INFLUENCE OF DISASTER PREPAREDNESS EDUCATION ON SDN PACET 1 STUDENTS' PREPAREDNESS AGAINST DISASTER AT MOJOKERTO

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Abstract

Regions in Indonesia is a ring of fire and Mojokerto is one area that is prone to landslides. Landslide that occurred in 2002 caused many casualties, the majority are elderly and children. Children are not all trained for disasters that need to be given education on elementary school children how to deal with a catastrophe if at any time there. Objective: This study aimed to determine the effect of the preparedness of disaster preparedness education of children, before and after education. Methods: The study design is quasi-experimental design with pre-post test design one. The sampling technique random sampling with total sample of 42 respondents while the data collection techniques by questionnaire and observation sheet. Research results show that Disaster Preparedness Education can enchance students' preparedness to deal with disasters.

Keywords : Education disaster preparedness, disaster preparedness.

Introduction

The trend of the last few years shows that there has been a disaster in terms of quantity, quality and intensity in some parts of Indonesia. The disaster caused by the natural change of earth condition (earthquake, tsunami, hurricane, tide, volcano eruption, drought etc) or disaster caused by excessive exploitation of natural resources of flash floods, landslide, fire and others (Undang Undang Penanggulangan Bencana 2007)

A disaster both directly and indirectly leads to degradation (decrease) the quality of the physical and social environment of the community which will cause the wheel of life not to run as it was before the disaster. This will have a broad impact on people's lives, especially in children and the elderly who are stratafikasi are the weak and not independent. Nationally, regionally and regionally, field experience shows that governmental, private, non-governmental, public and private institutions are not entirely prepared for a disaster when it occurs. This is due to the lack of mitigation efforts (disaster prevention and reduction). (Bakornas PB.2007)During 2014, recorded 1,525 disasters, leaving 566 people died, 2.66 million displaced and suffering, more than 51 thousand houses damaged, and hundreds of public buildings damaged. Economic losses reach tens of trillions of rupiah. Natural disasters include forest and land fires, floods, flash floods and landslides. 99 percent of the disaster in Indonesia during 2014 is a hydrometeorological disaster. Tornado is the most dominant type of disaster during 2014 which is 496 events, then flood (458) and landslide (413). In 2014, 60 percent (343 people) of the total death toll from the disaster is caused by landslides. The highest concentration of disasters is in West Java Province (290 events), Central Java (272), East Java (213). While the occurrence of landslide in the Pacet Region of Mojokerto district in 2002, 31 people dead. Since 2012-2015, in the Pacet region there was a landslide disaster, February 03, 2012 1 died, 2 people seriously injured, March 20, 2013 1 sacrifice died, 2 people seriously injured, 2014 several times happened landslide and flash floods disaster, April, August and September. In 2015 January and September 2 people died. (BPBD Jatim, 2015). From these data indicate that Pacet region is disaster prone area. Some of the main contributing factors to the emergence of many victims due to the lack of knowledge about the disaster and the lack of preparedness of the community in anticipating the disaster. Especially for landslides and flash floods that many victims died due to crashing debris caused by collapsed buildings. Among the casualties, most are elderly and children. (Bakornas PB.2007)

Primary school buildings are generally made with less attention to the basic tenets of building tenure and vulnerable land disaster, so that if there is flash floods and landslide then the school buildings can collapse and afflict students who are studying. Flash floods can occur at any time without warning, including during school hours. Rescuers can't to directly handle all places including schools located in disaster areas. So, that can be cause the victim died and injured because of crashed building ruins that are also due to panic situation. (RAN PRB, 2007).

Knowledge of disaster risk reduction has not been included in the education curriculum in Indonesia. In fact, 113 other countries that have incorporated into the curriculum of primary and secondary education such as Bangladesh, Iran, India, Mongolia, Philippines, Turkey and Tonga.

Based on the UN's Hoygo Framework, disaster Preparedness education is a priority, namely Priority for Action 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels. In order to build a culture of safety and resilience especially for children and young people, Disaster Preparedness education needs to be further developed at the level of basic education (Asep Mahpudz, 2014). Therefore, the researcher wanted to know the Influence of Disaster Preparedness Education on Student of Pacet Elementary School preparedness to Disaster in Mojokerto

METHOD AND MATERIAL

The type of research is quasi experiment using pre design post test design. The population of the study were 4th and 5th grade students of Pacet Elementary School Mojokerto with total population of 47 students. The sample in this research is part of the entire object that is studied and considered to represent the entire population, is some of the students of Grade 4 and 5 Pacet Elementary School Mojokerto with a total of 42 students (Mean age

11 years) 19(45,3%) were boys and 23 (54,7%) were girls. Taking into account the number of samples and sampling techniques, the sampling technique used is simple random or simple random sampling where each individual has the same opportunity as a sample and taken by way of melotre, so that the number of samples of 42 students. The research was conducted at Pacet Elementary School Mojokerto in 2015.

