Family Support and Psychosocial Problems among the Tsunami Survivors in Aceh Besar District, Indonesia

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ABSTRACT

This descriptive correlational study was aimed to describe the levels of perceived family support and psychosocial problems among the tsunami survivors and to investigate the relationship between the family support and psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia. Purposive sampling technique was employed for the recruitment of 126 tsunami survivors as the subjects of this study, in Lambada Lhok village, Aceh Besar District, Indonesia. Data were collected by requesting the subjects to complete a set of questionnaires that was validated by three experts and tested for reliability with Cronbach's alpha coefficient. The set of questionnaires consisted of demographic data and health information, the Family Support Questionnaire (α = 0.79) and the Psychosocial Problems Questionnaire (α = 0.79). The content validity index was 0.87 for the Family Support Questionnaire and 0.85 for the Psychosocial Problems Questionnaire. Data were analyzed by using descriptive statistics (means, standard deviations, frequency, and percentage). Pearson's product moment correlation was used to investigate the relationship between the family support and psychosocial problems among the tsunami survivors. The findings showed that the level of family support was at a moderate high level except instrumental support that was at a high level (M = 3.1, SD = 1.7). The level of psychosocial problems was at a moderate low level except problems of permanent housing that was at a moderate high level (M = 2.5, SD = 1.5). Correlation between the family support and psychosocial problems was low negative correlation ($r = -0.28$ $p<0.05$). However, the results of this study have provided some evidence regarding the family support and psychosocial problems among the tsunami survivors. The further study is still needed in order to gain more in depth information about the long – term psychosocial problems of the tsunami survivors.

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CHAPTER 1

INTRODUCTION

Background and Significance of the Study

The earthquake and tsunami disaster, which devastated the entire region of Southeast Asia on December 26, 2004, continues to have lingering effects, particularly those related to the psychosocial and mental health problems. Aceh, one of the provinces in Indonesia, had the greatest impact than many other provinces in the country. Following the disaster high mortality rates from 22.0 to 23.6% were found in Banda Aceh, Aceh Besar, and Aceh Jaya districts (Doocy, Gorokhovich, Burnham, Balk, & Robinson, 2006). According to the Bureau of Rehabilitation and Reconstruction (BRR, 2005) Aceh Besar, which was the worst affected area of Indonesia by the tsunami had a population of 309,082. Among the 605 villages of Aceh Besar, 130 villages were destroyed by the tsunami. Approximately, 146,307 survivors displaced population in Aceh Besar (Doocy et al., 2006).

The population of Aceh before the tsunami 2004 was approximately 4 million. Banda Aceh, the capital city of Nanggroe Aceh Darussalam had a population of 230,000. The population along the severely affected western coast of Aceh was approximately 450,000. Most of the population in Banda Aceh and along the western coastline have either died or been displaced. The magnitude of the disaster, according to the National Coordinating Authority (2005) involved the death toll of 170,000, with 30,000 missing and 8,500 injured. Many of the internal displaced persons (IDPs) are currently being placed in approximately 180 temporary settlements.

Tsunami 2004, as a catastrophic event, created extreme and intense stress among the affected people. Many children lost their parents. Tens of thousands of families lost one or more family members, and hundreds of thousands lost their homes and livelihoods.

This situation has caused an immense social, economical and environmental devastation to the areas that were already poor. Presently, the people of Aceh are involved in the phase of rehabilitation and reconstruction. The Bureau of Reconstruction and Rehabilitation (BBR, 2005) for Aceh and Nias, estimated that there 67,500 people were living in one-year old tents and 50,000 people were housed in the government-built temporary barracks and 110,000 houses are still needed. As of January 2006, 16,200 houses were built, and 13,200 were under reconstruction.

The impact of the tsunami 2004 has made people to face many physical, psychosocial and economical problems. However, the psychosocial problems will be continued to have a sustained and long-term effects. Hatthakit and Thaniwathananon (2007) found that after one and a half years of the tsunami, the survivors' still prolonged suffering by focusing mainly the psycho-spiritual aspects as caused of sense of loss. The disasters can have a significant psychosocial impact because they bring substantial loss for the victims such as loss of loved ones, bodily integrity, material goods, places they have made their own, and sense of safety and security (Laurendeau, Labbare, & Senecal, 2007). As a result, it is believed that there may be a massive need for psychosocial support. According to the National Coordinating Authority (2005) up to 50% of the affected population may be experiencing significant psychological distress, with 5 to 10% has developed a diagnosable stress-related psychiatric disorder.

Reijneveld, Crone, Verhulst and Verloove (2003) stated that the common long-term psychosocial problems resulting from a natural disaster include depression, anxiety, substance abuse, difficulties with concentration, memory problems, and behavioral problems in school, sleep deprivation, and post traumatic stress disorders (PTSD). Norris (2006) found that after a natural disaster, PTSD can be found in approximately 81% of the victims, while the depressive symptoms or major depressive disorders can be found in 57% of the victims.

Anxiety or generalized anxiety disorder can be found in about 19% of the victims, with 35% of them suffering from the psychosomatic symptoms. PTSD should be considered within the four weeks after the trauma otherwise it represents an acute stress disorder or delayed-onset PTSD, which develops at least six months after trauma (Foa, Stein, & Mcfarlane, 2003). PTSD symptoms can persist for many years after the trauma.

Many factors can contribute to the development of long-term psychosocial problems among the tsunami survivors, such as destruction of houses and possessions, unemployment, enormous financial costs for reconstruction of homes, and physical fatigue and interpersonal hardship at the relocation sites (Kokai, Fuji, Shinfuku, & Edwards, 2004). Each survivor of a natural disaster has his/her own personal perception of the event. According to Gauthamadas (2005) a survivor's reactions to a disaster and recovery from it, are influenced by the number of factors. These factors include personality, defensive style, world view, spiritual beliefs and coping abilities, but they are not limited to how the survivor has dealt with past stressful events Experiences of past losses can enhance or compromise coping and coping can be compromised if unresolved issues associated with past events remain (Gauthamadas, 2005).

Family support is very crucial for the survivors who faced with the psychosocial problems aftermath of the tsunami. Social support is information, which leads the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations (Cobb, 1976). Family support is a constellation of formal and informal services and tangible goods that defined and determined by families (Brennan & Rosenzweig, 2008).

The tsunami 2004, destroyed relationships or interaction between family and society ties. As many the tsunami survivors were displaced, relocated, and perceived negative support from other significant persons. Ullman (1996, as cited in Pruitt & Zoellner, 2006) stated that negative social support may suppress natural coping responses and therefore, serve to maintain posttraumatic symptomatology. Even though, the emergency phase of the tsunami has gone and a lot of assistance came to help the survivors but the survivors still need more positive social support in recovery phase to strengthen the community and rebuild a new social networks in a new environment. Glanz, Rimer, and Lewis (2002) pointed out

that social networks are linkages between people that can provide social support and can serve other functions that providing support. Social support has a relationship with how networking helps people cope with stressful events. Positive social support can help survivors to resolve their psychosocial problems for live a normal life.

The family support is one of the sources of the social support. It has played a major role after the tsunami 2004. The family support has a relationship with the psychosocial problems. The higher the perceived support, the lower the stress would be (Kaniasty & Norris, 1995). Family provided not only physical assistance but also psychological for the survivors since the tsunami 2004 occurred until recently. Family also helped the survivors to cope with their problems, particularly the psychosocial problems after the tsunami. It is, therefore, decided to focus only on the family support in this study.

Objectives of the Study

The objectives of this study were as follows:

1. To describe the levels of perceived family support among the tsunami survivors in Aceh Besar District, Indonesia
2. To describe the levels of the psychosocial problems among tsunami survivors in Aceh Besar Distrcict, Indonesia
3. To investigate the relationship between the family support and psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia

Research Questions

This study aimed to answer the following research questions

1. What are the levels of perceived family support among the tsunami survivors, in Aceh Besar District, Indonesia?
2. What are the levels of psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia?

3. Is there a relationship between the family support and psychosocial problems among the tsunami survivors in Aceh Besar, District, Indonesia?

Conceptual Framework of the Study

In this study, the researcher used the social support concept to explain the family support as the framework based on House (1981). House stated that social support has four types including: 1) emotional, 2) instrumental, 3) informational and 4) appraisal support. The emotional type of support is the provision of empathy, love, trust, caring, esteem and listen. Instrumental support allows to access to the individual for help in time of need including money, time, in-kind of assistance, and other explicit interventions on the person's behalf. Informational support occurs through the provision of information that the person can use in coping with personal and environmental problems such as advice, suggestions and directives. Appraisal support is the transmission of information relevant to self evaluation including affirmation, feed back, and social comparison. The source of social support in this study was family support.

The researcher also used a framework based on the ADAPT Model (Adaptation and Development after Persecution and Trauma) by Silove, Steel, and Psychol (2006) and combined it with a model based on Carballo, Heal, and Horbaty (2006) to describe the psychosocial problems among the tsunami survivors. According to Silove, Steel and Psychol (2006) the ADAPT model offers an expanded perspective on the psychosocial system undermined by a disaster. This model consists of: 1) safety and security, 2) interpersonal bonds and networks, 3) systems of justice and protection from abuse, 4) institutions and 5) roles and identities.

Carballo, Heal, and Horbaty (2006) stated that the psychosocial problems after a disaster related to gender, age, extent of personal loss, and personal experience in terms of how direct or indirect exposure emerged as key factors together with loss of place, problems of permanents housing, jobs and uncertainty about if and when it would be possible to return to original home sites and communities. In this study, the researcher did not use all aspects

based on Carballo, Heal, and Horbaty (2006) because presently, Acehnese people passed the acute phase of the tsunami 2004, they were in rehabilitation and reconstruction phase and most of them have moved to their permanent houses. Therefore, the researcher only focuses on some components of the psychosocial problems, which are still exist include: 1) extent of personal loss, 2) problems of permanent housing and 3) jobs. The researcher also used all the components in the ADAPT model except institutions, because after the tsunami 2004 struck, Acehnese people have re-created their institutions that facilitate them for practicing of their religion and cultural traditions.

Based on the conceptual framework, family support is a part of the social support that has a negative relationship with psychosocial problems after the tsunami. The higher the perceived social support, the lower the stress would be (Kaniasty & Norris, 1995). Family support and social support are likely to be strongly related to each other. Therefore, in this study, the researcher used the social support concept (House, 1981) as the main concept to describe the family support and the ADAPT model by Silove, Steel and Psychol (2006) which was combined with the Carballo, Heal, & Horbaty (2006) model to describe the psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia.

Hypothesis

There is a negative relationship between the family support and psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia.

Definitions of Terms

Family support is an assistance or support from the family members or the significant people who did not directly affected by the tsunami 2004 and who were living separately from the survivors. The family support includes emotional, instrumental, informational, and appraisal. It can be measured by using the Family Support Questionnaire developed for this study.

Psychosocial problems are the problems involving the psychological and the social problems that occurred after the tsunami 2004 including security and safety, interpersonal bonds and networks, systems of justice and protection from abuse, roles and identities, extent of personal loss, and problems of permanent housing. They can be measured by using the Psychosocial Problems Questionnaire developed for this study.

Scope of the Study

This study was conducted in the tsunami affected area in Lambada Lhok village, Aceh Besar District, Indonesia, from November 20, 2008 to January 20, 2009.

Significance of the Study

The results of this study have provided contributions to nursing practice, nursing education and development of further research as follows:

1. For nursing practice, the research findings has provided useful information and evidence for nurses regarding the family support and psychosocial problems among the tsunami survivors, especially for those who work in psychiatric nursing and community nursing and it will be served as guidelines for providing psychosocial interventions for the survivors.

2. For nursing education, the knowledge gained from the study can enhance ability of nurses to understand the relationship between family support and psychosocial problems.

