



# THE INFLUENCE OF KNOWLEDGE AND ATTITUDES OF ELEMENTARY SCHOOL STUDENTS NO.047174 KUTA RAYAT SUB DISTRICT NAMAN TERAN AGAINST EARTHQUAKE DISASTER PREPAREDNESS

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## **ABSTRACT**

Disaster risk reduction preparedness is needed in the face of disasters especially in the face of earthquakes. Knowledge and attitude are still low in society, especially children and elderly who are the most vulnerable age to the risk of casualties in a disaster. This study aims to describe and identify the influence of knowledge and attitudes of students of state elementary school student No.047174. Kuta Rayat District Naman Teran Karo Regency against earthquake preparedness. The study used survey methods for the data collection, where the main samples were collected through questionnaires, interviews and field documentation with the aim of providing empirical evidence that the ability to use action and preparedness in the face of earthquake disasters was influenced by students' knowledge and attitudes about earthquakes and action in the event of an earthquake and attitude to deal with the earthquake is a study that explains the relationship between the variables through hypothesis testing. The sampling technique used Purposive Sampling where a technique of determining samples among the population in accordance with the desired researcher with the number of samples is 60 people. The primary data obtained through the questionnaire that has been prepared include: Knowledge, and attitudes to earthquake risk, policies and guidelines, plans for disaster emergencies, disaster warning systems, ability to mobilize resources to students. Based on the results of interviews and observations of the respondents found that in general knowledge of student preparedness is at 23%, while the attitude preparedness 21%. The results showed that the knowledge and attitude level of 44%. Knowledge and attitude of student of state elementary school student No.047174 still lower that is below 50% from 60 people total of student responders. Suggestion to 1. For Educator expected to improve Integrative approach about earthquake disaster in IPS lesson that is geography study. 2. For the government to do counseling and simulation in the community. 3. For the community to follow the various counseling and actively seek information through print and electronic media. 4. For further research needs to be done deepening other factors that affect the community's preparedness to the earthquake.

Keywords: influence, knowledge, attitude, preparedness, earthquake

# **INTRODUCTION**

An earthquake is a disaster that does not directly cause death to the victim, what needs to be done to reduce the risk of death and morbidity caused by the earthquake is to reduce the risk of earthquakes in the community, namely by increasing the knowledge of the earthquake-related communities for disaster risk reduction. Disaster Risk Reduction Education is an interactive learning process that is interactive in the community and institutions. The education coverage of disaster risk reduction is broader than formal education in schools ranging from kindergartens, primary schools, junior high schools, high schools. These include the recognition and use of traditional wisdom and local knowledge for the protection of natural disasters. Preparedness to anticipate natural disasters such as knowledge and attitudes towards disaster risks, policies and guidelines, plans for disaster emergencies, disaster warning systems and the ability to mobilize resources (LIPI, UNESCO/ ISDR, 2006). Natural disaster is a disaster caused by events or series of events caused by nature such as earthquakes, tsunamis, volcanoes, earthquakes, droughts, hurricanes, and landslides (Law RI No. 24 of 2007 on Disaster Management article 1). A repeated earthquake disaster should make learning more prepared for impacts, especially in places where public buildings or groups are more vulnerable to disasters. However, the phenomenon that occurs in the handling of earthquakes has not been running optimally in which the attention and concern of all parties is







still focused on post-earthquake to respond to emergency response, rehabilitation and reconstruction. While mitigation and preparedness efforts still have not received more optimal attention at institution or institution level, as well as elementary school institution (Law No.44 Year 2009). Preparedness is one of the disaster management processes. Therefore, preparedness should be increased as disaster risk reduction activities prior to the disaster. Disaster preparedness is essential to minimize casualties. Based on the background of the above problem, this research entitled: "The Influence of Knowledge And Attitudes Of Elementary School Students No.047174 Kuta Rayat Sub District Naman Teran Against Earthquake Disaster Preparedness".

