significantly (odds ratio = 8.55; 95%CI: 5.54-13.2). Among respondents with post disaster depression diagnosis in flood impact groups were 9.5% depressed and 8.0% depressed in no flood impact groups.

Goenjian et al. (97) studied the severity and longitudinal course of post-traumatic stress, anxiety, and depressive reactions among two groups of adults differentially exposed to severe and mild earthquake trauma and third group exposed to severe violence. The result of the study showed that after exposure to severe trauma, either an earthquake or violence, adults are at high risk of developing severe and chronic post-traumatic stress reactions that are associated with chronic anxiety and depressive reactions.

Goenjian et al. reported the severity of post traumatic stress and depressive reactions among 158 Nicaraquan adolescents 6 months after Hurricane Mith. They reported that severe levels of post traumatic stress and depressive reactions were found among adolescents in the two most heavily affected cities. Severity of post traumatic stress and depressive reactions and features of abjective hurricane-related experiences followed a dose-of-exposure pattern that was congruent with the rates of death and destruction across cities. Death of a family member, and sex accounted for 59% of the variance in severity of depression (98).

Hardin et al. studied the effects of a natural disaster on 1,482 South Carolina adolescents, 1 year after exposed to Hurricane Hugo. They concluded that subjects who exposed to the disaster increased depressive and anxiety symptoms. In most cases, other stressful life events were at least as strong a predictor of psychological distress as was exposure to the hurricane (99).

Jutta and Lindert studied the prevalence of PTSD, anxiety and depression of refugees and to analysed age differences in symptom levels as well as to unmask differences in morbidity between different age groups. The result of the study showed that all refugees were exposed to high levels of violence during war; the most commonly reported events were forced expulsion and deprivation of water, food and shelter. The rates of PTSD, depression and anxiety were extremely high. Differences in symptom levels between age groups, with a peak for the age group between 40-60, was found (100).

Karakaya et al. screen the symptoms of PTSD, depression and anxiety in 334 adolescents students three and a half years after the Marmara earthquake in Turkey. They found that 30.8% had probable depression diagnosis and the mean grades of PTSD and anxiety measures were higher than that of the normal population (101).

Kilic et al. examined the effects of migration and other factors on psychological status of survivors 4 years after the two severe earthquakes in Turkey. Among 526 adult survivors of the 1999 earthquakes currently living in Ankara. The rates of depression was 11%. Although both traumatic stress and depression factors were predicted by some demographic and trauma severity variables, relocation status predicted depression but not traumatic stress (102).

Kohn et al. explored the psychopathological reactions to a natural disaster and their respective risk factors among 800 respondents of both genders aged 15 years and above were selected from high, middle and low residential status areas in Tegucigalpa, Honduras, that had suffered high and low exposure to the devastating effects of Hurricane Mitch. Result indicated that PTSD, depression 18.8%, and SRQ-case were found (103).

Kou et al. investigated the prevalence of psychiatric disorders and risk factors for PTSD and major depressive disorder among breaved 120 survivors of severe earthquake in Taiwan on September 21, 1999. The study showed that major depressive disorder was found 16% and risk factor was female (104).

Nolen-Hoekasema and Morrow measured the emotional and styles of responding to negative moods in 137 students. A follow-up was done 10 days and again 7 weeks after the loma Prieta Earthquake in 1989. They found that the students who, before the earthquake, already had elevaluated levels of depression and stress symptoms and a ruminative style of responding to their symptoms had more depression and stress symptoms for both follow-ups. Students who were exposed to more dangerous or difficult circimstances because of the earthquake also had elevated symptom levels 10 days after the earthquake. Similarly, studied, during the 10 days after the earthquake, students who had more ruminations about the earthquake were still more likely to have high levels of depressive and stress symptoms, 7 weeks after the earthquake (105).

North et al. studied the mental health in 227 US Embassy in Nairobi, Kenya and 182 the Oklahoma City Federal Building population who directly exposed to terrorist boming attack. The result of the study showed that the prevalence of major depression and post-trumatic stress disorder (PTSD) were an increased rate but not difference in each others (106).

Roussos et al. studied the severity of post-traumatic stress disorder (PTSD) and depressive reactions among 1,937 children and adolescents 3 months after the 1999 earthquake in Ano Liosia, Greece. The result of the study showed that the estimated rates of PTSD and clinical depression for both cities combination were 4.5% and 13.9%, respectively. Depression and difficulties at home accounted for 41% of the variance in severity of PTSD reactions. PTSD score was the single most powerful variable predicting depression (107).

Salcioglu et al. (108) examnied the incidence of PTSD and depression in 586 earthquake survivors who lived in prefabricated housing sites, a mean of 20 months after the 1999 earthquake in Turkey. The study showed that the estimated rate of depression was 18%. More severe depression symptoms related to older age, loss of close ones, single, marital status, past psychiatric illness, previous trauma experince, female, and family history of psychiatric illness.

Sharan et al. studied psychiatric morbidity after a natural disaster in rural India. 23 households (N = 56) in three villages in India, affected by an earthquake, were interviewed. They found that 33 subjects (59%) received a psychiatric diagnosis; the most common diagnoses were post traumatic stress disorder (13 subjects [23%]) and major depression (12 subjects [21%]). Psychiatric morbidity was associated with female, destruction of house, and destruction of possessions (109).

Van Kamp et al. studied physical and mental health 2-3 weeks after the explosion of a fireworks storage facility in a residential area (May 2000, Enschede, The Netherlands) among 3,792 residents. The result of the study showed that at least 30% of those affected by the disaster reported serious physical and mental health problems. Compared with reference values in the general Dutch population, high scores were found for somatic symptoms, sleeping problems, and restrictions in daily function due to physical and mental problems, such as anxiety, depression, and feelings of insufficiency. The strength of these differences varied between groups, based on the level of involvement and the level of being affected (110).

Vehid et al. investigated the psychological effects of the earthquake in 3,690 survivors from the Marmara Earthquake with occurred on August 17, 1999. They found that 71.5% in mild level, 9.6% in serious level. Injury to the self or to the loved ones, damage to home or peoperty, the loss of family members as a result of the enhances suicidal tendencies and depression (111).

From the literature reviewed about depression, that showed the severity cause, risk factor of depression, effect of the disaster to the survivors and from the Tsunami disaster that occurred on 26th December 2004. The navies or their spouses were one of the risky group for depression. Except the loss from this disaster that supported them to had depression. The other factors such as physical or psychiatric illness, demographic data, environmental factors, or socioeconomic could be cause of depression that occurred in the navies or their spousesin Phang-Nga Naval Base. So the conceptual flamwork of this study as shown in Figure 3.

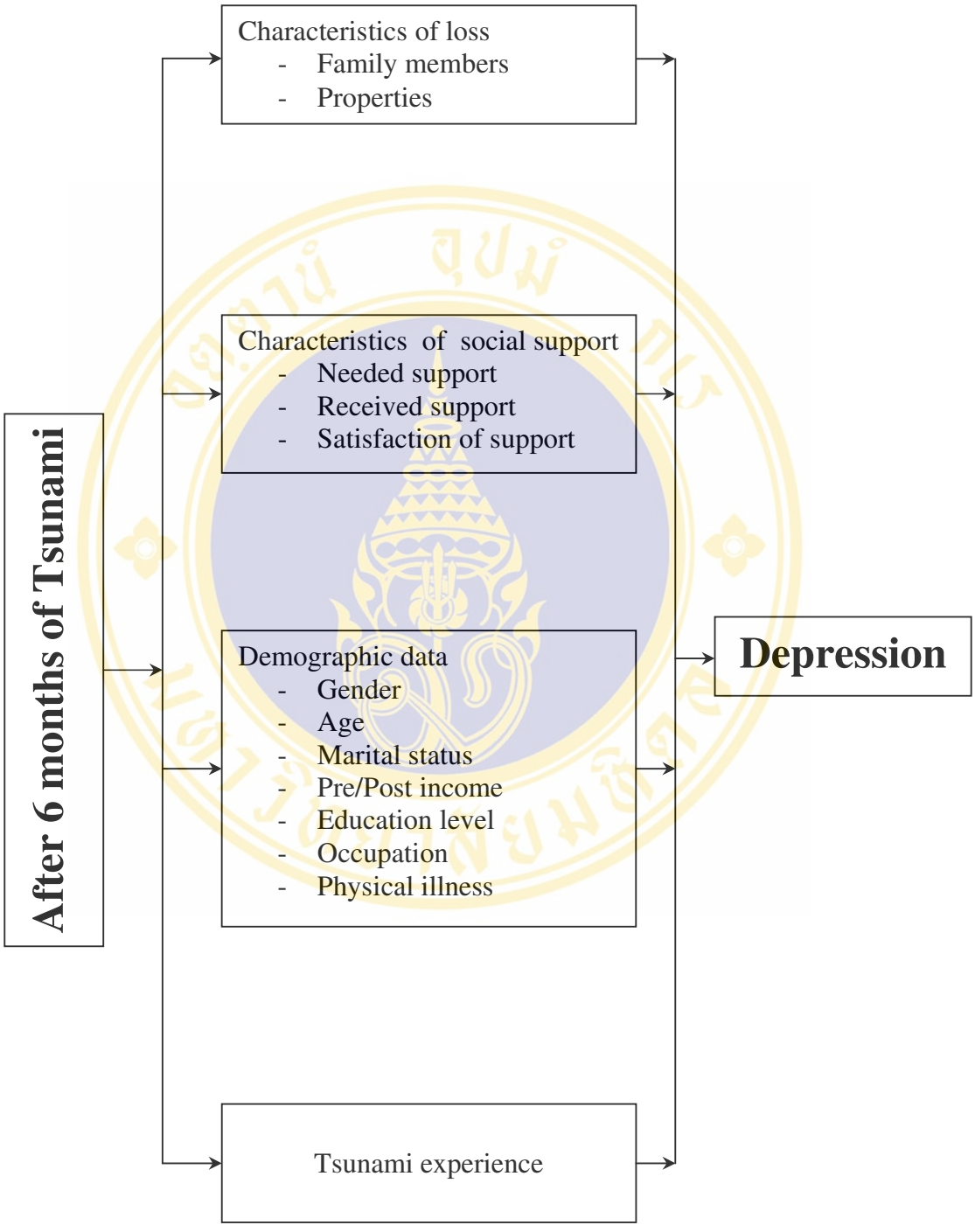


Figure 3 : Conceptual frame work

CHAPTER III
MATERIALS AND METHODS

Study Design

Analytic Cross-Sectional study is conducted to find out depression among the navies or their spouses who exposed and survived from Tsunami disaster and lived in the Phang-Nga Naval Base.

