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Stress, Self-Esteem, Coping Skill and Treatment Strategies among Victim of Earthquake at Kampung Mesilau Ranau, Sabah

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Abstract

The purpose of this study was to investigate the level of stress, self-esteem and coping skill of the victims of earthquake at Kampung Mesilau, Ranau Sabah. Besides that, this study also investigate the relationship between stress, self-esteem and coping skill. The study was conducted on 210 respondents from the village of Mesilau, Ranau Sabah. The instrument used is Depression Anxiety Stress Scale (DASS) to measure stress, Rosenberg Self Esteem to measure self-esteem and the COPE Scale (COPE) to measure the coping skill among the respondents. The results showed that the level of stress was mostly in the normal level of 125 people (72.94%), the level of self-esteem was mostly in the low level of 125 people (59.6%) and the level of coping skill mostly was good, 107 (51.0%). The results also found that there was no relationship between stress and self-esteem with coping skill, $r = .162$, $p > .05$ and $r = .162$, $p > .05$. Through the findings of this study, it can provide an input to the local community and community leaders to prepare for the eventual earthquakes in the future.

Keywords: Stress, Self Esteem, Coping Skill, Earthquake.

Introduction

Disasters such as earthquakes, floods, hurricanes and landslides bring with it tangible and intangible effects. Other real consequences include damage to property, pollution and death. While unrealistic effects can occur in the context of psychological, emotional, mental (mental) effects. Changes in behavior also occur as a result of a disaster. Natural disasters to society will certainly leave a profound impression on the victims, especially those who have lost family members. This will make them feel very sad and have no desire to continue living alone without family members. Victims will also continue to feel insecure and live in fear because of the fear of a natural disaster. Trauma victims are known as Post-traumatic stress disorder (PTSD).

Earthquakes are a phenomenon of the movement of the earth's surface due to the sudden movement of rocky terrain. Earthquakes are caused by the energy stored in the earth, which is in the form of a sudden fluctuation of rock. Earthquakes can be measured using predetermined scales of the Richter Scale and the Mercalli Scale. Earthquakes can cause a strong uproar in a country near the country where the earthquake occurred. Earthquakes will affect the environment as well as humans. Impact on the environment where an earthquake can cause a tsunami to hit the coast. Earthquakes that occur at the seafront can create a strong wave movement and will become even higher when entering shallow areas. Persistent waves in the back of shallow water will keep waves ahead. Sudden high tides will cause seawater near the shoreline to retreat into the sea for a short time before it strikes the coast again in the form of destructive waves.

Earthquake risk poses serious dangers in the medium to long term in terms of physical and mental health, safety and economic viability of the states involved. The tsunami that hit Aceh in 2004 until the recent earthquake in Sabah showed a risk in modern society that triggered the unrest, conflict, division and affect everything from death, damage to infrastructure and economic turmoil.

Based on the occurrence of earthquakes in the world and in Malaysia, several studies have been carried out by researchers across the country to look at the impact of the victims and the experiences of the earthquake. The effects of this natural disaster not only cause damage to property and loss of life but also affect human psychology and can affect human mental health such as self-esteem, stress, anxiety, depression and cope. David, Ana, Robert, Zetino and Raphael (2006), conducted a study to look at the effects of an earthquake on 252 teenagers and 83 people from the community. Studies show that natural disasters are strongly associated with psychological effects that affect family and society as well as adolescents' resilience. In addition, the effects of the earthquake have also resulted in homelessness and other physical resources. Meanwhile, Bulut (2004) following a tornado incident in Oklahoma, using DSM-IV found that many children have Posttraumatic Stress Disorder (PTSD). PTSD has affected the development and growth of the child.

Problems Statement

Research on mental health among earthquake victims has not many done in Malaysia. This is because earthquakes are a new phenomenon in Malaysia despite other natural disasters such as floods, tsunamis and hurricanes. The study was conducted to look at the effects of psychology and its relationship to the strategies of coping among earthquake victims in the Mesilau, Ranau Sabah. This is because when the victim experiences negative psychological effects, the individual is not functioning and carrying out daily activities as usual and thus affects economic and social development. The potential psychological impact of each of these disasters varies.