So for a more in-depth review, the problem is more directed at several things including:

- 1. How big is the influence of the students' knowledge of state elementary school student No.047174 on the preparedness of earthquake disaster in Kuta Rayat Kecamatan Naman Teran, Karo Regency?
- 2. How big is the influence of students' attitudes of state elementary school student No.047174 on the preparedness of earthquake disaster in Kuta Rayat Kecamatan Naman Teran, Karo Regency?
- 3. How big is the knowledge and attitude of the students of state elementary school student No.047174 on the preparedness of earthquake disaster in Kuta Rayat Subdistrict of Naman Teran, Karo Regency

### RESEARCH PURPOSES

- 1. The purpose of the authors carry out this research are as follows:
- a. General purpose

In general, this study aims to determine the effect of knowledge and attitudes of students of state elementary school student No.047174 against preparedness in the face of earthquake disaster in Kuta Rayat District Naman Teran, Karo Regency.

- b. Specific Objectives In particular this research is to know:
- 1) Knowing the influence of the students' knowledge of state elementary school student No.047174 that will show the way to the community about the earthquake disaster in Kuta Rayat Kecamatan Naman Teran, Karo Regency.
- 2) To know influence of attitude done in student of state elementary school student No.047174 to earth disaster preparedness in Kuta Rayat Sub district of Naman Teran, Karo Regency.
- 3) To know the influence of knowledge and attitude of students of state elementary school student No.047174 to disaster preparedness of society to disaster preparedness of earth in Kuta Rayat Sub-district of Naman Teran, Karo Regency.
- 4) For students in of state elementary school student No.047174 have knowledge and rational behavior and responsibility to earthquake disaster problems in line with earthquake preparedness research.

### LITERATURE REVIEW

## Earthquake

#### A. Understanding Earthquakes

Earthquake is a shake caused by movement, shear, or broken layer of rock in the earth (Ministry of Communication and Information RI, 2008: 7). According to Joko Christanto (2011: 11), Earthquakes occur due to friction between tectonic plates beneath the surface of the earth. This friction releases enormous energy and causes shocks on the surface.

- B. Earthquake Types According to Joko Christanto (2011: 41), earthquake-causing factors can be divided into: a. Tectonic Earthquake (Tectonic Earthquake) That is earthquakes caused by tectonic activity in the form of sudden tectonic plate shifts that have the power from very small to very large.
- b. Volcanic Earthquake (Volcanic Earthquake) Volcanic earthquakes are earthquakes that occur due to volcanic activity.
- c. Earthquake Collapse (Sudden Ground Shaking) Earthquake collapse is an earthquake that occurred due to the collapse of cave roof or empty area under the land collapsed, the collapse of the mine roof, the collapse of the soil, the collapse of rocks, and so forth.







- d. The collision earthquake occurs as a result of the fall of asteroids to the earth.
- e. Artificial Earthquakes Artificial earthquakes occur due to human activities themselves, such as dynamite explosives, nuclear, and bombs with enormous power.
- C. Causes of Earthquakes occur due to the release of energy caused by the pressure of moving plates. The pressure is progressively longer and will reach a pressure that cannot be retained by the plate to produce an earthquake vibration. Earthquakes also occur in volcanic activity that is at the time of movement of magma in the volcano (Joko Christanto, 2011: 27). Earthquakes occur due to the release of accumulation of strong energy due to the collision of tectonic plate movements that can be felt by humans on the earth's surface with magnitude in the Richter Scale (SR) or Mercalli Cancani (MM), earthquake with magnitude> 6 SR, become cracked and "liquefaction" so that the carrying capacity of the soil becomes weak and consequently the buildings standing on it can become collapsed and collapsed (Saptadi & Djamal, 2012).

#### Knowledge

Knowledge is the whole thoughts, ideas, ideas, concepts and understanding that human beings have about the world and everything in it including human beings and life. Knowledge includes human reasoning, explanation and understanding of everything. Also includes practice or technical capability in solving various life problems that have not been proven systematically and methodically (Notoatmodjo, 2005). Knowledge is of the utmost importance before determining attitudes, because with we recognize environmental conditions we can be more alert about what will happen to the environment such as disasters, derivatives and physical vulnerabilities so that we can predict ourselves when the environmental conditions will bring disaster after it can take the right attitude to deal with it. But basically when the disaster is predicted to happen at close intervals, no effort can be made to avoid it or to be stopped, therefore disaster control needs to be done in the long days before the disaster really happened or can be done after the disaster and the situation back to the beginning. The purpose of this knowledge is minimal to reduce losses during earthquakes, prevent earthquakes and hope the community first have a good knowledge of environmental conditions and disasters that often occur.