Study Population

Navies or their spouses who exposed and survived from Tsunami disaster and still lived in the official residence of Phang-Nga Naval Base, Phang-Nga Province.

Inclusion Criteria

1. Must be navies and their spouses, exposed to Tsunami disaster and survived, who still lived in the official resident house of Phang-Nga Naval Base.
2. Voluntarily cooperate with the research and signed their name.

Exclusion Criteria

1. Have severe physical illness or history of psychiatric illness.
2. Lived in the official resident house of Phang-Nga Naval Base after Tsunami disaster.

Sample Size

1. Specify size of the sample by the formula for approximate sample size, known number of population (112).

$$n = \frac{Z^2_{1-\alpha/2} P(1-P) N}{d^2(N-1) + Z^2_{1-\alpha/2} P(1-P)}$$

$Z_{\alpha/2}$	=	standard marks at 95% confident
N	=	objective population
P	=	percentage value expected to be founded
Q	=	1-P
d	=	maximum allowable error

From residence of the official residence house of naval base both single and married residence 472 families, so 614 people is the total amount of population here.

Therefore the calculation of this research can be as follows.

$$n = \frac{Z^2_{1-\alpha/2} P(1-P) N}{d^2(N-1) + Z^2_{1-\alpha/2} P(1-P)}$$

$$n = \frac{(1.96)^2(0.34)(0.66)(614)}{\left[(0.05)^2(613)\right] + \left[(1.96)^2(0.34)(0.66)\right]}$$

$$n = 221.04$$

Collected more expecting data 13.10% in order to achieve corrected and completed data so the requirement sampling from 250 people is needed.

2. Collecting example process using simple random sampling collected from every other house to get under spreading right data.

Research Instruments

Questionnaire of this research divided into 2 parts

Part 1 General Questionnaire

Part 2 Montgomery Asberg Depression Rating scale (MADRS) Thai virsion (59), questionnaire that assessed depression.

Part 1. General questionnaire

There are 18 questions; comprise 9 items of demographic data including gender, age, education level, marital status, occupation, part-time job, and income (before and after Tsunami disaster), 3 items of characteristics and amount of losses including lost of the family members, lost of properties, and estimated amount of properties loss, 3 items of characteristic of social support including needed help, recived help in the past 6 months, and satisfaction of support, 2 items of history of illness including psychiatric illness, and physical illness, and 1 item of Tsunami experience.

Part 2. Montgomery Asberg Depression Rating scale (MADRS) Thai version (59)

There are 10 items as follows:

Item 1. Apparent for sedness

Item 2. Reported sadness

Item 3. Inner tension

Item 4. Reduced sleep

Item 5. Reduced appitite

Item 6. Concentration difficulties

Item 7. Lassitude

Item 8. Inability to feel

Item 9. Pessimistic thoughts

Item 10. Suicidal thoughts

Item 1 Apparent for sedness representing despondency, gloom and despair (more than just ordinary transient low spirits), reflected in speech, facial expression, and posture. Rate by depth and inability to brighten up.

Item 2 Reported sadness representing reports of depressed mood, regardless of whether it is reflected in appearance or not. Includes low spirits, despondency or the feeling of being beyond help and without hope. Rate by intensity, frequency, duration, and the effect of the event to mood.

Item 3 Inner tension representing feelings of ill-defined discomfort, edginess, inner turmoil, mental tension mounting to either panic, dread or anguish. Rate according to intensity, frequency, duration and the extent of reassurance called for.

Item 4 Reduced sleep representing the experience of reduced duration or depth of sleep compared to the subject's own normal pattern when well.

Item 5 Reduced appitite representing the feeling of a loss of appetite compared with when-well. Rate by loss of desire for food or the need to force oneself to eat.

Item 6 Concentration difficulties representing difficulties in collecting one's thoughts mounting to an incapacitating lack of concentration. Rate according to intensity, frequency, and degree of incapacity produced.

Item 7 Lassitude representing difficulty in getting started or slowness in initiating and performing everyday activities.

Item 8 Inability to feel representing the subjective experience of reduced interest in the surroundings, or activities that normally give pleasure. The ability to react with adequate emotion to circumstances or people is reduced.

Item 9 Pessimistic thoughts representing thoughts of guilt, inferiority, self-reproach, sinfulness, remorse and ruin.

Item 10 Suicidal thoughts representing the feeling that life is not worth living, that a natural death would be welcome, suicidal thoughts, and preparations for suicide. Suicide attempts should not in themselves influence the rating.

In each item, measured the severity of a number of symptoms on a scale from 0 to 6.

Checking Quality of the Instruments

1. Fiding accuracy of content validity from general questionnaire through checking of qualified examiner before applies it.
2. Montgomery Asberg Depression Rating Scale (MADRS) Thai version that assessed by Kongsakon et al. the reliability with inter rater reliability Kappa correlation was equal to 0.78, and the internal consistancy for all scale was 0.80 (Cronbach's alpha) (59). Finding inter-rater realiability for the researcher by practice interview together for the understanding by the method of one by one interview with 1 patient and 6 persons who assess the results consists of psychiatrist, psychologist, researcher and researcher assistants**.** And score of each item must not less or more than one point of the other one. Then researcher and assistants additional interview 5 patients together.

Scoring Criteria

In each item of MADRS, rated on a scale score from 0 to 6. The total reponse scale score was reccorded with a value from 0 to 60. The cutoff point as shown in Table 1.

Table 1. The cutoff point of Montgomery Asberg Depression Rating Scale (MADRS)

Scale Score	Consideration to
0 - 10	No conditions
11 - 21	Mild
22 - 29	Moderate
≥ 30	Severe

Data Collection

Collecting data took place over 15 days July to 7 August 2005 by personal interview 10 – 15 minutes per person. During every visit, the purpose of the research project was explained to the interviewee in detail. Informed consent forms were obtained from all samples, together with approval from the ethic committee of the Faculty of Ramathibodi Hospital, Mahidol University. Household registrations indicated that the Phang-nga Naval Base had 614 residents in 472 households who were the navies and their spouses. The researcher learnt later that the registered population of 614 residents included some residents who left Phang-Nga Naval Base after the attack of Tsunami (manifested as vacant households) and some residents were not present at the time of data collection because of various reasons.

Data Quality Control

Every questionnaire batch was checked during collection by the researcher and researcher assistants for missing data.

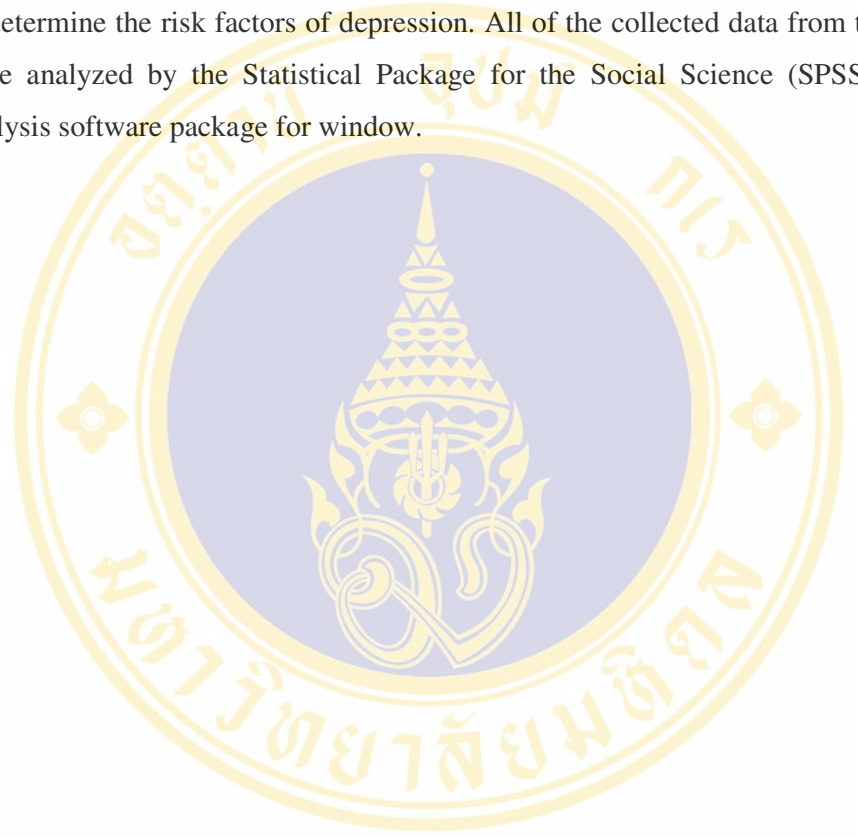
Protection of Human Subjects

In this study, the proposal was submitted to the ethic committee of the Faculty of Ramathibodi Hospital, Mahidol university for study permission. Furthermore, the proposal of the study was submitted to the Commandant of the Phang-Nga Naval Base.

After obtaining the permission, the researcher start collecting the data. Before the beginning of interview, the navies or their spouses were approached and informed about the details of this study in order that they counld understand and know their rights. Their rights included the right to refuse to participate in this study without any effects on their appropriate support. Their rights also were to cancel or give up during interview any sections if they wanted.

Statistical Analysis

When got complete data which were corrected, then entered coding. Descriptive statistics were used for demographic data and chi-square test were used to identify association between interested variables and depression. Logistic regression was used to determine the risk factors of depression. All of the collected data from the suvivors were analyzed by the Statistical Package for the Social Science (SPSS) statistical analysis software package for window.



CHAPTER IV
RESULTS

The depression among the navies or their spouses who survived in six months after the Tsunami disaster and continued living as residence in Phang-Nga Naval Base, Phang-Nga Province. Results of this study divided into 3 parts.