3. The results of this study can be used as baseline data for further research related to the family support and psychosocial problems particularly after disaster.

CHAPTER 2

LITERATURE REVIEW

The literature review for this study, which includes overview situation of the tsunami survivors, concept of the family support and psychosocial problems, measurements of the family support and psychosocial problems, and the relationship between the family support and psychosocial problems among the tsunami survivors is as follows:

1. Overview Situation of the Tsunami Survivors
2. Concept of the Family Support
   - 2.1 Definitions of the Family Support
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   - 2.3 The Family Support for the Tsunami Survivors
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Overview Situation of the Tsunami Survivors

The tsunami 2004 struck everyone in many dimensions. Some people were more vulnerable than others and they reacted with their different ways to survive and deal with many psychosocial and mental health problems. The adverse effects of the tsunami generated a stressful reaction for the survivors. According to the Biology Online Dictionary (2006) survivors are persons who have experienced a prolonged survival after serious disease or who continue to live with a usually life-threatening condition as well as family members, significant others, or individuals surviving traumatic life events. The tsunami survivors are people who survived from the Indian Ocean tsunami or lost loved ones in the water through a complex process of trauma, grief and at best rehabilitation (Katarina, 2008).

Presently, the Acehnese tsunami survivors are in the recovery phase. They have returned to their original houses, rebuild new community and institutions but in fact the adverse effects of the tsunami are still with them particularly long-term effects. The survivors who had directly affected by the tsunami still sometimes have psychological reactions for instance fear, anxiety, and delayed-onset post traumatic stress disorder (PTSD). According to Hobbs (1995) most 70-80% of people affected by a disaster experience the powerful early psychological reaction. Approximately 30-40% the survivors develop post-traumatic psychopathology, 10-12% manifesting the full diagnostic picture of PTSD (Raphael, 1986, as cited in Hobbs, 1995).

In summary, the tsunami survivors are vulnerable people who have risk to develop psychosocial problems and psychiatric morbidity. Therefore, the survivors should perceive support from family or social networks to promote adaptive coping not only in acute phase but also in long-term phase for a normal life.

Concept of the Family Support

2.1 Definitions of the Family Support

The definitions of the family support and social support are varied and widely used in the previous studies. The family support is a part of the social support,

therefore for better understanding of family support, in this study, the researcher has also reviewed the definitions of social support.

According to Brennan and Rosenzweig (2008) family support is a constellation of formal and informal services and tangible goods that defined and determined by families. Lidell (2002) defined family support as an interactive process which is influenced by many factors such as the illness, attitudes in which the support is given, and the stage in the recovery process. Moreover, Lidell (2002) stated that consequences of the family support on the survivors are depend on how the support and with what importance is given and in which mood it is given.

Cobb (1976) defined social support as information that leads the subjects to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations. Caplan (1976) defined social support as continuing social aggregates (namely, continuing interactions with another individual, a network, a group, or an organization) that provide individuals with opportunities for feedback about others, which may offset deficiencies in these communications within the larger community context, a cognition focused on the behaviors, belief or attitudes of other individuals. Hobfoll and Stokes (1988, as cited in Pugliesi & Shook, 1998) defined social support as social interactions and relationship that keep or attachment and is perceived as loving or caring.

2.2 Types of the Family Support

Types of family support may vary. Based on the previous studies it is stated that family support is a part of the social support and they are strongly related to each others, therefore, the types of family support can be similar to the social support. Following the definition of social support based on House (1981) family support is categorized into four types: emotional, appraisal, informational and instrumental is as follows:

2.2.1 Emotional support generally comes from family and is the most commonly recognized form of social support. It includes empathy, concern, caring, love, listen, and trust.

2.2.2 Appraisal support involves transmission of information in the form of affirmation, feedback and social comparison. This information is often evaluative and it can come from family**.**

2.2.3 Informational support includes advice, suggestions, or directives that provided by the family to assist the person to respond to personal or situational demands.

2.2.4 Instrumental support is the most concrete and direct form of family support. It includes encompassing help in the form of money, time, in-kind assistance, and other explicit interventions on the person's behalf.

Moreover, there are three key support components, which include positive support, negative support, and no support (Ullman, 1996, as cited in Pruitt & Zoellner, 2006). Positive support involves several factors including tangible aid, informational aid, and emotional aid. Negative support includes thing such as blame, disbelief, taking control of the recipient's choices, distraction, and withdrawal from the support recipient. No support is simply any reaction that is neither positive nor negative.

Caplan (1974) defined three types of activities that can be characterized as social support: (1) help by the stimulation of psychological resources to overcome problems of emotional disorder, (2) sharing of task which individual must perform, and (3) providing the material and financial resources, skills and supervision necessary to face up the stressful situation.

Thoits (1995, as cited in Wilson & Boden, 2008) stated that the key factors involved in social support include the size of one's social network, the extent to which the individual is embedded in a social network, and the extent to which individuals are satisfied with their level of social support. Furthermore, Thoits (1995, as cited in Ferrari, Harriot, & Zimmerman, 1997) found that family members or closed friend seems to be most important measure of social support.

Peltonen (1996, as cited in Bertero, 2000) stated that the primary level of social support, which includes family members and closed friends most suitable for giving emotional and practical support when needed. Lack of support or support given at the wrong time, can bring negative consequences.

2.3 The Family Support for the Tsunami Survivors

Family support and social support for the tsunami survivors play an important role to help the survivors adjusting with the stressful events. Perceived social support from family members may differ from other perceived social support in its relationships to personality dimensions because family support provides openness, conscientiousness, and agreeableness (Tong, Bishop, Diong, Enkelman, Why, & Ang et al., 2004). Lindell and Prater (2003) found that friends, relatives, neighbors, and co-workers can assist recovery of the victims of disaster through financial and in-kind contributions, as can community based organizations and local government do. Calhoun and Tedeschi (1993, as cited in Wilson & Boden, 2008) stated that social support systems play a key role in the aftermath of the trauma.

Social support influences the mental and physical health. More attention should be paid to the most basic expressions of support, e.g., receiving and providing help at times when it is needed (Kaniasty & Norris, 1995). Social support is associated with how networking helps people to cope up with stressful events like the tsunami. Social networks are linkage between the people that may provide social support, and motivate others for providing support (Glanz, Rimer, & Lewis, 2002).

Several previous studies have investigated the relationship between the social support and disaster. Kaniasty and Norris (1995) studied the pattern of social support mobilization following hurricane “Hugo” and found that there are three broad categories of factors that influence support reception and provisions including the stressor characteristics, the person characteristics, and the unique ecological context of support exchanges.

The stressor characteristics involve many collateral factors such as unambiguous and visibly distressing that complicate the process of receiving and providing help.
The severity of experienced stress, often considered as an index of relative needs for social support, should be most reliably related to the quantity of help receipt. Providing social support can also be related to the stressor severity.

The person characteristics include the recipients' providers. Basic attributes such as race, sex, age, marital status, and education are associated with differential exposure to structural barriers and opportunities in the society which may, in turn, shape the social relationship structures and processes. Females, married, more educated, and younger people generally receive more support than male, unmarried, less educated, and older people.

The ecological context associated with the societal, group, and relationship norms or standards may differentially apply across helping situations. The survivors who deal with the natural disasters such as hurricane, floods, or earthquakes have often described outpouring of immediate mutual help in the affected areas and communities.

In addition, Kaniasty and Norris (1995) pointed out that tangible (instrumental), emotional and informational forms of social support are all needed by the disaster victims. Tangible support may be the easiest form to provide. Further more, Kaniasty and Norris (1995) stated that the pattern of help receipt following natural disaster can be from family. Cohen (1992) stated that having people to talk about problems (appraisal support and informational) and having people who can make individual feels better about her/himself may be generally useful because these are coping requirements elicited by most stressors.

Pruitt and Zoellner (2006) studied the impact of social support: an analogue investigation of the aftermath of trauma exposure. This study examined how various social reactions following trauma exposure, influenced the subsequent anxiety, affect, and intrusive thought. The participants were 93, and the results of the study found that the lack of social support, which may be perceived as extremely invalidating, may impede the trauma recovery by affecting the frequency and severity of intrusions.

In summary, family support as a part of social support is important sources that can help the survivors deal with the stressful events and can contribute to reduce the psychological symptoms and psychosocial problems.

2.4 Measurement of the Family Support

There are few instruments to measure the family support. Based on the literature review, measurement of the family support is usually a part of social support. Hence, in this study, the researcher has reviewed both the family support and the social support instruments.

The Family Support Scale (FSS) was developed by Dunst, Trivette, and Jenkins (1986, as cited in Fischer & Corcoran, 1994)). The scale consists of 18 items covering sources of support such as the immediate family, relatives, friends, and others in the family's social network, social organizations and specialized and generic professionals services for children with disabilities. Reliability, validity, and factor structure were investigated for these measures with 990 families. Results suggest that the FSS is stable, internally consistent measures that appear to measure familial perceptions of support and resources adequately.

The Social Support Appraisal (SS-A) Scale was developed by Vaux, Philips, Holly, Thomson, Williams, and Stewart (1986, as cited in Fischer & Corcoran, 1994). The Social Support Appraisal (SS-A) is to measure the subjective appraisal of support in adults. The SS-A consists of 23 statements about the relationship with the family and friends. Lower score indicates a stronger subjective appraisal of social support. This instrument has a very good internal consistency, with alpha coefficients that range from .81 to .90. The SS-A was subjected to a considerable evaluation of its validity resulting in a very good concurrent, predictive, known groups, and construct validity.

The Social Support Behaviors (SS-B) Scale measures modes of social support in adults. It was developed by Vaux, Riedel, and Stewart (1987, as cited in Fischer & Corcoran, 1994) that comprises of a 45-item design to assess five modes of social support including emotional, socializing, practical assistance, financial assistance and advice/guidance. Scores for subscales and total scale are simply computed by summing

individual item scores on the 5-point scales (possible range of 45-225). The SS-B has a very good internal consistency, with alphas that exceed .81 to .90 and this instrument also has good concurrent validity.

The Multidimensional Scale of Perceived Social Support (MSPSS) was designed by Zimet, Dahlem, Zimet, and Farley (1988, as cited in Fischer & Corcoran, 1994). The purpose of this instrument is to measure perceived social support in the adults. The MSPSS consists of 12 statements about the perceived social support from the three sources: family, friends, and significant others. It is scored by summing individual items scores for the total and subscale scores and by dividing the number of items. Higher scores reflect higher perceived support. The MSPSS has excellent internal consistency, with alphas .91 for the total scale and .90 to .95 for the subscales. The MSPSS has good factorial validity and has good concurrent validity.

To conclude, all the instruments are not be used by the researcher because they were designed to measure the perceived family support or social support in different context with particularly some specific population, such as perceived family support for children with disabilities or perceived social support in the common events. They did not have relevancy with the tsunami or disaster. They also were developed in western countries and not quite fit with the eastern culture especially for Acehnese people. Therefore, the researcher used the family support questionnaire that was developed by the researcher and her colleague (Fithria & Syarifah, 2008).

Concept of the Psychosocial Problems

3.1 Definitions of the Psychosocial Problems

Robinson and Roter (1999) stated that the psychosocial problems can be manifested as: (1) distressing feelings or moods, such as depression, feeling down, low mood, poor spirit, sadness, frequent crying, loss of interest or pleasure, anxiety, panic, worry, tension, nervousness, edginess, stress, under pressure, or feeling worked-up, (2) problems, concerns or losses involving important relationships, including relationships with the family members, intimate friends or partners, roommates, work associates or employers and (3) mental health problems. Human responses to natural hazards are

assumed to be rooted primarily in the way individuals think, behave, and interact in the environment.