Dependent variable of research is Disaster Preparedness Education. Independent variable of research is Student Preparedness to Disaster Risk.

The research instruments used are:

1. learning implementation plan of Disaster Preparedness
2. Pretest and Posttest Questionnaire

Data collected by researcher and student as enumerator amounted to 3 people. The course of research is divided into 3 (three) stages:

1. Preparation Stage:
   1) Proposal Creation
   2) Preparation of the Protocol
   3) Licensing to the relevant Institution.
   4) Preparing the questionnaire.
   5) Selection of 3 person enumerators
2. Implementation Stage:
   1) Completion of informed consent form by respondent.
   2) Data collection of respondent identity of 42 People.
   3) The first step is a preliminary test (pre test) on the knowledge of 10 questions, to determine the ability of Student Preparedness in case of risk of landslide disaster.
   4) Furthermore, the child is given action as much as 3 times meeting using lecture method
   5) After that the final test (post test) is conducted to know the effect of disaster preparedness education to the knowledge of student preparedness to disaster.
   6) Before doing the research, the researcher first prepare some things including:
      a. Creating a learning implementation plan for the implementation of learning activities.
      b. Media, to improve the mitigation capability of the researcher's children using the drawing media and lecture methods
      c. Evaluation, After the researchers do the treatment, then the researchers conducted an evaluation to the Student. The goal is to know the increase of knowledge, students in the face of disaster. In the implementation of this evaluation the researcher gives the problem of knowledge as much as 10 questions, with the score if true 1 then the value 1, if the wrong score is 0.
   7) Perform data analysis of each variable according to objectives and research hypotheses.
3. Completion Stage:
   1) Final Seminar
   2) Report Preparation

Data collected using questionnaire and processed include:

1) Editing
   Editing is an examination activity to re-examine answers, to avoid empty answers and to be prepared for the next process.
2) Coding
   Coding is an encoding activity by giving certain data. Coding is used to facilitate the processing of data. After all the questionnaires are edited, coding is then done, ie changing the data in the form of sentences or letters into data numbers or numbers with each character. Questionnaire code: Pretest => A1, Postest => B1
3) Scoring
   Scoring is part of the research design on the subject's views on perceived matters or the physiological state of the subject. Scoring for this assessment using knowledge scoring results are categorized as follows:
   Good: Score 76-100%
   Fair: Score 56-75%
   Less: Score <56%
4) Tabulating
   Tabulating is the process of arranging data in tabular form. At this stage it is assumed that the data has been processed so that it must be immediately compiled into a formal pattern that has been designed.

After all the data collected checked the completeness, then the researchers conducted a univariate data analysis with frequency distribution and cross tabulation. Then to test the hypothesis by doing data analysis of each variable according to

the purpose and research hypothesis with Wilxocon statistical test.

RESULT

Table 1 : Knowledge Distribution of students before being given disaster preparedness education at Pacet Elementary School Mojokerto in October 2015.

No	Pretest	Frequency	Percentae
1	Good	6	14,3 %
2	Fair	8	19.0 %
3	Less	28	67,0 %
Total		42	100%

From the above table it can be seen that the knowledge of students before getting education Disaster Preparedness, most students knowledge is less (67.0%).

Table 2 : Knowledge Distribution of students After being given disaster preparedness education at Pacet Elementary School Mojokerto in October 2015.

No	Postest	Frequency	Percentage
1	Good	3	83,3 %
2	Fair	5	16,7 %
3	Less	7	0 %
		0	
Total		42	100%

From the table above can be seen that the knowledge of students after getting education Disaster Preparedness, Most of the students' knowledge is good (83.3%).

Tabel 3: Mean of Knowledge Preparedness students before and after the provision of disaster education at Pacet Elementary School Mojokerto in October 2015

Variable	Means Rank	Sign	α=5%	Kete rangan
Mean of Knowledge Preparedness students before and after	16,50	0,000	0,05	Ho ditolak

From the data processing above it is known that the mean value value of 16,50 with p value = 0.000 with the significance of 0.05. It can be concluded that if p value <α then Ho is rejected in the sense of Disaster Preparedness Education can improve the knowledge of student preparedness in the face of disaster.