4.1. Descriptive characteristics of the study subjects

1. Frequency and percentage of demographic data
2. Frequency and percentage of Tsunami experience
3. Charecteristic and amount of losses
4. Charecteristic of social support and satisfaction of support
5. Demographic data in each gender

4.2. Prevalence and severity of depression

1. Prevalence of depression among the navies and all their spouses
2. The distribution of severity of MADRS scores
3. The distribution of suicidal thought
4. The distribution of severity of MADRS scores in the suicidal thought group

4.3. Factors related to depression

1. The associations between characteristics of the suvivors and depression
2. Significant predictors of depression in logistic regression analysis

4.1. Descriptive Characteristics of the sample

Table 2. showed the frequency and percentage of the demographic data, it showed that 171 (68.4%) were males and 79 (31.6%) were females. The age distributions of the 250 survivors were 35.76 ± 9.09 years. 40.8% were 36-45 years, 26.8 % were 26–35 years, and 19.2% were 19-25 years.

It found that 52 % received secondary education next received certificate and primary education (18%, 14.8%, respectively).

Most of the survivors were married (72.4%), 23.2% were single and 2.8% were widowed.

Of these 250 survivors, most of them were government officers (59.6%) next were housewives and employee (26%, 12.4%, respectively). Only 2% were casual workers. 48.4% did not have any part-time jobs. 17.6% earn a living with trade and 15.6% had own business.

Thirty-three point six percent had income per month at average group, 17.2% did not have any income, and 16.8% had average income at low group. Only 14.4% had average income at high group.

About health information, only 30 (12%) had physical illness.

Table 2. Frequency and percentage of demographic data

	Frequency (N=250)	Percentage (%)
Gender		
male	171	68.4
female	79	31.6
Age (years)		
19-25	48	19.2
26-35	67	26.8
36-45	102	40.8
≥46	33	13.2
mean ± SD	35.76±9.09	
Education		
primary	37	14.8
secondary	130	52.0
certificate	45	18.0
bachelor	22	8.8
others (diploma)	16	6.4
Marital status		
single	58	23.2
married	181	72.4
divorced	4	1.6
widowed	7	2.8
Occupation		
government officer	149	59.6
employee	31	12.4
casual worker	5	2.0
housewife	65	26.0

Table 2. Frequency and percentage of demographic data (continued)

	Frequency (N=250)	Percentage (%)
Part-time job		
none	121	48.4
trade	44	17.6
agriculturist	31	12.4
work as employee	13	5.2
own business	39	15.6
others	2	0.8
Income (baht)		
none	43	17.2
low (≤ 4,999)	42	16.8
average (5,000-9,999)	84	33.6
moderate (10,000-14,999)	45	18.0
high (≥ 15,000)	36	14.4
Physical illness		
yes	30	12.0
no	220	88.0

Among the survivors 197 (78.8%) had Tsunami experience. (Table 3.)

Table 3. Frequency and percentage of Tsunami experience

	Frequency (N=250)	Percentage (%)
Tsunami experience		
yes	197	78.8
no	53	21.2

From the characteristic and amount of losses (Table 4.), 92.8% did not lost family members. But in the survivors group who lost family members, 33.3% lost of the other such as husband. And 27.8% lost of child and brothers/sisters.

Eighty-one point six percent, their houses/habitations were damaged, their other properties were damaged or lost 59.6%, and their businesses/stores were damaged 27.2%.

From the disaster, 31.2% of the survivors evaluated the amount of losses about 100,001-500,000 bath. 25.2% evaluated the amount of losses about 500,001-100,000 baht and 24% evaluated the amount of losses about 10,001-50,000 baht.

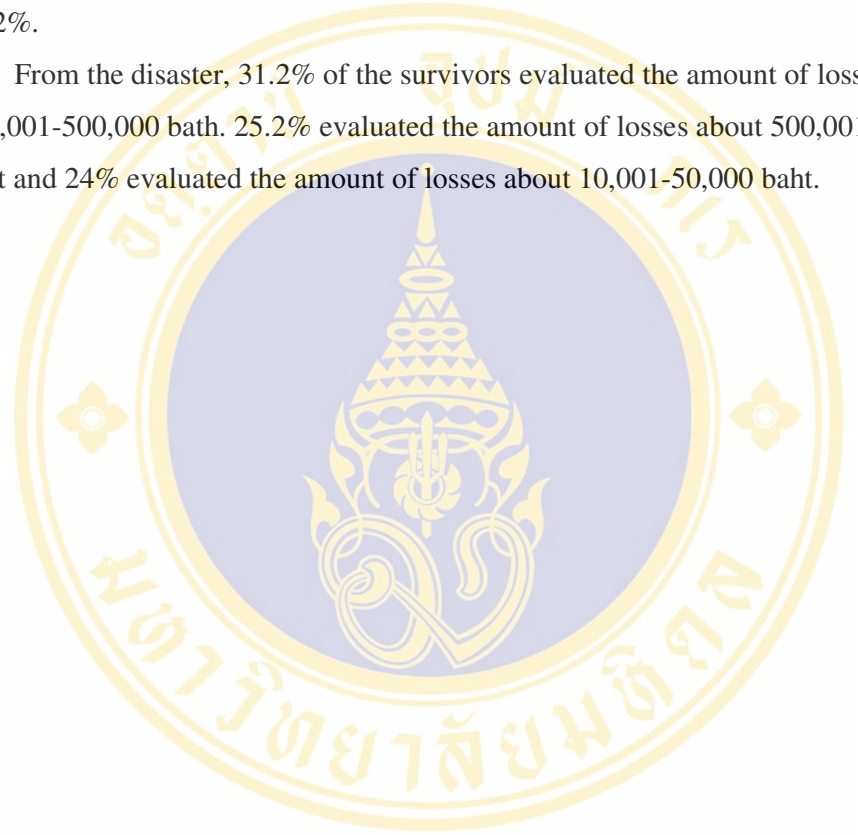


Table 4. Charecteristic and amount of losses

	n	%
Loss of family members (N = 250)		
no	232	92.8
yes (N = 18)		
• loss of father	1	5.6
• loss of mother	3	16.7
• loss of brothers/sisters	5	27.8
• loss of child	5	27.8
• others (husband, aunt)	6	33.3
Damage or loss of properties (N = 250)		
house/habitation	204	81.6
business/store	68	27.2
hotel/resort	1	0.4
agriculture-products	6	2.4
others (utencils, motorcycle, etc.)	149	59.6
Amount of losses (baht) (N = 250)		
≤10,000	35	14.0
10,001- 50,000	60	24.0
50,001-100,000	63	25.2
100,001-500,000	78	31.2
>500,000	14	5.6

n = number of case

From the characteristics of social support and satisfaction of support (Table 5.), only 12.4% did not need any support. In needed support group, 48.4% needed work fund, next needed cost of living and psychiatric support (40.6%, 30.6%, respectively).

Only 2.4% did not receive any support. 84.4% of the receiving group received habitation, next received cost of living and work fund (53.3%, 24.2%, respectively).

About the satisfaction, 46% satisfied with support in moderate level. 27.2% satisfied with support in mild level and 18.8% did not satisfy with support.

Table 5. Characteristic of social support and satisfaction of support

	n	%
Social support		
needed support (N = 250)		
• no	31	12.4
• yes (N = 219)		
- habitation	55	25.1
- workplace	53	24.2
- work fund	106	48.4
- scholarship	65	29.7
- cost of living	89	40.6
- physical	20	9.1
- psychiatric	67	30.6
received support (N = 250)		
• no	6	2.4
• yes (N = 244)		
- habitation	206	84.4
- workplace	11	4.5
- work fund	59	24.2
- scholarship	29	11.9
- cost of living	130	53.3
- physical	13	5.3
- psychiatric	31	12.7
satisfaction (N = 250)		
• mild	68	27.2
• moderate	115	46.0
• great	16	6.4
• none	47	18.8
• no opinion	4	1.6

n = number of case

Table 6. showed the demographic data in each gender, the age distribution of 171 males were 34.44 ± 9.54. Most of them (35.1%) were 36-45 years, next 26.3% were 19.25 years and 25.7% were 16-35 years.

Eighty-six percent of males were government officers, and 14% were employee. 52% of them did not have any part-time jobs, 19.9% had own business and 15.8% were agriculturist.

Fifty-five percent of male received secondary education, 22.2% received certificate and 11.7% received bachelor degree.

Seventy-five point four percent had Tsunami experience.

Most of them (89.5%) were healthy and only 10.5% had congenital disease.

About female, the age distribution of 79 females were 38.61 ± 7.33. Most of them (53.2%) were 36-45 years, next 29.1% were 16-35 years and 13.9% were ≥ 46 years.

Eighty-two point three percent of females were housewives next were employee and casual workers (8.9%, 52%, respectively). Only 2.5% were government officers. 40.5% of them did not have any part-time jobs, 35.4% earn a living with trade and 11.4% work as employee.

Forty-five point six percent of female were secondary education, 40.5% were primary education and 8.9% were certificate.

Eighty-six point one percent had Tsunami experience.

Most of them (84.8%) were healthy and only 15.2% had congenital disease.

Table 6. Demographic data in each gender

	Gender			
	Male (N = 171)		Female (N = 79)	
	n	%	n	%
Age (years)				
19-25	45	26.3	3	3.8
26-35	44	25.7	23	29.1
36-45	60	35.1	42	53.2
≥ 46	22	12.9	11	13.9
mean ± SD	34.44 ± 9.54		38.61 ± 7.33	
Occupation				
government officer	147	86.0	2	2.5
employee	24	14.0	7	8.9
casual worker	0	0.0	5	6.3
housewife	0	0.0	65	82.3
Part-time job				
none	89	52.0	32	40.5
trade	16	9.4	28	35.4
agriculturist	27	15.8	4	5.1
work as employee	4	2.3	9	11.4
own business	34	19.9	5	6.3
others	1	0.6	1	1.3
Education				
primary	5	2.9	32	40.5
secondary	94	55.0	36	45.6
certificate	38	22.2	7	8.9
bachelor	20	11.7	2	2.5
others	14	8.2	2	2.5

n = number of case

Table 6. Demographic data in each gender (continued)

	Gender			
	Male (N = 171)		Female (N = 79)	
	n	%	n	%
Physical illness				
yes	18	10.5	12	15.2
no	153	89.5	67	84.8
Tsunami experience				
yes	129	75.4	68	86.1
no	42	24.6	11	13.9

n = number of case

4.2. Prevalence and severity of depression

The prevalence of depression among 250 survivors was 28%. The prevalence of depression that occurred in male was 15.8% and in female was 54.4%. These results are shown in Table 7.