3.2 The Psychosocial Problems of the Tsunami Survivors

3.2.1 Emergency Phase

Acute stress reactions are normal and expected responses to a traumatic event. Weems, Watt, Marsee, Taylor, Costa, and Cannon et al. (2007) studied the psychosocial impact of hurricane Katrina which includes contextual differences in the psychological symptoms, family support, and discrimination. They studied 386 individuals that were recruited in the primary areas affected by Hurricane "Katrina" including Metropolitan New Orleans, Greater New Orleans, and the Mississippi Gulf Coast. Participants were assessed for the PTSD symptoms, other psychological symptoms, perception of the discrimination, perception of the social support, evaluation distance and the extent to which they experienced hurricane related stressful events. They found that the adverse conditions precipitated by the hurricane Katrina at both the family and community level threatened positive self-evaluations among survivors in multiple ways, including the disruption of esteem supporting relationships such as with co-workers, teachers, friends, and neighbors.

Several factors contribute to the development acute of stress reaction including, the severity and intensity of the initial trauma, the duration of exposure, and the individual characteristics and social circumstances of the survivors (Foa, Stein, & Mcfarlane, 2003). Furthermore, Foa, Stein, and Mcfarlane (2003) pointed out that those psychosocial or psychological problems in acute phase included acute PTSD, traumatic grief, major depressive disorder, generalized anxiety disorder, panic disorder and somatic symptoms. All details of those problems are as follows:

Post Traumatic Stress Disorder (PTSD)

PTSD is the common problem during acute phase. Based on the Fourth Edition of the American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 2000) recognizes three distinct symptom clusters associated with PTSD: experiencing the event, avoidance and numbing, and hyperarousal. To

qualify for a diagnosis of PTSD, individuals must have been exposed to a stressor that triggers feelings of intense fear, helplessness, or horror, and the symptoms must produce clinically significant distress or functional impairment for a minimum 4 weeks. PTSD is considered acute if symptoms will not resolve within 3 months.

Traumatic Grief

Traumatic grief can produce symptoms that overlap with those PTSD, such as recurrent intrusive thoughts and images of death and avoidance of situations, activities, or people associated with the event. In normal grief, individuals are able to retrieve positive memories of the deceased person, whereas following by the disaster; traumatic memories may intrude and inhibit this process.

Major Depressive Disorder (MDD)

The core symptoms in MDD are a depressed mood and anhedonia (an inability to feel normal happiness or pleasure). These are usually accompanied by a range of both psychological symptoms, such as feelings of worthlessness, excessive guilt, and suicidality, and physical symptoms such as changes in appetite, sleep disturbances, and loss of energy.

Generalized Anxiety Disorder (GAD)

Generalized Anxiety Disorder is defined by excessive worry and apprehension about events or activities, occurring frequently for at least 6 months, which is difficult to control and unrelated to other Axis 1 disorders (e.g., depression, schizophrenia, and social phobia). The symptoms of GAD include persistent feelings of fearful anticipation, irritability, impaired concentration, and restlessness. Physical symptoms include muscle tension and symptoms of autonomic hyperarousal, such as palpitations and tightness or pain in the chest.

Panic Disorder

Panic disorder is characterized by recurrent, spontaneous episodes of intense anxiety associated with somatic and psychiatric symptoms (panic attacks). Panic disorder tends to be more common in individuals exposed to traumas involving extreme autonomic arousal, hypervigilance, and unpredictability.

Somatic Symptoms

Somatic symptoms may coexist with PTSD, and these have a significant impact on normal functioning and the course of PTSD. The symptoms may present a somatic component of the traumatic memory. The incidence of somatization symptoms may 3 times higher in individuals with PTSD.

3.2.2 Long-term Phase

The tsunami as a stressful event has created long-term effects for the survivors. Dalgard, Bjork, and Tambs (1995) found that there are several long lasting adversities of stressful events. Those problems are related to family, housing, work, economics, health, children, interpersonal relations and other aspects of life.

According to Silove, Steel, and Psychol (2006) stated that the psychosocial problems after a natural disaster include: 1) safety and security, 2) interpersonal bonds and networks, 3) systems of justice and protection from abuse, and 4) roles and identities. All details of those problems are as follows:

Safety and Security

The impact of the tsunami on safety and security may derive from the destruction of the community of which an individual was a part, or from the destruction of the family structure due to multiple losses. There are not many studies conducted in this area. According to Hobbs (1995) traumatic experiences that affect the personal bonds, at the deepest level, can obliterate any sense of safety, security and the human relatedness. The safety and security have association with the physical and psychological aspects. After the tsunami, lot of houses and buildings were destroyed and they were unsafe to stay. The survivors stayed in the barrack or shelter with a lack of space and privacy, might feel unsafe and insecure because of the environment or community. Most of them might face with the social crime.

According to Gilling (2001) there are five dimensions of the community safety that related to post traumatic events including: 1) response, not only to crime, but also to insecurity that surrounds the crime, indexical not to the risk of crime but to the social and culture changes that defined advanced liberalism, 2) presented something

different from traditional modernist criminal justice, the failure of which may account for the rise of community safety, 3) normative, constructs a vision for the good, well-ordered society, 4) offers a distinct institutional means towards its end, which entails a shift from a predominantly central statist approach to the problems of crime, and 5) an elective set of measures designed for tackling the crime and insecurity.

Interpersonal Bonds and Networks

The tsunami destroyed both the family and community structures. Many children lost their parents, many men and women lost their spouses, and many people lost their friends. After the tsunami, many communities were divided into tented camps, host communities and barracks, which can contribute to an erosion of community cohesion. Just when it was most urgently needed, the capacity of communities come together to comfort each other and start rebuilding their lives, the separation that took place within the community structure intensifies the already existing stress levels.

One effective way to facilitate equitable community development after a disaster is through a cross-sectorial emphasis, which encourages mutual aid networks through cooperative strategies of communication and community development (Fawcett et al, 1996, as cited in Hutton, 2001). The development of the community vulnerability inventories may also facilitate anticipated community needs, at the all levels of crisis response, as well as help to match appropriate social support services, educational initiatives, relief efforts and programs for local neighborhood needs (Federation Emergency Management Association [FEMA], 1997, as cited in Hutton, 2001). Walsh (2007) stated that involvement of extended social systems might include: friends, neighbors, health care providers, clergy and congregational support, school teachers and counselors, employers and co-workers, and neighborhood or community organizations.

Systems of Justice and Protection from Abuse

The tsunami made people struggle with the problems of justice and protection from abuse. Even though, these problems were common problems in the acute phase but they are possibly occur in long-term phase. Disasters involve an inability to maintain people's privacy, due to limitations of space in a shelter. Many shelters are small and overcrowded and promiscuity is also a problem. In these

circumstances children and women are usually the victims of abuse. Child abuse is an acts carried out by an abuser to compensate for their perceived helplessness or loss of power (Finkelhor, 1983, as cited in Curtis, Miller, & Berry, 2000).

Curtis, Miller and Berry (2000) conducted study about the incidences of child abuse following natural disasters in three counties of the US like Hurricane Hugo, the Loma Prieta Earthquake, and Hurricane Andrew. The interrupted time series quasi-experimental design was used in this study. The counties were South Carolina, California, and Lousiana. The data was obtained for a period of two years, 1 year prior to the disaster date and ending 1 year following the event. They found that child abuse (physical abuse, sexual abuse, and emotional abuse) were higher in the 3rd, 6th, and 11th month after disasters. More specifically, in 3rd months after the hurricane there were total 329 fewer cases whereas, 686 and 1,131 fewer cases of child abuse were reported after 6th and 11th month of disaster, respectively.

The emotional effects of disaster on children might pose additional problems and increase stress for parents that could trigger abusive reactions. Following a disaster, many different systems experience changed and influenced the child as the victim. Many aspects can be seen as consequences of a disaster on the child: 1) the child protective case workers were experienced mostly the same stresses as did the general population, and they might be victims themselves of the disaster, 2) the child protection infrastructure was likely to be interrupted by natural disaster, and 3) the physical environment on which the caseworkers depend might be compromised (Curtis, Miller, & Berry, 2000).

Roles and Identities

The roles and identities of some people have changed after a natural disaster. Most of the victims have lost one or more loved ones, so the roles of the parent, spouse, sister, brother or friend may be altered. In addition, some roles and identities are influenced by the fact that some survivors are no longer capable of working due to disabilities. Such situation placed the survivor in a role of dependency. Marital stress also has been found to increase after disasters (Norris, 2006) because of the magnitude of the stressors was affected both spouses.

Women had special problems after the tsunami as they lost their husbands, children, homes, and possessions. Women, who were widowed in the tsunami, became heads of single-parents families with no means of earning income (Becker, 2007). This created the significant anxiety and a need to promptly remarry in this society. There was substantial guilt among parents of the lost children who were not able to hold on to them and save them. Husbands and wives blamed each other for the loss of the children, and depression and grief were rampant in this group.

Fothergill (1999) explained that after a disaster women's roles were changed. Their roles in the community, at home, and their work places were all affected by the disaster event, and the obligations and expectations of each role produced some expansion and conflict. Fothergill (1999) had studied women's roles after the Grand Forks flood; she interviewed sixty women. Based on in- depth interview, she found that there were three spheres of social life in women after a natural disaster including the domestic arena, workplace, and community.

The women experienced and negotiated both the traditional and non-traditional roles throughout the crisis. The community role was important and meaningful to women. Some women took on non-traditional roles, such as sandbagging, and expanded their definitions of self by seeing themselves as physically competent, as well as assertive and open-minded. Others were adopted more traditionally feminine roles by the performing support work, but felt more awarded and less isolated than when they performed this work in the private sphere during the non-disaster times.

The first significant role was the community role that encouraged the women to find their views by themselves, as they gained new skills, received recognition for their efforts, and found that their sense of what they were capable of, had expanded with their roles.

The second role those women were performed in the disaster was the family role. Fothergill (1999) found that women were concerned about their children's physical safety. The role also included preparing their home for the flood and gutting and cleaning it after the flood because their families saw that as part of the feminine family role. The

third role that the women performed in their families was “serving as the link to community services”.

The work role of the women after the disaster was related their role as employees in their paid jobs or professions. Some women could continue their regular work role but some of them had to find new jobs. Re-establishing the work role is important for the women’ sense of self as a working person, as well as for establishing a sense of normalcy and a routine in their lives.

Carballo, Heal, and Horbaty (2006) stated that psychosocial problems after the disaster including extent of personal loss, problems of permanent housing, and jobs. All details of those problems are as follows:

Extent of Personal Loss

Extent of personal loss is massive with a natural disaster, like the tsunami 2004. The survivors lost homes, properties and many other facilities that influence their daily lives. Norris (2006) found that personal loss was more strongly related to an increase in an individual’s negative affect, while community destruction was more strongly related to a decrease in one’s positive affect.

The decrease in one’s positive affect tends to be manifested by people feeling less positive about their surroundings, less enthusiastic, less energetic, and less able to enjoy the life. Disasters provoke sensations of “loss of place” in which not only homes and possessions abruptly lost, but also everything those places symbolized (Fullilove, 1996; Almedom, 2004, as cited in Carballo, Heal, & Horbaty, 2006). According to Walsh (2007) various forms of trauma were experienced in catastrophic events and can involve multiple losses, such as loss of: physical and psychological wholeness; the head of household; community leaders; an intact family unit and community; the way of life; economic livelihood; future potential (i.e., children); hope and dreams; security; predictability and trust. In helping the survivors, in response to traumatic loss, there are three factors that can reduce the vulnerability, or risk and help the survivors to recover from the traumatic loss: belief systems, organizational patterns, and communications processes.