Objectives of the Study

The objectives of this study are generally to analyze the level of stress, self-esteem and level of coping strategies among the Mesilau Village community, Ranau, Sabah. In addition, this study was also conducted to analyze the relationship between stress, self-esteem and coping strategy among the Mesilau community, Ranau, Sabah. This study is very important for the study of psychological effects and coping as strategies for coping with stress are very important for the development of oneself, family, community and nation.

Literature Review

Stress

The American Psychiatric Association (APA) (2013) has described stress as a pattern of individual and non-specific responses to stimulus events that disrupt balance or exceed its ability to cope. Nairne (2000), argued that each problem will create different levels of stress for different individuals depending on the reasoning and perception of the individual (Lazarus, 2015). According to Times Chambers Combine Dictionary Thesaurus (1995), defining stress is a person's reaction either physically or emotionally or both that can cause not only psychological but physical harm. This means that stress can have a negative effect on a person.

While according to Selye (1976), non-specific reactions to stimuli are the basis of Selye's Theory of Stress. He also defines stress as a non-specific body response to a range of stimuli. Selye also developed a model to describe the non-specific reactions and adjustments that the body has to make. This theory is known as The General Adaptation Syndrome (GAS) that has three-phases. These three phases are sequential to one another. The phases are as follows:

Precautionary phase

This phase is also known as an opponent's reaction or run. It is associated with a neuron mechanism involving the sympathetic nervous system that stimulates the medulla of the adrenal gland. It also involves the hypothalamus that stimulates the anterior and posterior lobe of the pituitary gland. This results in increased production of adrenocorticotrophic hormone (ACTH) from the anterior lobe of the pituitary and the hormone that regulates water balance from the posterior lobe. This phase culminates in a shock response that restores all the changes that occurred earlier.

Resistance phase

This phase defends and maintains the adaptation of the body's functions to the optimum level. This phase will result in adrenal cortical hypertrophy, increased parasitic activity, increased glucocorticoid production from the adrenal and thyroid hormone context. Generally, protein anabolism increases during this phase.

Exhausted Phase

When exposure to stress is severe and prolonged, adaptation may not last long and will stop. The condition becomes unbalanced due to impaired body function and the occurrence of certain diseases, some of which end in death (Salleh, 2014).

Self-Esteem

According to the Dictionary of the House (2005), self-esteem means self-respect that embodies the whole meaning of dignity. Spirituality means the inner or something of the soul. The study of self-esteem of students of academic excellence covers their spirituality because self-esteem encompasses perceptions and inner feelings hidden behind their behavior (Mruk, 1999).

In addition, the most important factor affecting self-esteem is self-belief or who we think we are. The mental image of the self or the inner self reflects the image of the person. According to Briggs (1977), the image of yourself is the belief system you build on yourself.

Our confidence in ourselves is largely shaped by the perception of past experiences, successes and failures of how you are judged by others. Self-image is also the foundation of one's personality. Positive beliefs also make up the bulk of one's personality and abilities, giving the individual the inner power to achieve his or her goals. Self-confidence also determines the limits of your achievement, what you can and cannot do. We are molded by our thoughts, something happens to what we think. Many people fail to achieve great success in life because of their negative self image, not because of their lack of ability or talent. People with negative self-image will usually have low self-esteem.

Coping

Cope comes from the English word meaning to face an enemy or obstacle, or to challenge the enemy at the same time. It also means confronting someone or something that threatens. Lazarus and Folkman (1984), defining action as a form of one's response to a situation of stress. Kahn and Cooper (1986), on the other hand, state that the strategies used by individuals play a role in reducing or moderating the relationship between inherent stress variables and tension. Mc Cubbin and Mc Cubbin (1989) state that coping strategy refers to effort that uses behavior to resolve the various demands caused by stress (Mc Cubbin & Mc Cubbin, 1989 cited in Plunckett, Radmacher & Moll-Phanara, 2000). Whereas the American Psychiatric Association (APA) (2013) has described stress as a pattern of specific and non-specific responses to stimulus events that disrupt balance or exceed its ability to cope.

Lazarus and Folkman (1984) see psychological stress as the link between individuals and the environment that is viewed as potentially harmful to the well-being of the individual. The relationship between the individual and the environment involves two critical processes, namely:

Cognitive Appraisal is a process of assessing the why and extent of transactions between individuals and the depressed environment.