Table 7. Prevalence of depression among the navies and all their spouses

	Depressed survivors (n)	Prevalence rate
Total (N = 250)	70	28.0
Gender		
Male (N = 171)	27	15.8
Female (N = 79)	43	54.4

n = number of case

According to the MADRS (Table 8.), 21.6% of the survivors, had scores at mild levels, 5.2% registered depression score in the moderate and 1.2% had scores at severe levels.

Males, 8.8% had scores at mild levels, 1.6% registered depression score in the moderate and 0.4% had scores at severe levels. Female, 12.8% had scores at mild levels, 3.6% registered depression score in the moderate and 0.8% had scores at severe levels.

Table 8. The distribution of severity of MADRS scores

	Montgomery Asberg Depression Rating Scale					
	mild		moderate		severe	
	n	%	n	%	n	%
Total (N = 250)	54	21.6	13	5.2	3	1.2
Gender						
Male	22	8.8	4	1.6	1	0.4
Female	32	12.8	9	3.6	2	0.8

n = number of case

Of the 205 survivors, 11 (4.4%) had suicidal thought. Consideration by gender, 4 (2.3%) of males and 7 (8.9%) of females had suicidal thought. The results were shown in Table 9.

Table 9. The distribution of suicidal thought

	n	%
Total (N = 250)	11	4.4
Gender		
Male (N = 171)	4	2.3
Female (N = 79)	7	8.9

n = number of case

In 4 males who had suicidal thought, 75% had scores at moderate levels and 25% had scores at severe levels. And in 7 females, who had suicidal thought, 28.6% had scores at mild levels, 42.9% had scores at moderate levels and 28.6% had scores at severe levels. The results were shown in Table 10.

Table 10. The distribution of severity of MADRS scores in the suicidal thought group

	Montgomery Asberg Depression Rating Scale					
	mild		moderate		severe	
	n	%	n	%	n	%
Gender						
Male (N = 4)	0	0.0	3	75.0	1	25.0
Female (N = 7)	2	28.6	3	42.9	2	28.6

n = number of case

4.3. Factors related to depression

Table 11. showed the covariates associated with whether the survivors had depression were gender (p-value < 0.001), education levels (p-value < 0.001), marital status (p-value = 0.001), income after Tsunami disaster (p-value < 0.001), the loss of family members (p-vale < 0.001), amount of losses (p-value = 0.001), needed social support (p-value = 0.017), and Tsunami experience (p-value = 0.002).

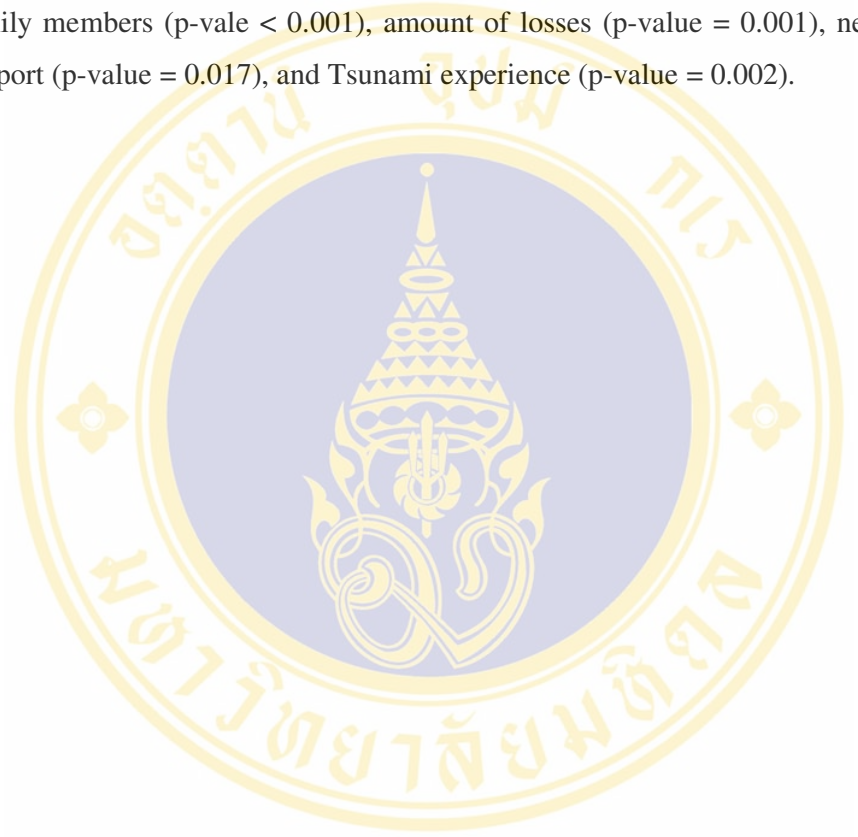


Table 11. The associations between charecteristics of the survivors and depression

	Depressed survivors (N = 250)	Percentage (%)	Pearson Chi-Square (χ^2)
Gender			40.021*
Male	27	10.8	
female	43	17.2	
Education			27.199*
primary	23	9.2	
secondary	31	12.4	
certificate	8	3.2	
bachelor	3	1.2	
others	5	2.0	
Marital status			17.041*
single	8	3.2	
married	54	21.6	
divorced	3	1.2	
widowed	5	2.0	
Income (baht)			31.531*
none	26	10.4	
low (≤ 4,999)	13	5.2	
average (5,000–9,999)	13	5.2	
moderate (10,000-14,999)	12	4.8	
high (≥ 15,000)	6	2.4	

* Significant at $p<0.05$

Table 11. The associations between charecteristics of the survivors and depression (continued)

	Depressed survivors (N = 250)	Percentage (%)	Pearson Chi-Square (χ^2)
Loss of family members			14.385*
yes	12	4.8	
no	58	23.2	
Amount of losses (baht)			19.072*
≤10,000	5	2.0	
10,001- 50,000	7	2.8	
50,001-100,000	21	8.4	
100,001-500,000	32	12.8	
>500,000	5	2.0	
Needed social support			5.893*
yes	67	26.8	
no	3	1.2	
Tsunami experience			9.281*
yes	64	25.6	
no	6	2.4	

* Significant at $p<0.05$

Further analysis revealed that the significant risk factors for depression were female (OR = 6.07; 95%CI 5.50-6.69), primary education (OR = 3.73; 95%CI 3.03-4.59). Survivors who were married, had a significant for depression higher than single (OR = 2.01; 95%CI 1.75-2.32). Divorced (OR = 12.88; 95%CI 8.81-18.82) and windowed (OR = 10.97; 95%CI 8.31-14.50). About their income after Tsunami disaster, survivors who did not have any income and low income group (≤ 4,900 baht), had a significant for depression (OR = 8.18; 95%CI 6.94-9.65, OR = 2.72; 95%CI 2.30-3.22, respectively). The other groups did not had significant.

Amount of losses was the one factor that was the risk factor for depression, survivors who evaluated about 50,000-100,000 baht, had significant for depression higher than evaluated about ≤10,000 baht (OR = 2.58; 95%CI 2.14-3.11). Evaluated about 100,001-500,000 baht (OR = 3.66; 95%CI 3.06-4.38), and about >500,000 (OR = 2.79; 95%CI 2.20-3.53).

And the other risk factors were loss of family members (OR = 5.22; 95%CI 4.42-6.16), needed social support (OR = 2.96; 95%CI 2.46-3.56), and Tsunami experience (OR = 4.08; 95%CI 3.54-4.72). The results were shown in Table 12.

Table 12. Significant predictors of depression in logistic regression analysis

	Total (n)	Adjusted OR	95%CI of adjusted OR	
			Lower	Upper
Gender				
male (Ref)	171	1.00	0.00	0.00
female	79	6.07*	5.50	6.69
Education				
others (Ref)	16	1.00	0.00	0.00
primary	37	3.73*	3.03	4.59
secondary	130	0.77	0.64	0.93
certificate	45	0.52	0.42	0.65
bachelor	22	0.35	0.27	0.45
Marital status				
single (Ref)	58	1.00	0.00	0.00
married	181	2.01*	1.75	2.32
divorced	4	12.88*	8.81	18.82
widowed	7	10.97*	8.31	14.50
Income (baht)				
high (≥ 15,000) (Ref)	36	1.00	0.00	0.00
none	43	8.18*	6.94	9.65
low (≤ 4,999)	42	2.72*	2.30	3.22
average (5,000-9,999)	84	1.01	0.86	1.20
moderate (10,000-14,999)	45	1.66	1.04	1.97
Loss of family members				
no (Ref)	232	1.00	0.00	0.00
yes	18	5.22*	4.42	6.16

n = number of case

Ref = reference category

* p-value < .001

Adjusted for age

Table 12. Significant predictors of depression in logistic regression analysis (continued)

	Total (n)	Adjusted OR	95%CI of adjusted OR	
			Lower	Upper
Amount of losses				
≤10,000 (Ref)	35	1.00	0.00	0.00
10,001- 50,000	60	0.73	0.59	0.90
50,001-100,000	63	2.58*	2.14	3.11
100,001-500,000	78	3.66*	3.06	4.38
>500,000	14	2.79*	2.20	3.53
Needed social support				
no (Ref)	31	1.00	0.00	0.00
yes	219	2.96*	2.46	3.56
Tsunami experience				
no (Ref)	53	1.00	0.00	0.00
yes	197	4.08*	3.54	4.72

n = number of case

Ref = reference category

* p-value < .001

Adjusted for age

CHAPTER V
DISCUSSION

This is a study of depression among the navies or their spouses 6 months after Tsunami disaster in Phang-nga Naval Base, Phang-nga Province. The data were collected by using Montgomery Asberg Depression Rating Scale (MADRS). All of the data which collected from the suvivors were analyzed using the Statistical Package for the Social Science (SPSS) statistical analysis software package for window. The discussions were as follows:

5.1. Discussion about characteristics of the study subjects

Mean ± SD age of 250 survivors was 35.76 ± 9.09 years, with a range of 19 to 56 years. 40.8% were 36-45 years, next 26-35 years and 19-25 years (26.8%, 19.2%, respectively). 68.4% were male and 31.6% were female. Most (59.6%) were government officers, 26% were housewives, and 12.4% were employee. Only 2% were causal workers.

Fifty-two percent received secondary education, 18% received certificate, and 14.8% received primary education. Only 6.4% received diploma.

Seventy-two point four percent were married, 23.2% were single, and 2.8% were widowed. Only 1.6% of them were divorced.

From the interviewed, 48.4% did not have any part-time jobs. In people who had part-time jobs, most of them (17.6%) earn a living with trade, then had own business, agriculturist, and work as emplyee (15.6%, 12.4%, 5.2%, respectively).