Problems of Permanent Housing

The tsunami 2004, as a catastrophic event, made a number of people to lose their homes which leaded to the displacement. As a result, people were forced to live in the tents, barracks or shelters that were built by the government or non-governmental organizations. Najarian, Goenjian, Pelcovitz, Mandel, and Najarian (2001) found that relocation after a disaster appears to be associated more with the risk of depression than with the risk of post-traumatic stress disorder. Najarian et al. (2001) studied 25 women who were devastated by an earthquake and compared with the 24 relocated survivors and 25 with the comparison group of women. They used a structured PTSD interview, the Hamilton Depression scale, and SCL-90-R. The results of this study indicated that the women in both exposed groups showed significantly more symptoms of the avoidance, arousal, and total PTSD than the comparison group. The women in the relocated city had significantly higher depression scores than the women in the earthquake city.

According to Steinberg (2007) in Aceh, there are some specific obstacles that are contributing to the slow progress in developing permanent housing such as land tenure and ownership, unbuildable land, identification of beneficiaries of existing land, environmental problems on some building sites, cost factors, availability of construction materials, construction specifications, and insufficient budgetary allocations for the habitat-related structures.

Jobs

As like all disasters, the tsunami 2004 also displaced many people who were poor. It caused the loss of jobs and created socio-economics problems, resulting people to be financially supported by both government and non-governmental organizations, such as faith-based and charity organizations. Many survivors' lost their jobs which resulted financial difficulties, particularly for the fisherman. They were feeling anxious to catch the fish whether in good or bad weather. They preferred staying at home rather than fishing, as the result, this issue influenced their economical and financial conditions. They did not get enough income to improve their socio-economic well-being.

The tsunami damaged the land was which vital to the survivors' livelihood especially in the coastal areas. The problem about uncertainty to return to the original home sites should be addressed as well. Brown and Crawford (2006) reported that several countries such as India, Indonesia (Aceh and North Sumatera), Thailand, and Sri Lanka devastated by the tsunami, faced the lands ownershift problems such as India, Indonesia (Aceh and North Sumatera), Thailand, and Sri Lanka. In India, 1,089 fishing villages were destroyed, 35,000 livestock were killed, 22,000 hectares of crop lane were damaged, and 83,000 fishing boats damaged or lost.

In the Aceh and North Sumatera of Indonesia, 300,000 land parcels (170,000 urban and 130,000 rural) were affected of which, it is estimated that only 60,000 were entitled. In Sri Lanka, it is estimated that 90% of the people lost all of their legal and property documents due to the destruction of their houses. This made reconstruction and rehabilitation efforts difficult to do. It is also difficult to identify the legal land owners and users in the absence of documentary proof. In Pang Nga, Thailand, the people of Ban Tung Wah village simply moved back to where their houses once stood, and began rebuilding without waiting for government's approval. The villagers told that the lands that have once been theirs are now to be used for a hospital funded by the German Embassy in Bangkok.

3.3 Risk Factors for the Psychosocial Problems of the Tsunami Survivors

A natural disaster like the tsunami affected the psychosocial dimension of the survivors. They have to struggle with adverse effects of the tsunami that can range from mild to severe and long-term effects. Even, in the recovery phase, there are many risk factors, which can influence the psychosocial problems of the survivors. According to Norris (2006) risk factors for the adverse outcomes after disaster include individual-level severity of exposure, neighborhood or community-level severity of exposure, gender, age, ethnicity, family factors, and the social support deterioration model. All details of the risk factors are as follows:

3.3.1 Individual-Level Severity of Exposure

The important stressor of this point include bereavement, injury to self or another family member, life threat, panic or similar emotions during the disaster, horror, separation from family, extensive loss of property, and displacement.

3.3.2 Neighborhood or Community-Level Severity of Exposure

Community destruction was more strongly related to decrease in positive affect, reflecting a community-wide tendency for the people to feel less positive about their surroundings, less enthusiastic, less energetic, and less able to enjoy life.

3.3.3 Gender

Gender influences post disaster responses especially females were affected more adversely than were males. The effects occurred across a broad range of outcomes, but for some psychological symptoms such as PTSD, women's rates often exceeded men's rates by a ratio of 2:1. The effects of gender almost happened in traditional cultures and in the context of severe exposure.

3.3.4 Age

Age also has a strong influence on the disaster victims. Children generally display more severe psychological distress after the disaster than do the adults. Middle-aged people were most adversely affected after the disaster because they have greater stress responsibility and overburden before the disaster strikes.

3.3.5 Ethnicity

The disproportionate risk of ethnic minorities appears to follow both by differential exposure to more severe aspects of the disaster and by culturally specific attitudes and beliefs that may impede seeking help. A married woman may experience the poorer post-disaster adjustment if her marital status results in giving out more social support than she receives.

3.3.6 Socioeconomic Status

This point related to education, income, literacy, or occupation that affected outcomes of the survivors, lower socioeconomic status is associated with poorer outcomes.

3.3.7 Family Factors

Family factors influence the survivors in several ways such as marital status, being a parent, family environment, pre-disaster functioning and personality, secondary stressors, and psychosocial resources.

3.3.8 The Social Support Deterioration Model

Social support is an important thing after a disaster especially in the recovery phase. The social support provides a healthy network for the survivors in order to decrease mental health problems. The higher perceived social support has a strong relationship with the few adverse psychological effects. Lewin, Carr, and Webster (1998) pointed out that the risk for post - disaster psychological morbidity is indicated by a broad range of psychosocial factors, including a past history of emotional problems, higher disaster exposure, a "vulnerable" disposition, inadequate coping strategies, and higher levels of post – disaster life events.

3.4 Measurement of the Psychosocial Problems

There are several instruments to measure the psychosocial problems. The Copenhagen Psychosocial Questionnaire (CPQ) was developed by Kristensen, Hannerz, Hogh, and Borg (2005) which has the three different lengths for assessing psychosocial factors at work, stress and the well-being of employee and some personality factors. It consists of 165 items which purposed to improve and facilitate research, as well as practical, interventions at workplaces.

The Psychosocial Assessment Tool (PAT) consist of a 20-item for assessing 10 potential risk domains: family structure, family resources, social support, child knowledge, school attendance, child emotional and behavior concerns, child maturity of age, marital status, family problems, family beliefs, and others. PAT was developed by Kazak, Prusak, McSherry, Simms, Beele, and Rourke et al. (2001).

The Holden Psychological Screening Inventory (HPSI) was designed by Holden (1996) consist of 36 items, with 5 point Likert scale response options to measure the three major dimensions of psychopathology including psychiatric symptomatology (i.e., hypocondriasis, anxiety, thinking disorder), social symptomatology (i.e., interpersonal

problems, alienation, and impulse expression), and depression (i.e., depression, social introversion, and self deprecation).

The Personal Experience Screening Questionnaire (PESQ) was developed by Winters (1991) comprise of a 40-item fixed-format self-report questionnaire that screens for the need for further assessment of drug using disorders and a brief overview of psychosocial problems, drug use frequency, and faking tendencies on adolescents with suspected of abuse alcohol or other drugs.

In summary, the researcher did not use all the instruments that have already mentioned above, because they were not focus on the psychosocial aspects of disasters or tsunami and one of them was developed to use in adolescents population therefore, the researcher will use the psychosocial problems questionnaire, which was developed by the researcher.

The Relationship between Family Support and Psychosocial Problems of the Tsunami Survivors

Family support is very important thing after a disaster particularly after the tsunami. Norris and Kaniasty (1996) stated that the higher the perceived social support, the lower the distress would be. There are several previous studies which reported the relationship between the family support and psychosocial problems. Wickrama and Wickrama (2007) studied family context on the mental health risk in the tsunami affected mothers: findings from a pilot study in Sri Lanka found that familial and social coping resources including family or community support has relationship with resilience factors for the tsunami affected people, particularly for mothers. Moreover, Wickrama and Wickrama (2007) stated that family's resources can protect the adult victims from negative stressful situations such as the PTSD and depression. The strength of effect due to the tsunami exposure on the mental health or psychosocial response depends on several factors, like the familial (familiasm, marital status), social (family or community support), cultural (religious participation), and psychosocial (hardiness).

According to Suurmeijer, Van Sonderen, Krol, Doeglas, Van Den Heuvel, and Sanderman (2005) found that the effect of emotional support ran via social

companionship, more emotional support (both transactions and satisfaction) was expressed in companionship leaded to a less depressed mood.

Haden, Scarpa, Jones, and Ollendick (2007) studied the posttraumatic stress disorder symptoms and injury. They found that the higher perceived social support from the family and friends can reduce the severe symptoms of PTSD and psychosocial aspects. The trauma survivors who perceived the strong family support could be able to express their worry when provided an opportunity to talk about what has happened through the events. In addition, Cohen and Hoberman (2006) pointed out that self-esteem and appraisal support was primarily responsible for the reported interactions between negative life stress and social support.

In summary, based on all literature review, can be concluded that the family support and social support have played an important role to help the survivors after a disaster. There are four types of family support by following the definition based on House (1981) including emotional, instrumental, informational, and appraisal. Family as one of the part of social support contributes a lot to reduce the psychosocial problems of the survivors both in acute and long-term phase.

However, the tsunami survivors as the vulnerable people still have to perceive much assistance or support from the society and family to help them for coping with the adverse effects of the tsunami. Long-term psychosocial problems such as safety and security, interpersonal bond and networks, system of justice and protection from abuse, roles and identities, extent of personal loss, problems of permanent housing, and jobs still exist in the survivors' life. All those problems will influence the psychological status of the survivors if they will not be handled wisely. The family support and social support also have a strong relationship with the psychosocial problems. The higher the survivors perceived support the fewer of psychosocial problems would be.

CHAPTER 3

RESEARCH METHODOLOGY

Research Design

This study was the descriptive correlational study. The aims of this study were to describe the levels of perceived family support by the tsunami survivors, to describe the levels of perceived psychosocial problems by the tsunami survivors, and to investigate the relationship between family support and psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia.

Population and Setting

The target population for this study was the adult tsunami survivors who were living in 130 villages of Aceh Besar District, Indonesia that were severely destroyed by the tsunami 2004. Those of 130 villages had the same severity affected by the tsunami 2004. The researcher selected one of villages for this study and chosen Lambada Lhok village as the setting of this study because this village was near to the resident of the researcher and more visible to conduct. The size of Lambada Lhok village is 150 Ha. This village is 300 meters from the coast line. The population of Lambada Lhok village before the tsunami approximately was 2,200 people. Approximately, 1,750 of the villagers were killed in the tsunami. After the tsunami 2004, it was only 895 people consisting of 465 men and 345 women. All the details of Lambada Lhok village profile are in Appendix D.

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Sample and Sampling

1. Sample Size

The number of subjects was determined by using the power analysis with level of significance (α) of .05 and the expected power ($1 - \beta$) of .80 which are the accepted minimum levels for power analysis. In this study, the researcher used a small effect size

(.25) to determine the sample size based on the correlation table (Polit & Hungler, 1999). The sample size in this study was 126 survivors.

2. Sampling Technique

Purposive sampling was used for recruiting eligible subjects for this study. Inclusion criteria for the subjects were as follows:

2.1 Adults (18 years and above)

2.2 Have affected directly by the tsunami 2004

2.3 Do not have cognitive or psychological impairment

2.4 Have returned to their permanent houses

2.5 Have family members or other significant persons who did not directly affected by the tsunami 2004 and live separately from the survivors

2.6 Able to communicate in Indonesian language

Instruments

1. Instruments

In this study, three instruments were used: 1) the Demographic Data Questionnaire and Health Information, 2) the Family Support Questionnaire, and 3) the Psychosocial Problems Questionnaire.

1.1 The Demographic Data Questionnaire and Health Information

The Demographic Data Questionnaire and Health Information were constructed by the researcher which included the information about age, gender, religion, ethnic, marital status, educational background, occupation, family income, adequacy of family income, family relationship, type of housing, loss of relatives, and loss of properties. The health information included the information about chronic diseases and its treatment or medication.