DISCUSSIONS

Knowledge of Student Preparedness Before Given Disaster Preparedness Education

Researchers conducted pre-test and post-test to students of Pacet Elementary School Mojokerto. Pre test are given before students obtain disaster Preparedness education materials and post test is given after disaster education materials are taught. Materials taught include: knowledge of landslide phenomena Understanding Disaster Preparedness, Nature around (soil, rocks), Types of landslides, Common symptoms of landslides, Impact of landslide disaster, Landslide-prone areas, Rescue during landslides, Disaster threat Aftershocks, matters that can prevent landslides, Parties that can be asked for help when landslide landslide, Evacuation of landslide victims.

Prior to being provided with Disaster Preparedness education, most students of poor knowledge 28 (67.0%), Knowledge is the result of knowing and this occurs after a person senses a particular object, sensing occurs through the five senses, sense of sight, hearing, smell, teste And touch. Much of human knowledge is obtained through the eyes and ears. Knowledge or cognitive is a very important domain for the formation of one's actions (Notoatmojo, 2005). According to Mubarak (2007) there are seven factors that affect one's knowledge, namely education, occupation, age, interests, experience, culture and information.

Many things that affect a person's knowledge include external things related to how a person obtains good information including access to information discovery to economic and social ability in society that can influence patterns of interaction and how to obtain information. Students who have never received disaster prepared material cause Lack of student knowledge about student preparedness for disaster.

Knowledge of Student Preparedness After Conducted Disaster Preparedness Education.

After being given Disaster Alert Education most of the students' knowledge is good 35 (83,3%). This is in accordance with that proposed by Eliza (2004) that education is a learning process that arises because of the need, run with knowledge and that cause the activities of individuals and communities with the aim of producing good behavior.

Based on the data it can be assumed that with the existence of disaster preparedness education conducted to students experience changes to knowledge. This is because students who previously did not know much about disaster preparedness and after receiving disaster awareness education they became more aware, knowledge about the phenomenon of landslide Understanding Disaster Preparedness, Nature around (soil, rocks), Type of landslide, Common symptoms of landslides, Impact of landslide disaster, landslide-prone areas, self-sustaining during landslides, subsequent disaster threats, Things that can prevent landslides, Parties that can be asked for help when landslide, Evacuation of landslide victims. This Means disaster awareness education is necessary for achieving student safety in the event of a disaster.

The Influence of Disaster Preparedness Education on Student of Pacet Elementary School preparedness to Disaster in Mojokerto.

Disaster Preparedness education outcomes mention giving positive or better result of change compared to before given disaster Preparedness education. To know the effect of disaster preparedness education on student preparedness to disaster. It also wants to know disaster preparedness information on disaster which is needed by every student. From the processing it was found that the mean value value of 16,50 with p value = 0.000 with significance equal to 0,05. It can be concluded that if p value $<\alpha$ then Ho is rejected in the sense that there is influence of knowledge preparedness of student before and after given education of disaster preparedness. Thus there is the effect of disaster awareness education knowledge on disaster. This is in line with similar research conducted by Matura (2011) on the influence of health education on the change of knowledge level of the community in Banyuwangi village which stated that there is influence of health education to the change of knowledge level of society with significance value $p < 0,03$ ($p = 0,03$).

This is similar to the research Sorenaryo (2004) which says that knowledge is a very important object for the formation of open behavior (overt behavior). Behavior based on knowledge is generally permanent ie someone who has good knowledge at least have known a problem and can analyze it so as to perform actions better than someone who does not know anything.

Knowledge of preparedness is a set of activities that students must know to anticipate disaster situations quickly and appropriately. Disaster preparedness is a condition of a community both individually and physically and psychically capable in coping with disasters.

CONCLUSIONS

Level of Knowledge of Primary School students before being given majority education with less category that is equal to 67.0%.
Then, Level of Knowledge of Elementary School Students after given the education of majority with good category 83,3%.
There is Influence of Disaster Preparedness Education on Student of Pacet Elementary School preparedness to Disaster in Mojokerto.

REFERENCES

British Columbia, *School Earthquake Safety Guides*, 2000

FEMA, *Earthquake Preparedness (What Every Child Care Provider Need to Know)*, 2006

KPP *Mitigasi Bencana Institut Teknologi Bandung, Program Kesiapan Sekolah Terhadap Bahaya Gempa Buku 1,2,dan 3*, 2003

Krishna S. Pribadi, *Modul Mitigasi Bencana, dalam Lokakarya TOT Guru Muhammadyah*, November 2006

Ronan, Kevin R., Kylie Crellin, David M. Johnston, Kirsten Finnis, Douglas Paton, and Julia Becker (2008).

"Promoting Child and Family Resilience to Disasters: Effects, Interventions, and Prevention Effectiveness." *Children,Youth and Environments 18(1): 332-353. Retrieved* [date] http://www.colorado.edu/journals/cye.

Shiwaku, Koichi, "Toward Innovation in School Disaster Education: Case Research in Kathmandu, Nepal"2007