About health information, 88% were healthy and did not have any congenital diseases. Only 12% had congenital diseases such as hypertention, diabetes, allergy, heart disease, etc.

Seventy-eight point eight had Tsunami experience. From 18 (7.2%) of the bereaved survivors, 33.3% lost husband, aunt, and other relatives. 27.8% lost child and brothers/sisters. Then 16.7% lost mother and 5.6% lost father.

After the disaster, 33.6% of 250 survivors had income in average group (5,000-9,999 baht). Next 18% were in moderate income group (10,000-14,999 baht). Furthermore there were 17.2% did not have any income.

Their properties that were damaged or losted, included 81.6% their houses were damaged. 59.6% were other properties such as cars, motorcycles, electrical utensils, other utensils, etc. Most of them evaluated amount of losses about 100,001-500,000 baht (31.2%), next 25.2% evaluated about 50,001-100,000 baht, 24% evaluated about 10,001-50,000 baht, and 14% evaluated about ≤10,000 baht. Only 5.6% evaluated about >500,000 baht.

Social support data, 87.6% needed the support. In this group they needed work fund 48.4%, next needed cost of living and psychiatric support (40.6%, 30.6%, respectively). In survivors who needed psychiatric support, most of them were housewives and some part of navies. From the interviewed, many victims continuous fear and worried about the disaster. As well as this is one of the risk area and they could not go any where. Therefore they needed someone to listen to them and could give them some suggestions.

Six months after the Tsunami disaster, most of the survivors received habitation (84.4%), cost of living 53.3%, work fund 24.2%, and psychiatric support 12.7%. Only 2.4% did not receive any social support.

Fourty-six percent of the victims satisfied with support in moderate level, 27.2% satisfied in mild level, and 18.8% were pungent. The survivors were pungent because there was not enough support for them, the distribution of the support was not good. Some part of them did not receive any support yet. They did not trust in support system that it was the real support they should received.

Consideration by gender, 75.4% of 171 males had Tsunami experience. Mean ± SD age was 34.44 ± 9.54 years. 35.1% was 36-45 years, next 19-25 years and 16-35 years (26.3%, 25.7%, respectively). 55% received secondary education, 22.2% received certificate, and 11.7% received bechelor degree. Only 2.9% received primary education.

Eighty-six percent of male were government officers and 24% were employee. 52% did not have any part-time jobs. 19.9% had own business, 15.8% were agriculturist, and 9.4% earn a living with trade.

Health information, most of males (89.5%) were health and did not have any congenital disease. Only 10.5% had congenital disease such as hypertention, diabetes, heart disease, etc.

Among females, 86.1% had Tsunami experience. Mean ± SD age was 38.61 ± 7.33 years. 53.2% was 36-45 years, next 16-35 years and ≥46 years (29.1%, 13.9%, respectively). Most (45%) of female received secondary education, 40.5% received primary education, and 8.9% received certificate. Only 2.5% received bechelor degree and diploma.

Eighty-two point three percent of females were housewives, 8.9% were employee, 6.3% were causal worker, and 2.5% were government. 40.5% did not have any part-time jobs. 35.4% earn a living with trade, 11.4% work as employee, and 6.3% had own business.

Health information, most of females (84.8%) was healthy and did not have any congenital disease. Only 15.2% had congenital disease such as hypertention, diabetes, allergy, etc.

5.2. Discussion about prevalence and severity of depression

Among 250 survivors, the prevalence of depression was 28%. When consideration by gender, found that the prevalence of depression that occurred in male was 15.8% and in female was 54.4%.

Most notably the results showed that the prevalence of depression in female or housewives group was higher than the other groups. In present study, most of them were housewives and most did not have any part-time jobs and 40.5% of them received primary education. Their jobs in day by day were house work and looked after the child. So except the hormone, pregnant, family history, etc., or education level that was associated with depression. Being at home and looked after the children were one of the risk factors that related to depression. This finding was consistent with the study by Scholten (28), rates of depression have been found to be higher in women who are at home with young children, and those who describe themselves as isolated, compared to women who are working or have a supportive social network. While males more likely to use alcohol or drugs to help them cope.

About the severity of depression by MADRS scores, 21.6% of the survivors, scores had scores at mild levels, 5.2% registered depression score in the moderate and 1.2% had scores at severe levels.

The results showed males 8.8% had scores at mild levels, 1.6% registered depression score in the moderate and 0.4% had scores at severe levels. Female, 12.8% had scores at mild levels, 3.6% registered depression score in the moderate and 0.8% had scores at severe levels.

Among the survivors, 11 (4.4%) had suicidal thought and all of them reported depression. When consideration by gender 4 (2.3%) of males and 7 (8.9%) of females reported suicidal thought. Most notably females make more suicide attempts than males (3.9:1 ratio). The results of this present study were agree with the previous studies (113-114), persons with depression lean to reported suicidal though and have up to a 15% risk for suicide. And the finding was related to a 2001 National Institute

for Mental Health (NIMH) report, women make more suicide attempts than men (3:1 ratio) (115).

In the suicidal though group, 75% of male had scores at moderate levels and 25% had scores at severe levels. And in females, 28.6% had scores at mild levels, 42.9% had scores at moderate levels and 28.6% had scores at severe levels.

5.3. Factors related to depression

Adjusted for age that was the confounding factors. The results showed, survivors experienced Tsunami disaster had higher rate of depression than survivors who never (OR = 4.08; $p < 0.001$). This finding was agree with the results of the previous studies (86), (94), the persons who directly expose to the panic or affected by disasters tend to had higher rates of depression than persons indirectly expose or have any effected by the disasters.

Gender was a significant risk factor for depression, the results showed that female increase rate more than male (OR = 6.07; $p < 0.001$). These finding coincide with previous studies (85), (90), (116), that female was the strong predictor of depression.

The results reported marital status was associated with depression. And the survivors who divorced and widowed had a higher rate of depression than single group (OR = 12.88; $p < 0.001$, OR = 10.97; $p < 0.001$, respectively). These findings about divoced and widowed were the significant risk factors for depression replicate those from other post disaster studies. For example, in a study by Chou and colleagues (88), significant risk factors for major depressive episode were divorced/widowed status ($p < 0.05$). This result has been found in other study (117).

In present study found that survivors who married also had higher rate of depression than single (OR = 2.01; $p < 0.001$). This finding is contrast with previous studies (86), (118) noted persons who did not married had significant of depression than who married (OR = 1.87; $p < 0.001$). Most notably the single group in this study did not have loss of family members, amount of losses did not exceed 50,000 baht, and most of them were young. So they did not have stress or too much things worried.

Education level was a significant risk factor for depression. The results showed primary education increased rates of depression more than other education level (OR = 3.73; $p < 0.001$). This finding was consistent with a study by Chou and colleagues (88), subjects with education level equal to or below primary school had higher rates of depression than other education levels. The persons who had low education could not earn a living as the good jobs and had good income.

And this finding is consistent with the results of this study, people who did not have any income and had income in low group (≤ 4,999 baht) was associated with depression and incressed rate of depression more than high income group (OR = 8.18; $p < 0.001$, OR = 2.72; $p < 0.001$, respectively). But in other groups, there was no significant with high income group. And the finding about household income has been found in the other study, reported household income was the significant predictor for depression ($p < 0.01$) (96).

Because all of the survivors had properties that damaged or lost. Most of them needed the social support and there was significant correlation between needed social support and depression. The needed group had higher rate of depression than the other group (OR = 2.96; $p < 0.001$). As well as the results reported, there was significant correlation between amount of losses and depression likewise. The survivors evaluated amount of losses about 50,000-100,000 baht, about 100,001-500,000 baht, and about >500,000 baht had significant for depression higher than evaluated about ≤10,000 baht (OR = 2.58; $p < 0.001$, OR = 3.66; $p < 0.001$, OR = 2.79; $p < 0.001$, respectively). The finding about the losted or damaged of properties relating to depression and the persons who reported prominent house damage or lost of properties had higher rate of depression than who did not, has been found in several studies (78), (88), (119).

May be in the none income group, most of them were housewives. The expenses in their house came from only their husbands. From the interviewed, many survivors in this study had debt preblems. And because of the Tsunami disaster, all of their properties were damaged or losted. They must borrowed the money to repaired disastrous preperties or bought the new ones. So many of them were unable to make end meet.

Factors associated with grief (e.g., loss of a family members) increased the likelihood of depression (OR = 5.22; $p < 0.001$). Some studies found about this

relationship (90), (120), death of relative, seperation from family, being injured and being close to death were powerful determinants of depression. And from the interviewed the survivors of this study who loss the loved ones, felt themselves lonely and some parts of them directly faced to the death of their loved ones.

So the results of this present study that reported directly expose, female gender, loss of loved ones, lower education, lower socioeconomic status tend to be related to higher depression among survivors and this finding consistent with the previous study (70-78) that reported about the greatest risk for depression after a disaster.

Limitations of the study

The main limitation of the study was cross-sectional design, which precludes any formal conclusion about the causality of the associations between depression and its correlates. Second, late look bias. Although this present study identified navies or their spouses faced to Tsunami disaster, some parts of them were moved out. So the survivors that were collected may be the strong persons who can live and face to the same environment or they must be there because they did not have any where to go. Possibly the prevalence of depression in navies or their spouses may be far from the truth.

CHAPTER VI
CONCLUSION AND RECOMMENDATIONS

Conclusion

This analytic cross-sectional study aimed to evaluate magnitude and severity of depression and evaluate factors that related to depression; included demographic data, charecteristic of lost, characteristic of social support, and Tsunami experience, in navies and their spouses who survived from the Indian Ocean Tsunami after 6 months past of Tsunami disaster at Phanga-Nga Naval Base, Phang-Nga Province. Data was collected from 250 navies and all their spouses, included males and females, from 24 July to 5 August, 2005. Collected data by using quationaire that divided into 2 parts.

1) Part 1 general questionnaire
2) Part 2 questionnaire that assessed depression (Montgomery Asberg Depression Rating scale:MADRS) Thai version (59)

Descriptive statistics were used for demographic data and chi-square test were used to identify association between interested variables and depression. Logistic regression was used to determine the risk factors of depression. The adjusted model was adjusted for age. All of the data collected from the survivors were analyzed by the Statistical Package for the Social Science (SPSS) statistical analysis software package for window.