Coping is a process by which individuals manage their demands on an individual's relationship to the environment and emotions resulting from the situation.

In addition, cognitive assessment involves the process of categorizing meetings and their importance to the well-being of individuals comprising three stages of assessment in this process,
that is;

The Primary Appraisal serves as the appraiser for the meeting whether it is irrelevant, positive or stressful. The primary assessment of an individual's stress situation can develop into three situations namely danger, threat and challenge. Therefore, this primary assessor is seen to be able to evaluate and control the circumstances and situations faced by the individual.

Secondary Appraisal is the deciding factor in what to do, acting as an appraiser on the benefits and consequences of a strategy of action depending on the individual's goals and obstacles to the individual. Therefore, this secondary assessment can guide individuals in deciding which specific action strategies to use.

Reappraisal is a re-evaluation based on new information gained from an individual's environment or situation. The effectiveness of action strategies in reevaluation will be beneficial for individual psychological adjustment.

Methodology

Design of Study

The study was conducted using quantitative method which is a survey form in which the questionnaire was distributed to the sample. The design of survey studies is a detailed description of the quantity of a population (Awang, Kumar, Satari, & Kunjambu).

Study Area

The study area is located in Kampung Mesilau, Ranau Sabah. The choice of Kampung Mesilau is the place of study as the village is the closest to Kinabalu Mountain which was the earthquake of 2015.

Sample Study

In the study, the sample is a collection of the necessary information. Whereas the population is said to be the larger group that will benefit from the findings (Idris, 2010). The sample of this study was 210 people, including adolescents, adults and elderly in Kampung Mesilau, Ranau Sabah.

Instruments

The research tools used in this study consist of four parts:

Part A: Respondents' Demographics where in this section respondents are asked to fill in their background.

Part B: Depression Anxiety Stress Scale (DASS) containing 21 items. The test was used to assess the level of depression, anxiety and stress among respondents. The DASS Test has four answer options that consists of a list of 42 symptoms, each of which is to be rated on a four point scale of how much you had that symptom. The stress levels were then evaluated based on five levels namely normal, mild, moderate, severe and extremely severe.

Part C: The Rosenberg Self Esteem Scale (RSES), which is a test to measure respondents' self-esteem, was developed by Rosenberg (1965). This test was chosen because it is simple, easy to understand, high reliability and validity and has been widely used by researchers both locally and abroad. This test contains only 10 items but is of high quality. The answer choices are in the form of likert four answer choices namely Strongly Agree, Agree, Disagree and Disagree (Rosenberg, 1965; Zuckerman, 1985).

Part D: Brief COPE Inventory (COPE) for coping among respondents of the survey containing 28 items. This test provides four levels of answer choices such as not pleasant, rare, frequent, very frequently used.

Findings

This section the results of the study are presented based on the objectives. The main objective of this study was to analyze the level of stress, self-esteem and level of action among

the people of Kampung Mesilau, Ranau Sabah. The study was also conducted to look at the relationship between stress and self-esteem and coping strategies among earthquake victims Kg. Mesilau, Sabah River.

Table 1 shows the number of respondents by gender in which the respondents in this study were 91 men (43.3%) while 119 were female (56.9%).

Table 1
Frequency Distribution of Respondents' Demographics by Gender

Gender	Frequency	Percentage
Male	91	43.3
Female	119	56.7
Total	210	100

Table 2 shows the number of respondents by the race where the majority of residents in the village are of Malay descent Mesilau is a total of 131 respondent (62.4%) and the Dusun of the 79 (37.6%).

Table 2
Frequency Distribution of Response Demographics by Race

Race	Frequency	Percentage
Malay	131	62.4
Dusun	79	37.6
Total	210	100

Table 3 shows the level of stress among the residents of Kampung Mesilau, Ranau Sabah. The findings showed that the majority of the population was in normal condition of 153 people (72.9%). There were also some of the low stress levels of 28 people (13.3%), the moderate level of 21 (10.0%) while the severe level of 8 (3.8%).