1.2 The Family Support Questionnaire (FSQ)

The Family Support Questionnaire (Appendix B) was developed by the researcher and colleague (Fithria & Syarifah, 2008) based on House's concept of social support (1981) which consisted of information about emotional, instrumental,

informational, and appraisal support. Emotional support included empathy, concern, care, love, trust, esteem and listens. Instrumental support included money, time, in-kind assistance, and other explicit interventions on the person's behalf. Informational support included advice, suggestions, directives, information to use for coping with personal and environmental problems that assist the person to respond to personal or situational demands, and Appraisal support included transmission of information relevant to self evaluation such as affirmation, feedback, and social comparison. There were 19 items including:

1. Emotional (1, 2, 3, 4, 5, 6)
2. Informational (7, 8, 9,)
3. Appraisal (10, 11, 12, 13)
4. Instrumental (14, 15, 16, 17, 18, 19)

Each item was scored from 0 to 4 in terms of 0 = Never, 1 = Sometimes, 2 = Often, 3 = Very Often, 4 = Always. Item scores were summed for the sub total and total score which ranged from 0 to 4. The levels of family support were categorized into four levels:

1. Low: 0-1
2. Moderate low: 1.01-2
3. Moderate high: 2.01-3
4. High: 3.01-4

With the higher score reflects the higher perceived family support.

1.3 The Psychosocial Problems Questionnaire (PPQ)

Psychosocial Problems Questionnaire (Appendix B) was constructed by the researcher. Each question was related to the items of psychosocial problems based on the ADAPT model (2006) including, safety and security, interpersonal bonds and networks, systems of justice and protection from abuse, roles and identities, and the Carballo, Heal and Horbaty model (2005) including extent of personal loss and problems of permanent housing. Psychosocial Problems Questionnaire consisted of 22 items including:

1. Safety and security (1, 2, 3, 4)
2. Interpersonal bonds and networks (5, 6, 7, 8, 9, 10)
3. Systems of justice and protection from abuse (11, 12, and 13)
4. Roles and identities (14, 15, 16, 17)
5. Extent of personal loss (18, 19)
6. Problems of permanent housing (20, 21, 22)

Each item was scored from 0 to 4 in terms of 0 = Never, 1 = Sometimes, 2 = Often, 3 = Very Often, 4 = Always. Item scores were summed for the sub total and total score which ranged from 0 to 4. The levels of psychosocial problems were categorized into four levels:

1. Low: 0-1
2. Moderate low: 1.01-2
3. Moderate high: 2.01-3
4. High: 3.01-4

With the higher score reflects the higher psychosocial problems.

2. Translation of the Instruments

The original instruments of this study were developed in English version. They were validated by the three experts from the Faculty of Nursing, Prince of Songkla University, Thailand. After validating, the instruments were translated into Indonesian language by the three bilingual translators from Nursing Science Program, Syiah Kuala University, Banda Aceh, Indonesia. The instruments were clarified and identified for the discrepancies by following the suggestions of the translators.

3. Validity and Reliability of the Instruments

3.1 The Validity of the Instruments

The instruments were examined for their content validity by the three experts from the Faculty of Nursing, Prince of Songkla University, Thailand. The first expert was from the psychiatric nursing, the second expert was from the community nursing and the last one was an expert in the tool development. Each item was examined

for its degree of relevance with its related construct. The instruments were modified and revised based on the suggestions of the experts. The researcher determined the content validity index (CVI) and the results of CVI was .87 for family support questionnaire and for psychosocial problems questionnaire was .85.

3.2 The Reliability of the Instruments

The reliability test of the instruments was performed to test the Indonesian version for 20 subjects who had similar criteria to the real subjects by using the Cronbach's alpha for each subscale of the instruments. This method is the most widely used for testing the internal consistency or homogeneity of the instruments (Polit & Hungler, 1999). The results of Cronbach's alpha were .79 for the Family Support Questionnaire (FSQ) and .79 for the Psychosocial Problems Questionnaire (PPQ).

Data Collection

Data collection was conducted in one of the tsunami affected areas in Lambada Lhok village, Aceh Besar District, Indonesia from November 20, 2008 to January 20, 2009. The steps of data collection were as follows:

1. Preparation Phase

1.1 The researcher asked for a letter of permission from the Dean of Faculty of Nursing, Prince of Songkla University, Thailand.

1.2 The researcher asked for the permission from the head of Lambada Lhok village of Aceh Besar District, Indonesia.

1.3 The researcher explained to the head of the Lambada Lhok village about the objectives, benefits, confidentiality and the method of data collection. The researcher requested to the head of the village for participation.

1.4 The researcher asked for the list of survivors' houses from the head of Lambada Lhok village.

2. Implementation Phase

2.1 Identified subjects who met the inclusion criteria and approached them in their houses and recruited them for this study.

2.2 The researcher explained to the subjects the purposes, benefits and ethical consideration of this study.

2.3 The researcher asked the permission of the subjects for completing the questionnaire given by the researcher.

2.4 Subjects who agreed to participate in this study verbally or with written consent were explained how to complete the questionnaire. Each subject took around 45 minutes to complete the questionnaire.

Ethical Consideration

Data were collected after the approval of the research proposal by the Institutional Review Board (IRB) of Faculty of Nursing, Prince of Songkla University, Thailand. After obtaining the permission of the head of village, the researcher approached the potential subjects. The researcher explained the purposes of the study, expectations from the subjects' participation and potential harm in this study such as subjects may feel flash back, fear, sad, or get depressed during completing the questionnaire. The researcher can solve those problems by asking the subjects to be calm, stop completing the questionnaire for a while and wait until the subjects feel better, and if the problem will get worse, the researcher will transfer the subjects to the experts.

In this study, all the subjects did not have psychological problems during completing the questionnaires. When the subjects agree to participate in this study, the researcher gave them consent form and explained how to complete the questionnaires. The subjects were informed about their right to withdraw at any time from this study for any reason without any fear or negative consequences to them. The researcher maintained confidentiality of the subjects by using code and all the information will be kept at least for 5 years.

Data Analysis

Data were analyzed by using the descriptive statistics (means, standard deviations, frequencies, and percentages) to assess the demographic data and health information, the family support and psychosocial problems. Pearson's product- moment correlation coefficient was used to explain the relationship between family support and psychosocial problems among the tsunami survivors. The researcher tested the assumption of correlation by using Kolmogorov - Smirnov test ($p<0.05$) to check whether the distribution was normal or not. The result was normal distribution.

CHAPTER 4

RESULTS AND DISCUSSION

Results

The findings of this study are presented as follows: 1) the demographic characteristics of the subjects and health information, 2) the levels of family support, 3) the levels of psychosocial problems, and 4) the relationship between family support and psychosocial problems among the tsunami survivors.

1. Demographic Characteristics of the Subjects and Health Information

The subjects consisted of 126 adult tsunami survivors. Most of the subjects (76.3%) were in the range of 18 – 39 years old with a mean age of 32.8 (SD = 10.6). More than half of them were males (51.6%) and 78.6% of them were married. All the subjects were Acehnese Moslem. The level of education was at a high school level for more than half of them (55.5 %). By occupation 69.8% were fishermen and 17.4% were government employees. Around 42.1% subjects had family income about Rp 500,000 – 1,000,000 monthly, which was considered inadequate (71.4%). Most of the subjects (98.4 %) had a good relationship with their family members. Most of the subjects (91.3%) had permanent housing, 92.1% of them lost their relatives and 89.7% of them lost their properties. For the health information, the subjects reported that they did not have any chronic disease (84.1%) and they did not get treatment/medication (88.8%). Only 3.2% of the subjects reported suffering from rheumatoid arthritis and 2.4% of the subjects reported suffering from heart disease (Table 1).

Table 1

Frequency and percentage of demographic characteristics of the subjects (N = 126)

Characteristics	Frequency	Percentage
1. Age (years) *(M = 32.8, SD = 10.6)*		
Min = 18, max = 65		
18-39	103	76.3
40-50	15	17.3
>50	8	6.4
2. Gender		
Female	61	48.4
Male	65	51.6
3. Marital status		
Single	19	15.0
Married	99	78.6
Widow	1	0.8
Widower	7	5.6
4. Religion		
Islam	126	100.0
5. Ethnic		
Acehnese	126	100.0
6. Educational Background		
No formal education	9	7.1
Elementary school	36	28.7
High school	70	55.5
College/University	10	7.9
Others	1	0.8

Table 1 (continued)

Characteristics	Frequency	Percentage
7. Occupation		
Fishermen	88	69.8
Government employee	22	17.4
Business person	8	6.4
Unemployed	5	4.0
Private employee	2	1.6
Farmer	1	0.8
8. Family income per month		
None	41	32.5
< Rp 500,000	18	14.3
Rp 500,000 -1,000,000	53	42.1
Rp 1,000,001-2,000,000	10	7.9
Rp 2,000,001-3,000,000	2	1.6
> Rp 3,000,000.	2	1.6
9. Adequacy of family income		
More than adequate	5	4.0
Adequate	26	20.6
Fair	5	4.0
Inadequate	90	71.4
10. Family relationship		
Good	124	98.4
Fair	2	1.6
11. Types of housing		
Permanent	115	91.3
Temporary	11	8.7

Table 1 (continued)

Characteristics	Frequency	Percentage
12. Loss of relatives		
Yes	70	92.1
No	10	7.9
13. Loss of properties		
Yes	113	89.7
No	13	10.3
14. Having chronic diseases		
No	115	84.1
Yes	11	8.7
Rheumatoid arthritis	4	3.2
Heart Disease	3	2.4
GI problems	1	0.8
Hypertension	1	0.8
15. Treatment/medication		
No	119	88.8
Yes	7	5.6
Anti Hypertensive drug	1	0.8
Anti Arrhythmic drug	1	0.8
Others	5	4.0

2. The levels of family support

The levels of family support of the subjects are presented in Table 2. It was found that the mean score of the total family support was at a moderate high level (M = 2.6, SD = 1.2). Instrumental support (M = 3.1, SD = 1.7) was at a high level, and the mean scores of the other types of support were at a moderate high level, which were appraisal support (M = 2.6, SD = 1.9), emotional support (M = 2.5, SD = 1.7), and informational support (M = 2.4, SD = 1.6) respectively.

Table 2

Means, standard deviations and the levels of family support of the subjects (N = 126)

Family support	M	SD	Level
1. Instrumental	3.1	1.7	High
2. Appraisal	2.6	1.9	Moderate high
3. Emotional	2.5	1.7	Moderate high
4. Informational	2.4	1.6	Moderate high
Total	2.6	1.2	Moderate high

2.1 The instrumental support of the subjects

All instrumental support items were at a high level with the mean scores ranged from 3.1 to 3.4. Among those items, two items had the highest score “my family gives me foods and grocery things when I needed” (M = 3.4, SD = 2.5), and “my family wants to share his/her time when I needed” (M = 3.3, SD = 2.1) (Table 3).

Table 3

Means, standard deviations and the levels of instrumental support of the subject (N = 126)

Instrumental support	M	SD	Level
1. My family gives me foods and grocery things when I needed	3.4	2.5	High
2. My family wants to share his/her time when I needed	3.3	2.1	High
3. My family provides me house equipments	3.2	1.7	High
4. My family provides me transportation when I needed	3.1	1.5	High
5. My family gives me money when I faced financial problems	3.1	1.3	High
6. My family buys me new clothes that I lost	3.1	1.2	High

2.2 The appraisal support of the subjects

All appraisal support items were at a moderate high level with the mean scores ranged from 2.2 to 2.5. The highest item was “my family states that she or he appreciates me so much” (M = 2.5, SD = 1.2) (Table 4).