Of 250 survivors, majority of them was men (68.4%) were males, government officers (59.6%), married (72.4%), and age distribution was 35.76 ± 9.09 years. Most of them received secondary education (52%) and only 6.4% received diploma, did not have any part-time jobs (48.8%), received incomes at average groups (5,000-14,999 baht) after Tsunami disaster (33.6%).

The prevalence of depression among 250 survivors was 28%. And the prevalence of depression that occurred in male was 15.8% and 54.43% in female. The severity of depression by MADRS scores among all of the survivors, most (21.6%) had scores at mild levels, 5.2% registered depression score in the moderate and 1.2% had scores at severe levels. Consideration by gender, 8.8% of males had scores at mild levels, 1.6% had scores at moderate levels and 0.4% had scores at severe levels. In females, 12.8% registered depression score in mild levels, 3.6% registered depression score in the moderate and 0.8% had scores at severe levels.

The suicidal thought in 250 survivors, 11 had suicidal thought. In these survivors, there were 4 males and 7 females. Among 4 males who reported suicidal thought, 75% had scores at moderate levels and 25% had scores at severe levels. And in 7 females, 28.6% had scores at mild levels, 42.9% had scores at moderate levels and 28.6% had scores at severe levels.

Most notably, significant risk factors for depression were female gender, lower education level, marital status including married, divorced and widowed, household income after the disaster, needed social support, amount of losses, lost of family members, and Tsunami experience were also associated with depression.

Recommendations

Based on the findings of this study, the following points of recommendations could be advantageous for the further implementation for planned and continued to improve their mental impairment such as depression among the navies or their spouses and other disaster survivors.

Recommendations for further study

1. The results of this study reveal that Tsunami disaster was the greatest risk for depression among the navies or their spouses. It is suggested that further studies be followed up them for a long period such as 12 months, 18 months or 24 months and compare the results with 6 months. The effective intervention

should be planned and continued to improve their mental health about depression.

2. The association between depression and efficiency of work among the navies who exposed to Tsunami disaster and compare to the navies who did not expose. The results will suggest guidelines for help and improve their mental impairment for the efficient work.
3. Need for social support that one of the risk factor for depression of the navies or their spouses. It is therefore recommended the further studies should cover the factors related to social support that affects depression in the disaster survivors. The results of such studies will suggest guidelines for providing adequate and efficient social support.

Policy Recommendations

1. This study and many studies worldwide have reported the long – term effects of the the disasters to depression. It is recommended that the government should establish health promotion policy for the victims include entry victims (such as police, military personnel, rescue workers, government officials, volunteers) in the impact area. The policy may emphasize the promotion of mental rehabilitation programs.
2. The results show that the victims who have insufficient income or lower incomes are tend to have depression. In order to generate income for the them, the government should provide appropriate work and promote a market for distribution of victims made products. In addition, a tax deduction system should be offered to them.
3. Female, married and the widow/divorce victims have risk for depression than do males, and the single groups. The government should pay special attention in promoting mental health among female victims and those who are married and widowed, divorced.
4. Lower education was powerful determinant of depression. The government should offer the knownledge and support them about the education.

5. There is evidence that a large amount of resources, both domestic and international, was under – utilized in the efforts to assist the victims and therefore, knowledge of changes in depression over the time. The government should allocate resources efficiently at different time. However, it is critical to carry out longitudinal studies to identify and assess the mental health needs to be met for the sake of those who have not yet recovered and the victims' needs in each phase following the disaster because their needs can change as time passes.

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APPENDIX

Checking Instrument

1. Assoc.Prof.Dr. Ronnachai Kongsakon
   Faculty of Medicine, Ramatibodi hospital, Mahidol University
2. Assoc.Prof.Dr. Somjit Prueksaritanond
   Faculty of Medicine, Ramatibodi hospital, Mahidol University

เอกสารชี้แจงข้อมูล/คำแนะนำแก่ผู้เข้าร่วมการวิจัย

(Patient/Participant Information Sheet)

ชื่อโครงการ การศึกษาภาวะซึมเศร้าของทหารประจำการ-คู่สมรสที่รอดชีวิตภายหลังจากประสบภัยพิบัติคลื่นยักษ์สึนามิ 6 เดือน ณ ฐานทัพเรือพังงา จังหวัดพังงา

ภาษาอังกฤษ Depression among the navies, their spouses survivors, six months after the Tsunami disaster in Phang-nga Naval Base, Phang-Nga Province

ชื่อผู้วิจัย รศ. นพ. รณชัย คงสกนธ์ (Assoc.Prof.Dr.Ronnachai Kongsakorn)

รศ.พญ. สมจิต พฤกษะริตานนท์ (Assoc.Prof.Dr.Somjit Prueksaritanond)

นางสาว นิภาวรรณ ลีนานนท์ (Miss Nipawan Leenanon) นักศึกษาปริญญาโท หลักสูตรวิทยาศาสตร์มหาบัณฑิต สาขาวิทยาการระบาด คณะแพทย์ศาสตร์ศิริราชพยาบาล มหาวิทยาลัยมหิดล

สถานที่ทำการวิจัย ฐานทัพเรือพังงา ตำบลลำแก่น อำเภอท้ายเหมือง จังหวัดพังงา

บุคคลและวิธีการติดต่อเมื่อมีเหตุฉุกเฉินหรือความผิดปกติที่เกี่ยวข้องกับการวิจัย

1. รศ. นพ. รณชัย คงสกนธ์ โทรศัพท์ 0-2201-1478
2. รศ.พญ. สมจิต พฤกษะริตานนท์ โทรศัพท์ 0-2201-1486

ผู้สนับสนุนการวิจัย โครงการรามาธิบดีช่วยเหลือผู้ประสบภัยภาคใต้อย่างต่อเนื่อง คณะแพทย์ศาสตร์ โรงพยาบาลรามาธิบดี

ความเป็นมาของโครงการ

วันที่ 26 ธันวาคม 2547 เวลาประมาณ 07.58 น. (ตามเวลาในประเทศไทย) ได้เกิดคลื่นยักษ์สึนามิขึ้นรอบมหาสมุทรอินเดีย โดยมีจุดศูนย์กลางอยู่ทางตะวันตกของเกาะสุมาตรา ความรุนแรงของแผ่นดินไหวัดได้ 9.0 ริคเตอร์ สำหรับประเทศไทยได้รับผลกระทบบริเวณภาคใต้ของประเทศบริเวณชายฝั่งทะเลอันดามัน รวม 6 จังหวัด ได้แก่ จังหวัดระนอง พังงา ภูเก็ต กระบี่ ตรัง และสตูล ก่อให้เกิดความเสียหายอย่างไม่สามารถประเมินค่าได้ และทำให้มีผู้เสียชีวิต 5,395 คน ผู้ได้รับ บาดเจ็บ 8,457 คน และผู้สูญหาย 2,932 คน ตามลำดับ โดยจังหวัดพังงาเป็นจังหวัดที่มีจำนวนผู้เสียชีวิตและสูญเสียทรัพย์สินมากที่สุด สำหรับฐานทัพเรือพังงา จังหวัดพังงา จากการสำรวจของสภาวิศวกร เมื่อ 8-9 มกราคม 2548 พบว่า คลื่นได้ซัดเข้าไปทำลายฐานทัพเรือเสียหายมาก นอกจากนี้ยังได้ซัดเรือหลวงกระบุรี เอฟเอฟ .457 ซึ่งมีขนาดยาวกว่า 150 ฟุต ขึ้นฝั่งด้านตะวันตกของฐานทัพเรือ สำหรับทหารซึ่งรอดชีวิตจากภัยดังกล่าวต้องเผชิญกับความสูญเสียจากภัยพิบัติดังกล่าว ซึ่งมิอาจประเมินค่าได้ถึงแม้ว่าที่ผ่านมาจะมีหน่วยงานทั้งภาครัฐและภาคเอกชนได้ให้ความช่วยเหลือกับผู้ประสบภัยดังกล่าวแล้ว ส่วนใหญ่จะเน้นการช่วยเหลือด้านกายภาพเป็นส่วนใหญ่ มิได้ใส่ใจกับด้านจิตใจเท่าใดนัก

อีกทั้งฐานทัพเรือซึ่งประกอบด้วยทหารที่เป็นผู้ชายเป็นส่วนใหญ่ สังคมภายนอกมักมองเป็นที่พึ่งพาของผู้อื่นและมีความเข้มแข็งทั้งร่างกายและจิตใจ ฉะนั้นภาพที่ปรากฏออกสู่สายตาของสาธารณชนอาจมิได้เป็นตัวตนที่แท้จริง ลึกๆแล้วอาจมีความหวาดกลัวและความวิตกกังวลแฝงอยู่ซึ่งเมื่อสะสมเป็นระยะเวลานานโดยมิได้รับการช่วยเหลือ อาจส่งผลให้เกิดความเจ็บป่วยทางจิตที่รุนแรง และส่งผลกระทบต่อหน้าที่ความรับผิดชอบต่อบ้านเมืองในอนาคตได้

วัตถุประสงค์

เพื่อประเมินและศึกษาภาวะซึมเศร้าของทหารประจำการหรือคู่สมรสที่รอดชีวิตภายหลังประสบภัยธรณีพิบัติคลื่นยักษ์สึนามิ 6 ณ ฐานทัพเรือพังงา จังหวัดพังงา

รายละเอียดที่จะปฏิบัติต่อผู้เข้าร่วมการวิจัย

ผู้เข้าร่วมการวิจัยตอบแบบสอบถาม ข้อมูลทั่วไป และแบบสอบถามเพื่อประเมินภาวะซึมเศร้า (Montgomery Asberg Depression Rating Scale) โดยผู้วิจัยสัมภาษณ์ ใช้เวลาประมาณ 10-15 นาที ต่อคน ขณะตอบแบบสอบถาม ถ้าเกิดความไม่เข้าใจสามารถสอบถามผู้วิจัยได้ หากผู้เข้าร่วมการวิจัยไม่สะดวกสามารถปฏิเสธการเข้าร่วมในการวิจัยครั้งนี้ได้

ประโยชน์และผลข้างเคียงที่จะเกิดแก่ผู้เข้าร่วมการวิจัย

ประโยชน์ของการวิจัยครั้งนี้จะนำไปเป็นแนวทางสำหรับการดูแลให้ความช่วยเหลือฟื้นฟูทั้งด้านร่างกาย จิตใจ และคุณภาพชีวิตต่อไป

การเก็บข้อมูลเป็นความลับ

ข้อมูลทั้งหมดจากการตอบแบบสอบถามจะได้รับการปกปิดเป็นความลับการรายงานผลการวิจัยจะรายงานเป็นผลสรุปของการศึกษาทั้งหมด

ถ้าท่านมีปัญหาข้อใจหรือรู้สึกกังวลใจกับการเข้าร่วมโครงการวิจัยครั้งนี้
ท่านสามารถติดต่อกับประธานกรรมการ

หนังสือยินยอมโดยได้รับการบอกกล่าวและเต็มใจ

(Informed Consent Form)

ชื่อโครงการ การศึกษาภาวะซึมเศร้าของทหารประจำการ-คู่สมรสที่รอดชีวิตภายหลังจากประสบภัยพิบัติคลื่นยักษ์สึนามิ 6 เดือน ณ ฐานทัพเรือพังงา จังหวัดพังงา

ภาษาอังกฤษ Depression among the navies, their spouses survivors, six months after the Tsunami disaster in Phang-nga Naval Base, Phang-Nga Province

ชื่อผู้วิจัย รศ. นพ. รณชัย คงสกนธ์ (Ass.Pro.Dr.Ronnachai Kongsakorn)

รศ.พญ. สมจิต พฤกษะริตานนท์ (Ass.Pro.Dr.Somjit Prueksaritanond)

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* ชื่อผู้เข้าร่วมการวิจัย .....