Table 3
Level of Stress in the Respondent of Kampung Masalai, Ranau Sabah

Level	Frequency	Percentage
Normal	153	72.9
Low	28	13.3
Moderate	21	10
Severe	8	3.8
Total	210	100

Table 4 shows the level of self-esteem among the residents of Kampung Mesilau, Ranau Sabah. The findings show that the majority of the population is at a low level of self-esteem of 125 people (59.6%). However, there were also a high number of self-esteem residents at 85 (40.5%).

Table 4
Level of Self-esteem within the Respondent of Kampung Mesilau, Ranau Sabah

Level	Frequency	Percentage
Low	125	59.6
High	85	40.5
Total	210	100

Table 5 shows the level of coping among the residents of Kampung Mesilau, Ranau Sabah. The findings show that the majority of the population is in good at 107 people (51.0%). However, there was also a moderate population of 87 people (41.4%), and some of them were very good at 16 (7.6%).

Table 5
Levels of Action in the Population of Kampung Mesilau, Ranau Sabah

	Frequency	Percentage
Moderate	87	41.4
Good	107	51.0
Very Good	16	7.6
Total	210	100

Table 6 shows the relationship between stress, self-esteem and coping among the resident of Kg Mesilau Ranau, Sabah. The results of the Pearson Correlation analysis showed that there was no significant relationship between stress and coping, $r = .109$, $p > .05$. Similarly, the relationship between self-esteem and coping where it showed no significant relationship between the two, $r = .162$, $p > .05$. This indicates that both of these factors, stress and self-esteem do not influence the strategy of coping among the resident of Kg Mesilau Ranau, Sabah.

Table 5
The Relationship between Stress, Self-Esteem and Coping

	Coping r
Stress	.109
Self Esteem	.162

Discussions

The results show that there is no relationship between stress, self-esteem and coping. This indicates that the stress and self-esteem factors are not related to the strategy of coping among the resident of Kg Mesilau, Ranau Sabah. The results of this study are similar to those conducted by Xiao, Xinchun and Rui (2018), in which their study found no association between social support and self-esteem with adolescent coping skill in China. They conducted a study of 397 adolescents living in Lushan County, China who were affected by the earthquake.

A study conducted by Nasir (2010) on residents of Cameron Highland suffering from mud floods shows that natural disasters have affected people's psychological well-being such as stress, anxiety, depression and even action.

The results also show that there is no difference between the coping by the resident of Kg Mesilau whether based on gender, ie men and women and also based on race of Malays and Dusun. This finding contrasts with the findings of Frydenberg and Lewis (1991) who found that men are more likely to face stress than women. They also find that women are more likely to give up on fate and escape from stressful situations, and they have more hope than effort.

According to Mahfar, Zaini, & Nordin (2007); Anal, Ahmad, Razalli, & Min, 2018; Griva, Dinas, & Flegas, 2018; Al-Edenat, Alhawamdeh, 2018).

in their study have found that the spiritual aspect of religious matters is one of the strategies used by 47 per cent of the respondents in the face of stress. We often know that they or the victims of natural disasters will often experience the effects of the soul. These include trauma, anxiety, depression and phobias on the plague that hit them. Referring to the effects of the earthquake that occurred in Sabah a long time ago, researchers believe that one of the major effects of the victims' lives was depression.

Conclusion

Based on the findings of the study, researchers have found that these earthquakes can have various psychological effects on the human soul. Through the various demographics of the respondents conducted in this study, it is found that there is a huge impact on society. In terms of self-esteem, the data obtained show the impact of self-esteem through coping in the event of an earthquake in an attempt to save lives. This earthquakes will affect themselves and their families. This gives the impression that people will naturally try to save themselves in the event of a disaster or disaster because they feel the value of their lives. In terms of stress, the majority of the resident in Kg, Mesilau is Muslims and they believe that whatever happens is a provision from Allah S.W.T. They are happy and don't really think about what happened. As such, the situation did not put much pressure on them. In terms of stress, it recorded statistics showing that there were coping to save the family in an earthquake. Although the data of the study do not show significant data on such behaviors, the researchers are optimistic that the coping are for personal and family safety. Based on the conclusion above, it is clear that the study of the earthquake victims is in line with the objective of this study. Through the findings of this study, it can provide input to the local community and community leaders to prepare for the event of an earthquake in the future.

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