### Attitude

Attitude is a reaction or response that is still closed from someone to a stimulus or object. Attitudes have 3 main components (Notoatmodjo, 2003), namely:

- 1) Belief (belief), ideas and concepts of an object.
- 2) Emotional life or evaluation of an object.
- 3) The tendency to act.

According to Ellis in Fajriansyah: 10, attitude is a factor of feeling / emotion and reaction as a determinant of human behavior, as a reaction then attitude has two alternatives, that is happy or not happy, according to and execute it or avoid something. Reinforced by the opinion Notoadmodjo (2005) suggests that attitude is a closed response of a person to the simulation or certain objects, which already involve factors of opinion and emotion in question (happy - not happy, agree - disagree, good - not good, and so on). Attitudes can be positive and can be negative. In a positive attitude the tendency of action is to approach, to enjoy, to expect a certain object, whereas in a negative attitude there is a tendency to avoid, avoid, hate, dislike certain objects. From the above opinion it can be concluded that the attitude is a response given by a person at the time of seeing an event or hear an opinion without taking action first but they are responsible for the opinion chosen, so the attitude is how someone is judging from what is seen or heard. Attitudes about natural disasters are very important for the community because they determine behavior, but must be accompanied by knowledge, often the wrong people take the attitude to deal with disaster because of lack of correct information about the disaster results in the face of a disaster society will be anxious and panic.

# Preparedness

Natural factors and / or non-internal factors and human factors resulting in the occurrence of human casualties, environmental damage, loss of property, and psychological impacts, and preparedness is a series of activities undertaken to anticipate disasters through organizing and through appropriate and







efficient measures Act No. 24 of 2007). Preparedness is a series of efforts and activities undertaken to anticipate the emergence of a disaster that can cause disaster victims and other losses, so that the community can prevent the impact of the disaster. According to Law No. 4 of 2008 on Guidelines for Preparation of Disaster

Mitigation Plans that preparedness is a series of actions to anticipate disasters through organizing and through appropriate and efficient measures. Preparedness needs to be implemented to deal with disasters that have arisen and often arise in an area either in time to happen or that still occur so that people have a vigilant attitude and response to the possible signs of the environment so that more prepared to avoid the risk of disaster. Preparedness is more applicable to the pre-disaster phase aimed at reducing disaster risks more efficiently when applied from self and educational facilities. Preparedness activities in general are as follows: ability to assess risk, alert planning, resource mobilization, education and training, coordination, response mechanism, information management, simulation. So for a more in-depth assessment, the hypothesis is more focused as follows:

- 1. The magnitude of the influence of the students' knowledge of state elementary school student No.047174 on the preparedness of the earthquake disaster in Kuta Rayat Kecamatan Naman Teran, Karo Regency above 50% of the total respondents.
- 2. The magnitude of the influence of students' attitudes of state elementary school student No.047174 on the preparedness of earthquake disaster in Kuta Rayat Kecamatan Naman Teran, Karo Regency above 50% of the total respondents.
- 3. The magnitude of knowledge and attitude of students of state elementary school student No.047174 to the preparedness of the earthquake disaster in Kuta Rayat Kecamatan Naman Teran, Karo Regency above 50% of the total respondents.

## **METHODOLOGY**

The research method uses quantitative research method based on survey / questionnaire activity with closed question list. Quantitative methods focus on survey / questionnaire activities with a list of questions designed in private. Quantitative data from survey / questionnaire results, not on the researcher's or writer's forecasts but from the results of the respondents provided with the existing answers. Data Collection This research is an empirical study using survey methods, where the principal of the sample is collected through questionnaires, interviews and field documentation that aims to provide empirical evidence that the ability to use action and preparedness in the face of earthquake disasters is influenced by knowledge factors about the earthquake disaster earth as well as action during earthquakes and attitude to deal with earthquake disaster. Research Sample In this study researchers determine the respondents are more random (random sampling) by applying the pattern of cluster sampling (area sampling). Random sampling or also called probability sampling is a sample selection method in which each sample in the population has the same probability of being selected. (Haris Herdiansyah, 2010: 105). While the technique of sampling using Purposive Sampling where a technique of determining the sample among the population in accordance with the desired researcher with the number of samples is 60 people. Data Processing Data analysis techniques are needed to identify problems and constraints that occur based on data and field survey results. The data used in this study is the primary data, where the data can be taken directly from the object of research. The data analysis was done descriptively by testing the classical assumption of the questionnaire result.