คำยินยอมของผู้เข้าร่วมการวิจัย

ข้าพเจ้า.....ได้ทราบรายละเอียดของโครงการวิจัยตลอดจนประโยชน์และข้อเสี่ยงที่จะเกิดขึ้นต่อข้าพเจ้าจากผู้วิจัยแล้วอย่างชัดเจนไม่มีสิ่งใดปิดบังซ่อนเร้นและยินยอมให้ทำการวิจัยในโครงการที่มีชื่อข้างต้นและข้าพเจ้ารู้ว่าถ้ามีปัญหาหรือข้อสงสัยเกิดขึ้น ข้าพเจ้าสามารถสอบถามผู้วิจัยได้ และข้าพเจ้าสามารถไม่เข้าร่วมโครงการวิจัยนี้เมื่อใดก็ได้ โดยไม่มีผลกระทบต่อการรักษาที่ข้าพเจ้าพึงได้รับ นอกจากนี้ผู้วิจัยจะเก็บข้อมูลเฉพาะเกี่ยวกับตัวข้าพเจ้าเป็นความลับและจะเปิดเผยได้เฉพาะในรูปที่เป็นสรุปผลการวิจัยการเปิดเผยข้อมูลเกี่ยวกับตัวข้าพเจ้าต่อหน่วยงานต่างๆที่เกี่ยวข้อง กระทำได้เฉพาะกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

ลงชื่อ .....(ผู้เข้าร่วมการวิจัย)

.....(พยาน)

.....(พยาน)

วันที่.....

หมายเหตุ กรณีผู้เข้าร่วมการวิจัยไม่สามารถอ่านหนังสือได้ ให้ผู้วิจัยอ่านข้อความในหนังสือยินยอม

*ผู้เข้าร่วมการวิจัย หมายถึง ผู้ยินยอมตนให้ทำวิจัย

□□□ เลขที่แบบสอบถาม

1 2 3

แบบสัมภาษณ์ข้อมูลทั่วไปสำหรับผู้ประสบภัยสึนามิ

คำชี้แจง

1. ผู้ตอบแบบสอบถามต้องเป็นทหารประจำการ หรือคู่สมรส ผู้ซึ่งประสบภัยสึนามิเมื่อวันที่ 26 ธันวาคม 2547
2. ข้อมูลของท่านจะเป็นประโยชน์อย่างยิ่งสำหรับการศึกษาวิจัยทางด้านเวชศาสตร์ชุมชนและเพื่อประยุกต์สู่การดูแลผู้ประสบภัยในอนาคต
3. โปรดทำเครื่องหมาย √ ในช่อง ( ) หรือเติมข้อความในช่องว่างตามความเป็นจริง

ชื่อ ..... นามสกุล .....

ตำแหน่ง .....

สำหรับผู้วิจัย

1. เพศ ( ) 1. ชาย ( ) 2. หญิง SEX □ 4

2. อายุ ..... ปี (นับจำนวนเต็มปีบริบูรณ์) AGE □□ 5

3. ที่อยู่ปัจจุบันของผู้ตอบแบบสอบถาม บ้านเลขที่ ..... ADD □ 6

หมู่ ..... ตำบล ..... อำเภอ ..... จังหวัดพังงา

4. จบการศึกษาสูงสุด EDU □ 7

( ) 1. ประถมศึกษา ( ) 2. มัธยมศึกษา

( ) 3. ประกาศนียบัตร ( ) 4. ปริญญาตรี

( ) 5. อื่นๆ .....

5. สถานภาพสมรส STATUS □ 8

( ) 1. โสด ( ) 2. คู่

( ) 3. หย่าร้าง ( ) หม้าย

6. อาชีพ OCC □ 9

( ) 1. รับราชการ ( ) 2. ลูกจ้างประจำ

( ) 3. ลูกจ้างชั่วคราว ( ) 4. แม่บ้าน

7. อาชีพเสริม EXOCC □ 10

( ) 1. ไม่มี ( ) 2. ค้าขาย

( ) 3. เกษตรกร (ทำสวน/นา/ไร่) ( ) 4. รับจ้าง

( ) 5. ธุรกิจส่วนตัว

( ) 6. อื่นๆ (ระบุ) .....

8. ตัวท่านมีรายได้ต่อเดือนประมาณ BEINC □ 11

( ) 1. 4,999 บาทหรือสูงกว่า ( ) 2. 5,000 – 9,999 บาท

( ) 3. 10,000 – 14,999 บาท ( ) 4. 15,000 บาทหรือสูงกว่า

9. หลังประสบภัยตัวท่านมีรายได้ต่อเดือนประมาณ AFINC □ 12

( ) 1. 4,999 บาทหรือสูงกว่า ( ) 2. 5,000 – 9,999 บาท

( ) 3. 10,000 – 14,999 บาท ( ) 4. 15,000 บาทหรือสูงกว่า

10. ภายหลังประสบภัยมีการสูญเสียบุคคลในครอบครัวหรือไม่

( ) 1. ไม่มี PSLOSS □ 13

( ) 2. มี (ตอบได้มากกว่า 1 ข้อ)

( ) 1. พ่อ PSLOS 1 □ 14

( ) 2. แม่ PSLOS 2 □ 15

( ) 3. พี่-น้อง PSLOS 3 □ 16

( ) 4. ลูก PSLOS 4 □ 17

( ) 5. อื่นๆ (ระบุ) .....PSLOS5 □ 18

11. ภายหลังประสบภัยมีการสูญเสียทรัพย์สินหรือไม่

( ) 1. ไม่มี PPLOS □ 19

( ) 2. มี (ตอบได้มากกว่า 1 ข้อ)

( ) 1. บ้าน-ที่อยู่อาศัย PPLOS 1 □ 20

( ) 2. กิจการ/ร้านค้า PPLOS 2 □ 21

( ) 3. โรงแรม/รีสอร์ท PPLOS 3 □ 22

( ) 4. ผลผลิตทางเกษตรกรรม PPLOS 4 □ 23

( ) 5. อื่นๆ (ระบุ) .....PPLOS 5 □ 24

12. ประเมินมูลค่าทรัพย์สินที่สูญเสีย ..... บาท ESTLOS □ 25

( ) 1. ต่ำกว่า 10,000 บาท ( ) 2. 10,000 – 50,000 บาท

( ) 3. 50,001 – 100,000 บาท ( ) 4. 100,001 – 500,000 บาท

( ) 5. 500,000 บาทขึ้นไป

13. ความต้องการความช่วยเหลือ

( ) 1. ไม่ต้องการ HLP □ 26

( ) 2. ต้องการ (ตอบได้มากกว่า 1 ข้อ)

( ) 1. ด้านกายภาพ (สิ่งแวดล้อม)

( ) ที่อยู่อาศัย HLPPSC 1 □ 27

( ) ที่ทำมาหากิน HLPPSC 2 □ 28

( ) 2. ด้านการเงิน

( ) ทุนประกอบอาชีพ.....บาท HLPMON 1 □ 29

( ) ทุนการศึกษา ..... บาท HLPMON 2 □ 30

( ) ค่าครองชีพ .....บาท HLPMON 3 □ 31

( ) 3. ด้านจิตใจ HLPPSY □ 32

( ) 4. ด้านร่างกาย HLPBO □ 33

14. ในช่วงเวลา 6 เดือนที่ผ่านมาหลังประสบภัยท่านได้รับความช่วยเหลือด้านใดบ้าง

( ) 1. ไม่ต้องการ PHLP □ 34

( ) 2. ต้องการ (ตอบได้มากกว่า 1 ข้อ)

( ) 1. ด้านกายภาพ (สิ่งแวดล้อม)

( ) ที่อยู่อาศัย PHLPPSC 1 □ 35

( ) ที่ทำมาหากิน PHLPPSC 2 □ 36

( ) 2. ด้านการเงิน

( ) ทุนประกอบอาชีพ.....บาท PHLPMON 1 □ 37

( ) ทุนการศึกษา ..... บาท PHLPMON 2 □ 38

( ) ค่าครองชีพ .....บาท PHLPMON 3 □ 39

( ) 3. ด้านจิตใจ PHLPPSY □ 40

( ) 4. ด้านร่างกาย PHLPBO □ 41

15. ท่านพึงพอใจกับความช่วยเหลือที่ได้รับในภาพรวมทั้งหมดช่วง 6 เดือนที่ผ่านมาในระดับใด

( ) 1. พอใจมาก PHLPCON □ 42

( ) 2. พอใจปานกลาง

( ) 3. พอใจน้อย

( ) 4. ไม่พอใจ เพราะ .....

.....

.....

.....

( ) 5. ไม่แสดงความคิดเห็น

16. ท่านเคยมีประวัติการเจ็บป่วยทางจิตเวชหรือไม่ PSY □ 43

( ) 1. ไม่มี

( ) 2. มี ระบุ.....