Table 4

Means, standard deviations, and the levels of appraisal support of the subjects (N = 126)

Appraisal support	M	SD	Level
1. My family states that she or he appreciates me so much	2.5	1.2	Moderate high
2. My family tells me that I am a lucky person who have family members to share the feeling	2.3	1.9	Moderate high
3. My family gives me a positive feedback after doing something	2.2	1.3	Moderate high
4. My family tells me that I have ability to rearrange my new life same as other people	2.2	1.1	Moderate high

2.3 The emotional support of the subjects

All the items of emotional support were at a moderate high level with the mean scores ranged from 2.1 to 2.8. The highest items were "my family is really concerned about my feeling of loss" (M = 2.8, SD = 1.1) and "my family really listen to me when I talked about my feeling" (M = 2.6, SD = 1.2) (Table 5).

Table 5

Means, standard deviations, and the levels of emotional support of the subjects (N = 126)

Emotional support	M	SD	Level
1. My family is really concerned about my feeling of loss	2.8	1.1	Moderate high
2. My family really listens to me when I talked about my feeling	2.6	1.2	Moderate high
3. My family 's action makes me feel comfortable to disclose my feeling	2.4	1.1	Moderate high
4. My family really tries to understand all of my feeling	2.2	1.1	Moderate high
5. My family expresses his/her love to me	2.2	1.2	Moderate high
6. My family holds me in the high esteem	2.1	1.2	Moderate high

2.4 The informational support of the subjects

All the items of informational support were at a moderate high level with the mean scores ranged from 2.1 to 2.3. The highest item was "my family gives me suggestions how to figure out my life" (M = 2.3, SD = 1.2) (Table 6).

Table 6

Means, standard deviations, and the levels of informational support of the subjects (N = 126)

Informational support	M	SD	Level
1. My family gives me suggestions how to figure out my life	2.3	1.2	Moderate high
2. My family gives me an advice to deal with the social problems related to the tsunami	2.1	0.8	Moderate high
3. My family leads me how to get other aid resources to solve the tsunami problems	2.1	0.6	Moderate high

3. The levels of psychosocial problems

The levels of psychosocial problems of the subjects are presented in Table 7. It was found that the mean score of the total psychosocial problems (M = 1.3, SD = 0.5) was at a moderate low level. All the items of psychosocial problems were at a moderate low level except one, problems of permanent housing was at a moderate high level (M = 2.5, SD = 1.5) (Table 7).

Table 7

Means, standard deviations, and the levels of psychosocial problems of the subjects (N =126)

Psychosocial problems	M	SD	Level
1. Problems of permanent housing	2.5	1.5	Moderate high
2. Extent of personal loss	1.3	0.8	Moderate low
3. Safety and security	1.2	0.5	Moderate low
4. Interpersonal bonds and networks	1.2	0.5	Moderate low
5. System of justice and protection from abuse	1.1	0.3	Moderate low
6. Roles and identity	1.1	0.3	Moderate low
Total	1.3	0.5	Moderate low

3.1 Problems of permanent housing

All the items of problems of permanent housing were at a moderate high level with the mean scores ranged from 2.5 to 2.9. The highest scored item was “I have a difficulty to get clean water in my permanent housing” (M = 2.9, SD = 1.3) (Table 8).

Table 8

Means, standard deviations and the levels of problems of permanent housing of the subjects (N = 126)

Problems of permanent housing	M	SD	Level
1. I have a difficulty to get clean water in my permanent house	2.9	1.3	Moderate high
2. I am not satisfied with the construction materials of my permanent housing	2.7	1.1	Moderate high
3. I think my permanent housing is too small	2.5	0.7	Moderate high

3.2 Extent of personal loss

Both items of extent of personal loss were at a moderate low level with the mean scores ranged from 1.1 to 1.3 (Table 9).

Table 9

Means, standard deviations and the levels of extent of personal loss of the subjects (N = 126)

Extent of personal loss	M	SD	Level
1. I am depressed due to the loss of my relatives in the tsunami	1.3	0.8	Moderate low
2. I feel sad due to the loss of my properties in the tsunami	1.1	0.5	Moderate low

3.3 Safety and security

All the items of safety and security were at a moderate low level with the mean scores ranged from 1.5 to 1.7. The highest scored item was "I feel uncomfortable stay at home after the tsunami" (M =1.7, SD = 0.6) (Table 10).

Table 10

Means, standard deviations and the levels of safety and security of the subjects (N = 126)

Safety and security	M	SD	Level
1. I feel uncomfortable stay at home after the tsunami	1.7	0.6	Moderate low
2. I feel my home unsafe after the tsunami	1.7	0.4	Moderate low
3. I feel my society not well-ordered	1.6	0.5	Moderate low
4. I feel the presence of many crimes in my community	1.5	0.3	Moderate low

3.4 Interpersonal bonds and networks

All the items of interpersonal bonds and networks were at a moderate low level with the mean scores ranged from 1.2 to 1.6. The highest scored item was "I do not like rebuilding of my society" (M = 1.6, SD = 0.8) (Table 11).

Table 11

Means, standard deviations and the levels of interpersonal bonds and networks of the subjects (N = 126)

Interpersonal bonds and networks	M	SD	Level
1. I do not like rebuilding of my society	1.6	0.8	Moderate low
2. I have a difficulty in maintaining relationship with the people	1.5	0.7	Moderate low
3. I withdraw from the society	1.4	0.8	Moderate low
4. I have a difficulty to get closed friends	1.3	0.8	
5. I am not satisfied with my family	1.3	0.8	Moderate low
6. I have a difficulty in developing relationship with my neighbors	1.2	0.6	Moderate low

3.5 System of justice and protection from abuse

All the items of system of justice and protection from abuse were at a moderate low level with the mean scores ranged from 1.3 to 1.5. The highest scored item was “I feel support from the NGOs is not equal” (M = 1.5, SD = 0.9) (Table 12).

Table 12

Means, standard deviations and the levels of system of justice and protection from abuse (N = 126)

System of justice and protection from abuse	M	SD	Level
1. I feel support from the NGOs is not equal	1.5	0.9	Moderate low
2. I do not get protection of physical abuse from my family	1.3	0.7	Moderate low
3. I get abusive reactions from my spouse	1.3	0.4	Moderate low

3.6 Roles and identity

All the items of roles and identity were at a moderate low level with the mean scores ranged from 1.1 to 1.3. The highest scored item was "I do not like my roles that changed after the tsunami" (M =1.3, SD = 0.8) (Table 13).

Table13

Means, standard deviations and the levels of roles and identity of the subjects (N =126)

Roles and identity	M	SD	Level
1. I do not like my roles that changed after the tsunami	1.3	0.8	Moderate low
2. I avoid to performance my roles that changed after the tsunami	1.2	0.7	Moderate low
3. I have problems in achieving my identity	1.2	0.7	Moderate low
4. I lost my identity	1.1	0.5	Moderate low

4. *The relationship between family support and psychosocial problems of the subjects*

The relationship between family support and psychosocial problems of the subjects is presented in table 14. The results of correlation showed that there was a low negative correlation between the family support and psychosocial problems with ($r = -0.28$, $p<0.05$). Instrumental support was statistically significant low negative correlated with the problems of permanent housing ($r = -0.45$, $p<0.01$), extent of personal loss ($r = -0.32$, $p<0.01$), interpersonal bonds and networks ($r = -0.26$, $p<0.01$). Instrumental support did not have correlation with the safety and security, system of justice and protection from abuse, and roles and identity.

Appraisal support was statistically significant low negative correlated with the extent of personal loss ($r = -0.27$, $p<0.01$) and interpersonal bonds and networks ($r = -0.24$, $p<0.05$), and it was not correlated with problems of permanent housing, system of justice and protection from abuse, and roles and identity. Emotional support was statistically significant very low negative correlated with the extent of personal loss ($r = -0.19$, $p<0.01$) and it was not correlated with the problems of permanent housing, extent of personal loss, safety and security, system of justice and protection from abuse, and roles and identity.

Informational support was statistically significant very low negative correlated with the interpersonal bonds and networks ($r = -0.21$, $p<0.05$) and it was not correlated with the problems of permanent housing, extent of personal loss, safety and security, system of justice and protection from abuse, roles and identity.

Table 14

Correlation between the family support and psychosocial problems of the subjects

Pearson product moment correlation (N = 126)

Family support	Psychosocial problems						
	1	2	3	4	5	6	Total
1. Instrumental	-.45**	-.32**	-.15	-.26**	-.21	-.14	
2. Appraisal	-.20	-.27**	-.20	-.24*	-.12	-.10	
3. Emotional	-.02	-.19**	-.12	-.05	-.03	-.07	
4. Informational	-.01	-.10	-.11	-.21*	-.06	-.09	
Total							-.28*

*p<0.05, **p<0.01

Note:

1. Problems of permanent housing
2. Extent of personal loss
3. Safety and security
4. Interpersonal bonds and networks
5. System of justice and protection from abuse
6. Roles and identity

Discussion

This study aimed to describe the levels of perceived family support and psychosocial problems among the tsunami survivors and to investigate the relationship between family support and psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia. The subjects were recruited through one hundred and twenty six in the tsunami affected areas, in Lambada Lhok village, Aceh Besar District. The findings are discussed following three main parts: 1) the levels of family support, 2) the levels of psychosocial problems, and 3) the relationship between family support and psychosocial problems among the tsunami survivors.

1. The levels of family support

Overall, the levels of family support were at a moderate high level except instrumental support that was at a high level with a mean score of 3.1 (SD = 1.7) (Table 2). The findings indicated that the family mainly provided instrumental support to their family members who were affected by the tsunami 2004. The instrumental support was at a high level because the tsunami survivors were mostly lost their homes and properties (89.7%) (Table 1). The instrumental support is the most concrete and direct form of family support, encompassing help in the form of money, time, in-kind assistance, and other explicit interventions on the person's behalf (House, 1981). Lindell and Prater (2003) defined that friends, relatives, neighbors, and co-workers can assist recovery of the victims of a disaster through financial and in-kind contributions, as can community based organizations and local government do.

In addition, there are some factors associated with the high level of the instrumental support. Firstly, the instrumental support is still needed by the survivors' especially financial support because after the tsunami their income has decreased. It can be seen from the family income per month (Rp 500,000 – 1,000,00), which was inadequate (71.4%) (Table 1). Thorburn (2008) stated that the average numbers of income earners per household is slightly lower than it did before the tsunami. The factors such as location, relative level of tsunami destruction and the existence of productive activities have influenced the speed and trajectory of economic in villages. Therefore,

although the survivors have returned to their permanent houses, they have been performing their daily life activities normally and staying together with their family but they still have financial problems and still need support from family to improve their life.

Another factor is culture; the subjects belong to the Asian culture, in which the people usually expresses their love and concern toward their family members or loved ones through a provision of gifts and things. In Aceh, family is also a key person who gave much contribution after the tsunami struck. Fauzi (2004, as cited in Ardiansyah, 2005) stated that the Acehnese community has its own tradition and culture and it is characterized by family bonds and strong solidarity. Acehnese people, usually, have extended family. The relationship between members of family is so strong even though they stay far away from their relatives but they would like to help each other. Hasan (2005) stated the people of Aceh need practical help to pick up their life after tsunami. However, Acehnese people obtained a lot of assistance from many resources such as government, NGOs, and other sources, the support from family is still very important, particularly in rehabilitation and reconstruction phase.

On the other hand, appraisal, emotional, and informational support are also very crucial types of family support but in this study it was found that these types of support scored were at a moderate high level because the survivors have recovered to the normal life and almost four years have been passed after the tsunami struck. They can cope with the psychosocial problems as well. They also do not have psychological problems. Therefore, the emotional, appraisal, and informational support were at a moderate high level.

Appraisal support is the transmission of information relevant to self evaluation that includes affirmation, feedback, and social comparison (House, 1981). Family provided the appraisal support to the survivors in order to help them to cope with the physical and psychological problems after the tsunami. The support includes appreciations, sharing feeling, positive feedback and ability to rearrange new life. Arnold (1970, as cited in Lazarus & Folkman, 1984) stated that appraisal as the cognitive determinant of emotion, describing it as a rapid, intuitive process that occurs automatically, as distinguished from slower, more abstract and reflective thought.