#### **Results of Observation and Discussion**

Influence Knowledge of earthquake disaster preparedness in Kuta Rayat Kecamatan Naman Teran, Karo Regency as follows:

Data Influence Of Knowledge And Attitude Of Elementary School Student No.047174 Kuta Rayat Sub District Of Naman Teran To Earthquake Disaster Preparedness

No	Description	Amount (people)	Percentage (%)
1.	Knowledge, and	14/60	23
2.	Attitudes to disaster risk	13/60	21
3.	Policies and guides	11/60	18
4.	Plan for a state of emergency	9/60	15
5.	Disaster warning system	7/60	11
6.	Ability to mobilize resources	6/60	10
	Total	60	100

Data source: Primary data, 2018

The result of calculation for the influence of knowledge and attitude toward disaster risk on elementary school children's preparedness in facing earthquake disaster in Kuta Rayat Sub-district of Naman Teran, Karo Regency obtained value 23% so that it means knowledge to earthquake disaster preparedness for elementary school children in Kuta Rayat Sub-district of Naman Teran, Karo District is still very low despite having a higher percentage than the ability to mobilize 10% resources, policies and guidance by 18%, plans for disaster emergencies by 15% and 11% disaster warning system. The magnitude of the influence of knowledge on the preparedness in the face of earthquake disaster is still very low in Kuta Rayat Kecamatan Naman Teran, Karo Regency.

Based on the above calculation it can be seen that the influence of attitude toward preparedness in the face of earthquake disaster in Kuta Rayat Sub-district of Naman Teran, Karo Regency is 21%, interpreted as the value of knowledge influence of 5 parameters according to LIPI UNESCO 2006 about earthquake and tsunami writer apply in earthquake disasters such as Knowledge, and attitude to disaster risk, policy and guidance, plan for disaster emergency, disaster warning system, ability to mobilize resources. Attitude values occupy the number 21% of researchers only calculate the attitude to answer the problem formulation in this study.

## CONCLUSIONS AND SUGGESTIONS

## Conclusion

Based on research on the influence of knowledge and attitude of state elementary school student No.047174 to earthquake disaster preparedness in Kuta Rayat District of Naman Teran, Karo Regency can be drawn conclusion:

1. Knowledge has greater influence on earthquake disaster preparedness in Kuta Rayat Sub-district of Naman Teran, Karo Regency with a contribution of 23%, 23% is defined as the value of knowledge influence of 5 parameters according to LIPI UNESCO 2006 about earthquake and tsunami writer apply in other rains earthquakes Knowledge, and attitudes to disaster risks, policies and guidelines, plans for disaster emergencies, disaster warning systems, the ability to mobilize resources. The value of knowledge occupies 23%, the researchers only calculate the amount of knowledge to answer the problem formulation in this study.







- 2. Attitude greatly affect the preparedness of earthquake disaster in Kuta Rayat Sub- district of Naman Teran, Regency of Karo with big contribution of 21%, 21% is interpreted as value of influence of knowledge of 5 parameters according to LIPI UNESCO 2006 about earthquake and tsunami that applied in earthquake disasters such as Knowledge, and attitudes toward disaster risk, policies and guidelines, plans for disaster emergencies, disaster warning systems, ability to mobilize resources. Attitude values occupy 21%, researchers only calculate the amount of knowledge to answer the problem formulation in this study.
- 3. Knowledge and attitudes together affect the preparedness of earthquake disaster in Kuta Rayat Kecamatan Naman Teran, Karo Regency with a large contribution of 44%. This means that knowledge and attitude influence 44% attitude ie 23% + 21% = 44%.

## **B.** Suggestions

From the results of research that has been done in the field then the researcher can provide suggestions as follows: The existence of various limitations in this study, the authors provide suggestions as follows:

- 1. For Education is expected to improve the Integrative approach to earthquake disaster applied in IPS lesson which includes study of geography study.
- 2. For the government of Kuta Rayat Kecamatan Naman Teran, Karo Regency is expected to increase community preparedness in the face of earthquake disaster by always doing counseling and simulation in the community.
- 3. For the people of Kuta Rayat Kecamatan Naman Teran, Karo Regency is expected to play an active role in improving knowledge and attitude toward earthquake disaster preparedness by following various counseling and actively seeking information through print and electronic media.
- 4. It is better for further research to be done deepening of other factors that affect the community preparedness for earthquake disaster.

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