17. ท่านมีโรคประจำตัวหรือไม่ SICK □ 44

( ) 1. ไม่มี

( ) 2. มี ระบุ.....

18. ขณะเกิดคลื่นยักษ์สึนามิ ท่านอยู่ในเหตุการณ์หรือไม่ TSUN □ 45

( ) 1. ไม่อยู่

( ) 2. อยู่

□□□ เลขที่แบบสอบถาม

MADRS ฉบับภาษาไทย

การให้คะแนนจะให้โดยการประเมินลักษณะอาการ และความรุนแรงของอาการ ผู้ประเมินจะต้องให้เป็นค่าลำดับคะแนน (0,2,4,6) หรือระหว่างค่าลำดับคะแนนนั้นก็ได้ (1,3,5)

ในบางกรณีที่ไม่สามารถประเมินจากผู้ป่วยได้โดยตรง ขอให้ประเมินจากข้อมูลแวดล้อมทางคลินิกอื่นๆที่เชื่อถือได้แทน

การประเมินสามารถประเมินโดยใช้ระยะเวลาถี่ห่างเท่าใดก็ได้

1. ความซึมเศร้าที่ปรากฏให้เห็น (คะแนน.....)

หมายถึง ความสลด, ความเศร้า และความสิ้นหวัง (ไม่ได้เป็นเพียงความเบื่อหน่ายซึ่งเกิดขึ้นเพียงชั่วครั้งชั่วคราว) โดยสะท้อนออกมาเป็นคำพูด, การแสดงออกทางสีหน้าและท่าทาง

ประเมินจาก ความรุนแรง และความไม่สามารถที่จะร่าเริงและมีชีวิตชีวา

0 - ไม่มีความเศร้า

2 - ดูเหมือนไม่มีชีวิตชีวาแต่สดชื่นได้โดยไม่ลำบาก

4 - แลดูเศร้า และไม่มีความสุขเกือบตลอดเวลา

6 - ดูเหมือนมีความทุกข์ตลอดเวลา รู้สึกสิ้นหวังอย่างมาก

2. ความซึมเศร้าที่รายงาน (คะแนน.....)

ปรากฏชัดถึงอารมณ์ที่หดหู่ โดยไม่คำนึงว่าจะแสดงออกมาหรือไม่ รวมถึงความเบื่อหน่าย, ความสลดใจ หรือความรู้สึกที่สิ้นหวังคงไม่มีใครช่วยเหลือได้

ประเมินตาม ความรุนแรง ความถี่ ระยะเวลา และผลกระทบของเหตุการณ์ต่ออารมณ์และความรู้สึก

0 – มีความซึมเศร้าเป็นครั้งคราวเหมาะสมกับเหตุการณ์

2 - รู้สึกซึมเศร้าและเบื่อหน่าย แต่สดชื่นได้โดยไม่ลำบาก

4 - มีอารมณ์เศร้าและหดหู่ไปทุกเรื่อง แต่อารมณ์ยังเปลี่ยนแปลงตามสิ่งแวดล้อมภายนอก

6 - มีอารมณ์เศร้าต่อเนื่อง หรือสลดใจอยู่ตลอดเวลาโดยไม่เปลี่ยนแปลงตามเหตุการณ์

3.ความตึงเครียดที่อยู่ภายใน (คะแนน.....)

หมายถึง ความรู้สึกไม่สบายใจ อึกอัดจนบอกไม่ถูก ความพลุ่งพล่านภายใน ความตึงเครียดอาจมากจนเป็นความตื่นตระหนกอย่างรุนแรง หวาดกลัว หรือความปวดร้าวภายในจิตใจ

ประเมินตาม ความรุนแรง ความถี่ ระยะเวลา และความต้องการที่จะแสวงหาสิ่งภายนอกเพื่อให้เกิดความมั่นใจ

0 - จิตใจสงบ มีเพียงความเครียดภายในชั่วครั้งชั่วคราว

2 - ความรู้สึกฉุนเฉียว หงุดหงิดในบางครั้ง

4 - ความรู้สึกตึงเครียดภายในอย่างต่อเนื่อง หรือความตื่นตระหนกอย่างรุนแรงเป็นระยะๆซึ่งสามารถควบคุมได้ด้วยความยากลำบาก

6 - ความหวาดกลัวที่ไม่ได้ผ่อนคลายลง หรือความปวดร้าว ความตื่นตระหนกอย่างท้วมท้น

4. การนอนหลับที่ลดลง (คะแนน.....)

หมายถึง ระยะเวลา หรือความลึกของการนอนหลับที่ลดลง เมื่อเปรียบเทียบกับการนอนหลับตามปกติของตัวเองเมื่อตอนสบายดี

0 - หลับตามปกติ

2 - หลับได้ยากเล็กน้อย หรือหลับได้สั้นลงเล็กน้อย หลับๆตื่นๆ

4 - การนอนลดลงหรือมีปัญหาไปอย่างน้อย 2 ชม.

6 - หลับได้น้อยกว่า 2-3 ชม.

5.ความอยากอาหารลดลง (คะแนน.....)

หมายถึง การสูญเสียความอยากอาหาร เมื่อเปรียบเทียบกับตอนสบายดี

ประเมินโดย ความเบื่ออาหาร หรือความจำเป็นที่ต้องมีการบังคับให้กินอาหาร

0 - ความอยากอาหารปกติหรือเพิ่มขึ้น
2 - ความอยากอาหารที่ลดลงเล็กน้อย
4 - ไม่มีความอยากอาหาร รู้สึกอาหารไม่มีรสชาติ
6 - มีความจำเป็นที่ต้องมีการกระตุ้นให้กินอาหาร

6. ปัญหาในการรวบรวมสมาธิ (คะแนน.....)

หมายถึงความยากลำบากในการรวบรวมความคิดอย่างมีประสิทธิภาพ ไปจนถึงการขาดสมาธิ

ประเมินตาม ความรุนแรง ความถี่ และระดับของความไม่มีสมาธิ

0 - ไม่มีความยุ่งยากในการรวบรวมสมาธิ
2 - มีความยากลำบากเป็นครั้งคราวในการ2-รวบรวมความคิด
4 - คงสมาธิ หรือความคิดอย่างต่อเยื่องในการอ่าน หรือการสนทนาได้ลำบาก
6 - ไม่สามารถที่จะอ่านหรือพูดคุยเรื่องง่ายๆ ความหวาดกลัวที่ไม่ได้ผ่อนคลายลง หรือมีความปวดร้าวตลอดเวลา ความตื่นตระหนกอย่างท้วมท้น

7. ความอ่อนเปลี้ยเพลียแรง (คะแนน.....)

แสดงออกถึง ความยากในการริเริ่มทำสิ่งต่างๆ หรือความเชื่อช้าในการทำกิจวัตรประจำวัน

0 - เริ่มทำสิ่งต่างๆได้โดยไม่ลำบาก ไม่มีความเฉื่อยชา

2 - มีความยากในการริเริ่มทำกิจกรรม

4 - มีความยากในการริเริ่มทำกิจวัตรประจำวันที่ง่ายๆทำโดยต้องใช้ความพยายาม

6 - มีความอ่อนเปลี้ยเพลียแรงโดยสิ้นเชิง ไม่สามารถที่จะทำสิ่งต่างๆโดยปราศจากความช่วยเหลือ

8. การตอบสนองทางอารมณ์ที่ลดลง (คะแนน.....)

หมายถึงรู้สึกถึงการขาดความสนใจในสิ่งรอบตัว หรือกิจกรรมที่เคยสร้างความพึงพอใจในยามปกติ

มีการลดลงในความสามารถที่จะโต้ตอบด้วยอารมณ์ที่พอเพียงต่อสถานการณ์ หรือบุคคล

0 - มีความสนใจปกติต่อสิ่งรอบข้างและผู้คน

2 - ลดความสามารถที่สนุกสนานกับสิ่งที่เคยสนใจตามปกติ

4 - เสียความสนใจในสิ่งรอบข้าง สูญเสียความรู้สึกต่อเพื่อนและคนคุ้นเคย

6 - รู้สึกเหมือนอารมณ์หายไปหมด จนไม่สามารถจะโกรธ โศกเศร้า หรือเพลิดเพลินแม้แต่กับญาติและเพื่อนสนิท

9. ความคิดในด้านลบ (คะแนน.....)

แสดงออกโดยความรู้สึกผิด ต่ำต้อย ตำหนิตนเอง บาป เศร้า หายนะ

0 - ไม่มีความคิดในด้านลบ

2 - ความคิดวนเวียนเกี่ยวกับความล้มเหลว ตำหนิตนเอง หรือด้อยค่าในตัวเอง

4 - การกล่าวโทษตนเองอยู่ตลอดเวลา หรืออย่างชัดแจ้ง แต่ยังคงมีความคิดอย่างมีเหตุผลต่อความรู้สึกผิดบาป มีความคิดในด้านลบเกี่ยวกับอนาคตเพิ่มขึ้น

6 - คิดหลงผิดเกี่ยวกับความเศร้า ความหายนะหรือบาปที่ไม่สามารถไถ่ถอนได้ การกล่าวโทษตนเองอย่างไม่เหมาะสม และไม่สามารถปรับเปลี่ยนได้โดยง่าย

10. ความคิดฆ่าตัวตาย (คะแนน.....)

แสดงถึง ความคิดว่าชีวิตไร้ค่าที่จะอยู่ต่อไป มองว่าการตายเป็นสิ่งที่ยอมรับได้ มีความคิดที่จะฆ่าตัวตาย มีการเตรียมการที่จะฆ่าตัวตาย (พฤติกรรมที่พยายามฆ่าตัวตายไม่ควรนำมาใช้ประเมิน)

0 - มีความสุขกับการมีชีวิต

2 - เบื่อหน่ายชีวิต มีความคิดที่ฆ่าตัวตายชั่วครั้งชั่วคราว

4 - มีความคิดว่าบางครั้งควรตายดีกว่าอยู่ ความคิดที่จะฆ่าตัวตายเป็นเรื่องธรรมดา มองว่าการฆ่าตัวตายเป็นทางออกที่เหมาะสม แต่ยังไม่ถึงกับมีแผนหรือความตั้งใจที่แน่นอน

6 - มีการเตรียมพร้อมที่จะฆ่าตัวตาย มีแผนที่ชัดเจนสำหรับการฆ่าตัวตายเมื่อมีโอกาส

คะแนนรวม = ...

BIOGRAPHY

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