Emotional support is the support such as showing empathy, listening actively, and telling the value of relaxation and spirituality to the survivors (John, 2005). House (1981) stated that emotional support is the provision of empathy, love, trust, caring, esteem and listen. Emotional support is an important support particularly in the emergency phase of a disaster. It is needed to reduce the psychological symptoms such as anxiety, fear, worry, grief, sadness, and depression. Baldwin (1995) stated that there are two primary goals of initial mental health disaster response: 1) normalizing feelings to reassuring victims that the strange and upsetting feelings they experience after a disaster (as following other traumatic events) are normal and 2) helping victims to find effective ways of coping with their ongoing stress.

Informational support occurs through the provision of information that the person can use in coping with personal and environmental problems such as advice, suggestions and directives (House, 1981). In the rehabilitation and reconstruction phase, Acehnese people are still need informational support from family. The family provided advice and suggestions for the survivors about how to figure out their life after disaster, how to deal with the social problems, and how to get aids to solve the tsunami problems.

A number of the studies have found that family support plays an important role in response of natural disaster, particularly in the tsunami. Thoits (1995, as cited in Ferrari, Harriot & Zimmerman, 1997) found that family members or closed friends seem to be most important measure of social support. Furthermore, Calhoun and Tedeschi (1993, as cited in Wilson & Boden, 2008) stated that social support systems play a key role in the aftermath of the trauma. Caplan (1974) stated that there are three types of activities that can be characterized as social support: 1) keep by the stimulation of psychological resources to overcome problems of emotional disorder, 2) sharing of tasks which the individual must perform, and 3) providing material and financial resources, skill, and supervision necessary to face up the stressful situation.

Peltonen (1996, as cited in Bertero, 2000) stated that the primary level of social support includes closed friends and family. The primary level of support is most suitable for giving emotional and practical support when needed. Lack of support or support given at the wrong time, could bring about negative consequences. Kaniasty and Norris

(1999) pointed out that the tangible (instrumental), emotional and informational forms of social support are all needed by the disaster victims. Tangible support may be the easiest form to provide. Further more, Kaniasty and Norris (1999) stated that the pattern of help receipt following natural disaster can be from family. Cohen (1992) stated that having people to talk about problems (appraisal support and informational) and having people who make individual feels better about herself/himself may be generally useful because these are coping requirements elicited by most stressors.

To conclude, family support is still very important thing particularly instrumental support in order to help the survivors to overcome the long – term psychosocial problems after the tsunami struck.

2. The levels of psychosocial problems

The psychosocial problems, as one of the major problems aftermath of the tsunami are considered into long-term phase. In general, the findings found that the levels of psychosocial problems of the tsunami survivors were at a moderate low level particularly for extent of personal loss, safety and security, interpersonal bonds and networks, system of justice and protection from abuse, and roles and identity except the level of permanent housing that was at a moderate high level (M = 2.5, SD = 1.5).

The survivors who deal with the traumatic events, particularly with the natural disasters, seem to have unpleasant experiences even though after many years of a disaster. Dalgard, Bjork, and Tambs (1995) found that there are several long lasting adversities of stressful events. Those problems are related to family, housing, work, economics, health, children, interpersonal relations and other aspects of life. According to Lewin, Carr, and Webster (1998) pointed out that risk for post - disaster psychological morbidity is indicated by a broad range of psychosocial factors, including a past history of emotional problems, higher disaster exposure, a "vulnerable" disposition, inadequate coping strategies, and higher levels of post – disaster life events.

The psychosocial problems in Aceh has decreased dramatically after almost four years of the tsunami disaster, since many volunteers both local and non-local NGOs came to support the survivors and community, especially to rebuild a new permanent houses.

The housing has been the major priority because after the tsunami struck, many survivors lost their houses and properties, they stayed in temporary barracks, shelter or their relatives' homes. Presently, most of the survivors (91.3%) are staying in their permanent housing. However, the existing problems of the tsunami survivors in rehabilitation and reconstruction phase were related to living in permanent housing. Although the survivors have returned to their original home sites but they are still felling uncomfortable with their new permanent houses.

Asian Development Bank (ADB, 2007) has provided $73 million to rehabilitate and reconstruct houses and infrastructures in Aceh and Nias. The planning work was started with a village plan that takes into account the ecological and environmental aspects of the surroundings; and it developed jointly by each community. According to Bureau of Rehabilitation and Reconstruction (BRR, 2005) approximately 116,880 housing units were destroyed, out of a total of 820,000. The damage was concentrated within a 3.2 – 6.4 kilometer zone along the coast line, with the brunt of the destruction affecting 80% of the housing stock including Aceh Besar. By June 2008, 112,346 houses that were rebuilt and 30,000 were still under construction (BRR, 2008). Furthermore, the houses that already rebuilt has created the new problems, most of the survivors still complain that their new houses are not the same as their old homes and they are not made up good in construction materials, the houses are too small and they also have a difficulty in getting clean water.

Thorburn (2008) stated that housing reconstruction programs have been plagued by variety of problems, manifesting in the villages as the result of frustrating delays such as confusion over the bewildering variety of styles and types of housing, lack of clear minimum standards, and inability of residents to evaluate the quality of services. These problems are exacerbated by poor coordination and communication between the housing providers and intended recipients. Another problem, land acquisition and land ownership represents extremely complex issues that are complicating and frequently impeding the housing reconstruction. Furthermore, Thorburn (2008) found that after three years of the tsunami reconstructions, there are still many factors that are related to recovery and redevelopment in communities of Nanggroe Aceh Darussalam.

In general, the reconstruction phase has been successful particularly in governance, livelihoods, village infrastructure and housing. The survivors who lost their relatives or properties do not feel sad anymore. Regarding role and identity, the role and character of Keuchik (Village Head) are important in Acehnese communities. The women's participation in decision making was increased dramatically. They are often actively involved in their neighborhood and household levels.

However, other psychosocial problems such as extent of personal loss, safety and security, interpersonal bonds and networks, system of justice and protection from abuse and roles and identity were at moderate low level. This can happen because tsunami devastated for almost four years and Acehnese people received much assistance from many sources such as family, friends, NGOs, and government to reduce their psychosocial problems. Most of the survivors returned to their original home sites, so they can still maintain their interpersonal bonds and networks. Acehnese people have strong religious belief and they can accept the impact of the tsunami as a punishment or a warning from the Allah. Salzman (2008) found that culture and religion are related and influence each other bi-directionally. Moreover, Salzman (2008) also found that religious people had better health (e.g., less substance abuse), live longer and received more social support. Acehnese people also related to an Islamic law and they believe that the God will give the best thing after something wrong. Therefore, they can deal with the psychosocial problems without feel worry and hopeless.

3. *The relationship between family support and psychosocial problems among the tsunami survivors*.

The hypothesis of this study was there is a negative relationship between the family support and psychosocial problems among the tsunami survivors. The general findings showed that the relationship between family support and psychosocial problems had a low negative significant correlation ($r = -0.28$, $p<0.05$) (Table 14). It means that the hypothesis was accepted. Kaniasty and Norris (1995) stated that the higher the survivors' perceived support, the lower the stress would be. Solomon, Bravo, Stipec, and Canino (1993) studied effect of family role on response to disaster in St.Louis compared with in

Puerto Rico. The results showed that victims without families had higher level of alcohol abuse symptoms than did any other subgroup.

Instrumental support had negative significant correlation with the problems of permanent housing ($r = -0.45$, $p<0.01$), extent of personal loss ($r = - 0.32$, $p<0.01$) and interpersonal bonds and networks ($r = -0.26$, $p<0.01$). Instrumental support is one of the types of family support which plays an important role to reduce the psychosocial problems such as problems of permanent housing, extent of personal loss, and interpersonal bonds and networks. After the tsunami devastated, Acehnese people lost their homes and properties, loved ones, and the social networks. Family who did not affected directly by the tsunami 2004 helped the survivors to reduce those problems by expressing their love and concern toward their family members or love ones through provision of gifts and things. Walsh (2007) pointed out that with the loss of basic infrastructures, family and social systems must reorganize, recalibrate, and reallocate roles and functions. Furthermore, Walsh (2007) explained that the practical assistance with immediate need is essential in order to strengthen the community networks.

Appraisal support had negative significant correlation with the extent of personal loss ($r = -0.27$, $p<0.01$) and interpersonal bonds and networks ($r = -0.24$, $p<0.05$). Appraisal support was provided by the family to help the survivors reduce their feeling of loss in aftermath of the tsunami by giving them positive feedback or affirmation. Cohen and Hoberman (2006) pointed out that the self-esteem and appraisal support was primarily responsible for the reported interactions between negative life stress and social support. In addition, appraisal support from family can contribute to rebuild interpersonal bonds and networks.

Emotional support had negative significant correlation with extent of personal loss ($r = -0.19$, $p<0.01$). The tsunami has a great impact on personal loss. Many survivors lost everything they have; they lost homes, properties, jobs and loved ones. Family can give the emotional support by sharing acknowledgment of reality of traumatic event or losses, sharing experience of loss of survivorship, realignment of relationships and finding new purpose from the tragic loss and the spirit of loved ones lost (Walsh, 2007). Furthermore, Walsh (2007) defined that various forms of trauma can experience in

catastrophic events and can involve multiple losses, such as loss of physical and psychological wholeness, the head of household, community leaders, an intact family unit and community, the way of life, economic livelihood, future potential (i.e., children), hope and dreams, security, predictability and trust. In helping the survivors, in response to traumatic loss, there are three factors that can reduce the vulnerability, or risk and help the survivors to recover from the traumatic loss: belief systems, organizational patterns, and communications processes.

Suurmeijer, Van Sonderen, Krol, Doeglas, Van Den Heuvel and Sanderman (2005) found that the effect of emotional support ran via social companionship, more emotional support (both transactions and satisfaction) was expressed in companionship leading to a less depressed mood. Norris (2006) found that personal loss was more strongly related to an increase in an individual's negative affect, while community destruction was more strongly related to a decrease in one's positive affect.

Informational support had negative significant correlation with interpersonal bonds and networks ($r = -0.21$, $p<0.05$). Information is also an essential thing that can be provided by the family in order to rebuild and strengthen the relationship of the survivors in community. Tsunami made community disruption and destroyed the society ties of the survivors. Family can provide advice, suggestions and directives to promote the ability of the survivors to rebuild their new society.

In summary, the present studies stated that there was the relationship between family support and psychosocial problems among the tsunami survivors event though the correlation was low. Family, one of the sources of social support, has played an important role in order to help the survivors to deal with the psychosocial problems and to live stay in a better life after the tsunami struck.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This study was a descriptive correlational study. The aims of this study were to describe the levels of perceived family support and psychosocial problems among the tsunami survivors, and to investigate the relationship between family support and psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia.

This study was conducted in Lambada Lhok village that was one of the tsunami affected areas, Aceh Besar District, Indonesia, with a sample of 126 tsunami survivors. The subjects were asked to complete a set of questionnaires, which consisted of three main parts: 1) the Demographic Data and Health Information Questionnaire, 2) the Family Support Questionnaire (FSQ), and the Psychosocial Problems Questionnaire (PSQ). The Family Support and Psychosocial Problems Questionnaires were evaluated for their content validity by three experts from the Faculty of Nursing, Prince of Songkla University, Thailand. The first expert was from the psychiatric nursing, the second expert was from the community nursing, and the last one was an expert in tool development. The results of content validity index were 0.87 for the Family Support Questionnaire and 0.85 for the Psychosocial Problems Questionnaire. The reliability of the instruments was 0.79 for the Family Support Questionnaire and 0.79 for the Psychosocial Problems Questionnaire.

Summary of the Study Findings

In this study one hundred and twenty-six the tsunami survivors were recruited as the subjects. The mean age of the subjects was 32.8, (SD= 10.6). Almost 51.6 of the subjects were males and 76.3% were in 18-39 year age group. The majority of the subjects 78.6% were married. The level of education of the subjects was high school (55.5%), and occupation mostly described as fishermen (69.8%) and government employees (17.4%). Most of the subjects 42.1% had a family income of Rp 500,000 –

1,000,000, which was considered inadequate 71.4%. The family relationship of the subjects was considered as good (98.4%). 91.3% of the subjects had a permanent housing, 92.1% of the subjects lost their relatives and 89.7% lost their properties. In terms of having chronic diseases, 84.1% of the subjects were reported that they did not have any chronic disease and they also did not get treatment or medication (88.8%) but 3.2% the subjects suffered from rheumatoid arthritis and 2.4% the subjects suffered from heart disease.

The level of family support of the subjects was at a high level for the instrumental support (M = 3.1, SD = 1.7), on the other hand the appraisal, emotional and informational support were at a moderate high level (M = 2.6, SD = 1.9), (M = 2.5, SD = 1.7), and (M = 2.4, SD = 1.6), respectively.

The level of psychosocial problems of the subjects was at a moderate high level for the problems of permanent housing (M = 2.5, SD = 1.5), it was at a moderate low level for extent of personal loss (M = 1.3, SD = 0.4), safety and security (M = 1.2, SD = 0.1), interpersonal bonds and networks (M = 1.2, SD = 0.2), system of justice and protection from abuse (M = 1.1, SD = 1.0), and roles and identity (M = 1.1, SD = 0.3).

The relationship between family support and psychosocial problems among the tsunami survivors had a low negative significant correlation ($r = -0.28$, $p<0.05$). The findings showed that the instrumental support had a negative significant correlation with the problems of permanent housing ($r = -0.45$, $p<0.01$), extent of personal loss ($r = -0.32$, $p<0.01$) and interpersonal bonds and networks ($r = -0.26$, $p<0.01$) compared with the appraisal, emotional and informational support.

Limitations of the Study

Certain demographic characteristics of the subjects in this study such religion and ethnic limit the result of this study to be generalized to all the tsunami survivors in other population.

Recommendations

Nursing Practice

The findings provided some evidence regarding the family support and psychosocial problems. Event though, the study found a low negative correlation between the family support and psychosocial problems but there are lot of previous studies that support this relationship. Nurses can apply this knowledge in particular areas especially for those works in the community and psychiatric nursing by enhancing the family to give support for the tsunami survivors.

Nursing Education

The findings from this study can increase the ability of nurses' educators to teach the student about how important the family supports especially instrumental support for the tsunami survivors and its relationship with long - term the psychosocial problems of the survivors.

Nursing Research

The findings described that there is a low negative significant correlation between the family support and psychosocial problems. Further study is still needed in order to gain the in depth information about the situation of survivors. Intervention studies should be considered and conducted in more than one tsunami affected areas with a large sample.

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APPENDICES

APPENDIX A

Informed Consent

Dear Participant,

My name is Syarifah Rauzatul Jannah. I am a lecturer at Nursing Science Program of Syiah Kuala University Banda Aceh, Indonesia. Now I am a master student at Faculty of Nursing, Prince of Songkla University, Thailand. I am conducting research project regarding family support and psychosocial problems among the tsunami survivors in Aceh Besar District, Indonesia. Information from this study will be valuable for the development of nursing profession. If you agree to participate, you would be asked to complete questionnaires which take time around 45 minutes. Your personal identity and all answers will be kept confidentially and all information will only be used for purpose of this research project. Your participation is voluntary. You may withdraw from this study any time and no effect of your decision to refuse to participate in this study. Your signature in this form will indicate that you understand this form and you willing to participate in this study.

Signature

……

Date

…….

If you still do not understand in completing the questionnaires or need more information, please do not hesitate to contact me or my thesis advisor (Assist. Prof. Dr. Urai Hatthakit) at the following address:

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APPENDIX B

Instruments

Code:…….

Date:…….

Part 1 Demographic Data and Health Information

I would like to ask you some information regarding personal data and general health information. Please answer by putting mark (v) in the space available that is appropriate for you.

A. Demographic data

1. Age …….years old
2. Gender : 1 ( ) Female 2 ( ) Male
3. Marital status

   1 ( ) Single 2 ( ) Married

   3 ( ) Widow 4 ( ) Widower

   5 ( ) Divorced

4. Ethnic: 1 ( ) Achenese 2 ( ) Javanese

   3 ( ) Padang 4 ( ) Others,……

5. Religion: 1 ( ) Islam 2 ( ) Christian

   3 ( ) Catholic 4 ( ) Hindu

   5 ( ) Buddhist

6. Educational background

1 ( ) No formal education
2 ( ) Elementary school
3 ( ) Junior high school
4 ( ) Senior high school
5 ( ) College/ University
6 Others,……..

7. Occupations

1 ( ) Fisherman
2 ( ) Business person
3 ( ) Farmer
4 ( ) Government employee
5 ( ) Private employee
6 ( ) Retired
7 ( ) Unemployed
8 ( ) Others,……

8. Family income per month

1 ( ) None
2 ( ) < Rp 500,000
3 ( ) Rp 500,000 – 1,000,000
4 ( ) Rp 1,000,001 - 2,000,000
5 ( ) Rp 2,000,001 – 3,000,000
6 ( ) > Rp 3,000,000

9. How do you think about your income?

1 ( ) More than adequate
2 ( ) Adequate
3 ( ) Fair
4 ( ) Inadequate

10. Types of current housing

1 ( ) Temporary
2 ( ) Permanent

11. Loss of family members: 1 ( ) No
2 ( ) Yes

12. Loss of property : 1 ( ) No
2 ( ) Yes

13. Family relationship

1 ( ) Good 2 ( ) Fair 3 ( ) Poor

B. Health information

14. After the tsunami do you have any chronic diseases? 1 ( ) No 2 ( ) Yes

If yes, please specify

1 ( ) Hypertension
2 ( ) Heart disease
3 ( ) Diabetes Mellitus
4 ( ) Asthma
5 ( ) Cancer
6 ( ) Gastrointestinal disease
7 ( ) Others,……..

15. Do you get treatment/medication for your chronic disease? 1 ( ) No 2 ( ) Yes

If yes, please specify

1 ( ) Anti hypertensive drug
2 ( ) Insulin
3 ( ) Ventolin
4 ( ) Chemotherapy
5 ( ) Anti arrhythmic drug
6. Others,……

C. The Family Support Questionnaire (FSQ)

Please answer all of the questions that apply for you based on your experience after tsunami 2004 by putting mark (v) in the appropriate column. In this questionnaire family support can be (mother, father, sons, daughters, grand father, grand mother, uncle, aunt, siblings, cousins, nephews, nieces, sisters-in-law, and brothers-in-law) or other significant persons who did not directly affected by the tsunami 2004 and lived separately from you. They have provided you support after the tsunami struck until presently. There are 5 options available:

0 = Never 1 = Sometimes 2 = Often 3 = Very Often 4 = Always.

Items	**Never**	**Sometimes**	**Often**	**Very Often**	**Always**
1. My family really tries to understand all of my feeling					
2. My family expresses his/her love to me					
3. My family's action makes me feel comfortable to disclose my feeling					
4. My family is really concerned about my feeling of lost because of the tsunami					
5. My family holds me in the high esteem when I felt upset					

Items	Never	Sometimes	Often	Very Often	Always
6. My family really listens to me when I talked about my feeling					
7. My family gives me an advice to deal with the problems related to the tsunami					
8. My family gives me suggestions how to figure out my life					
9. My family leads me how to get other aid resources to solve the tsunami problems					
10. My family states that she or he appreciates me so much					
11. My family gives me a positive feedback after doing something					
12. My family tells me that I have ability to rearrange my new life same as other people					

Items	Never	Sometimes	Often	Very Often	Always
13. My family tells me that I am a lucky person who have family members to share feeling					
14. My family wants to share his/her time when I needed					
15. My family buys me new clothes that I lost					
16. My family gives me food and grocery things when I needed					
17. My family provides me house equipments					
18. My family provides me transportation when I needed					
19. My family gives me money when I faced with financial problems					

D. The Psychosocial Problems Questionnaire (PPQ)

This questionnaire will provide some questions regarding the psychosocial problems. Please answer all questions that apply for you by putting mark (v) in the appropriate column.

There are 5 options available:

0 = Never 1 = Sometimes 2 = Often 3 = Very Often 4 = Always

Items	**Never**	**Sometimes**	**Often**	**Very Often**	**Always**
1. I feel my home is unsafe after the tsunami					
2. I feel uncomfortable to stay at home after the tsunami					
3. I feel the presence of many crimes in my community					
4. I feel my society is not well-ordered after the tsunami					
5. I have a difficulty in maintaining relationship with the people					
6. I withdraw from the society					
7. I have a difficulty to get closed friends					

Items	Never	Sometimes	Often	Very Often	Always
8. I have a difficulty in developing relationship with my neighbors					
9. I am not satisfied with my family					
10. I don't like rebuilding of my society					
11. I feel support from the NGOs is not equal					
12. I do not get protection of physical abuse from my family					
13. I get abusive reactions from my spouse					
14. I do not like my roles that changed after the tsunami					
15. I avoid to perform my roles changed after the tsunami					
16. I have problems in achieving my identity					
17. I lost my identity					

Items	Never	Sometimes	Often	Very Often	Always
18. I am depressed due to the loss of my relatives in the tsunami					
19. I feel sad due to the loss of my properties in the tsunami					
20. I have a difficulty to get clean water in my permanent house					
21. I think my permanent house is too small					
22. I am not satisfied with the construction materials of my permanent house					

APPENDIX C

List of Experts

Three experts validated the content validity of the Family Support Questionnaire and the Psychosocial Problems Questionnaire, they were:

1. Assoc. Prof. Dr. Wandee Suttharangsee
   Nursing Lecturer, Faculty of Nursing, Prince of Songkla University, Thailand.
2. Assist. Prof. Dr. Sang-arun Isaramalai
   Nursing Lecturer, Faculty of Nursing, Prince of Songkla University, Thailand
3. Assist. Prof. Dr. Piyanuch Jintanoon
   Nursing Lecturer, Faculty of Nursing, Prince of Songkla University, Thailand.

APPENDIX D

Profile of Lambada Lhok village

Lambada Lhok village is one of the villages that was worst affected by the tsunami 2004. The majority occupation of people in the village is fishermen and this village is also known as a fishery village. After the tsunami struck, the village received much assistance from government and local or non-local NGOs such as SOS, Mercy Corps, World Vision, AuSaid, Islamic Relief, KADIN, ILO, UNICEF, Rolls Royce, and AIPRD (Australia Indonesia Partnerships for Reconstruction and Development). Most of the NGOs provided their assistance for only the short term, but in fact the villagers are still needed the help for long-term.

Currently, all the villagers have returned to their permanent houses, which are rebuilt by SOS (150 housing units) and KADIN (250 housing units). The people have been performing their activities normally. The religious activities are also the important thing for the Muslim villagers. They, frequently do religious activities in the mosque or *meunasah* (a place where gather the Muslim people to pray, to recite the Al Qur'an, to listen the religious speech, to discuss about religious things and sometime to discuss other things for instance social and economical things.

AIRPD (Australia Indonesia Partnerships for Reconstruction and Development) as one of non-local NGOs developed the project to help the villagers for increasing their livelihoods which was referred as "Community Engagement". This project was used two methods: live in and PRA (Participatory Rural Appraisal) in order to get the accurate data of the needs of the people in the Lambada Lhok village. The target group of this activity was stakeholders and society. The results of this projects showed that the long-term problems after tsunami 2004 are still exist in the village including economical, educational, hygiene

and sanitation, and housing. Therefore, both government and NGOs should pay much attention on these problems and keep going on rebuilding the facilities for the villagers.

VITAE

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