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THE EFFECT OF EARTHQUAKE DISASTER EDUCATIONAL VIDEOS ON STUDENT PREPAREDNESS

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ABSTRACT
Earthquakes are a disaster that continues to occur to this day, events that cannot be predicted accurately can cause damage and casualties. The island of Java, specifically the Special Region of Yogyakarta, has a history of earthquakes which have resulted in many fatalities and damage to buildings. The majority of victims are children and the elderly because they fall into a vulnerable group. The factor causing the emergence of many victims is due to a lack of knowledge about disaster preparedness. Not all children get the knowledge how to deal with the disaster if it does happen. Objective: The purpose of this study was to determine the level of preparedness for students before and after receiving education about earthquake disasters through video media Method: This type of research uses pre-experimental with pre and posttest one group. The research sample size was 37 respondents using total sampling. The instruments used are standard and have been tested for reliability and validity. Data analysis used the Wilcoxon Sign Rank Test. Results: the study show the effect of earthquake disaster educational videos on student preparedness with a p-value of 0.000. Conclusions : this study is that earthquake disaster educational videos can increase student preparedness in dealing with disasters

Keywords: education; earthquake; preparedness; student; video

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INTRODUCTION

Earthquake is a disaster that often occurs today and is felt throughout the world. Every year it is estimated that more than 100 earthquakes occur in various regions of the world (Feng et al., 2020). Based on Indonesia's location there are the Pacific plate and the Australian plate, this results in a high potential for earthquakes, tsunamis and ground movements (BNPB, 2016). Basically, humans cannot prevent natural processes that cause earthquakes, but one of the keys is to increase mitigation knowledge and preparedness in disaster-prone communities. (Maizar et al., 2021). One of the groups of people who are vulnerable to disasters is children, because they have limited abilities and natural resources to control and prepare themselves. When they feel afraid, they are very dependent on parties outside themselves (Setyaningrum & Muna, 2020). One of the efforts that can be made to increase preparedness is through the education sector, disaster management must be integrated into development programs, including in education. (Nandi & Havwina, 2018).

There are many ways to provide education to improve disaster preparedness and mitigation,

based on research conducted by (Novak et al., 2019) that the interactive education strategy proved to be more effective for increasing disaster preparedness knowledge, than providing written materials (Vásquez et al., 2018). Learning media using video can overcome the limitations of student experience, so that it is easier to understand what is conveyed. It is hoped that students can protect themselves or anticipate disasters (Wulandari, 2018). Schools are educational institutions that function effectively to provide information and change mindsets and behaviors with mitigation in schools (Romadhonah et al., 2019). The red zone for earthquakes is a disaster-prone map. In Indonesia, one of them is the Special Region of Yogyakarta, especially the Bantul district. Based on a preliminary study conducted at the Pundong 1 Elementary School, the school is included in the red zone as an area prone to earthquakes and tsunamis. In addition, the Pundong 1 Elementary School is included in the disaster preparedness school program but has not gone well, the results of interviews with the majority of students said they would run away when an earthquake occurred. Based on information from the teacher that they had never received education about earthquakes using video media, the efforts being made by the school are currently limited to giving students an understanding to gather in the field if an earthquake occurs. The importance of the role of students in handling earthquake disaster management, the purpose of this research is to increase preparedness for students in earthquake disasters. It is hoped that students can be better prepared independently to help themselves when a disaster occurs.

METHOD

The design used in this research is "Pre experimental Design". The population in this study were all students of Pundong 1 Elementary School grades 4 and 5 totaling 7 students aged 9-11 years. All populations are used as research samples. The School Preparedness Level Questionnaire uses the LIPI-UNESCO/ISDR (2006) questionnaire in the form of a questionnaire and structured interviews. The instruments used are standard and have been tested for reliability and validity. The questionnaire was used to determine the level of students' preparedness for earthquake disasters using 4 parameters, namely knowledge and attitudes, plans for emergencies, early warning systems and resource mobilization. Index. The Disaster Preparedness Level Index is less than 40 categories not ready, 40-54 categories less prepared, 55-64 categories almost ready, 65-79 categories ready and 80-100 categories very ready. The data scale in this study is ordinal so it uses the Wilcoxon signed test data analysis test. The ethical test in this study was carried out at KEPK STIKes Surya Global Yogyakarta with No.2.25/KEPK/SSG/II/2023.

RESULTS

Table 1.
Characteristics of Respondents Based on Age and Gender of Grade 4 & 5 Students (n=37)

Characteristics of Respondents	f	%
Age		
9	5	13.5
10	21	56.8
11	11	29.7
Gender		
Male	22	59.5
Female	15	0.5

Table 1. Characteristics of respondents based on age, the highest number of respondents was 10 years with a frequency of 21 and a percentage of (56.8%), based on gender, the highest number of respondents were male with a frequency of 22 and a percentage of (59.5%).

Tabel 2.
Frequency Distribution of Respondents' Attitudes to Grade 4 and 5 Students (n=37)

Category	f	%	f	%
not ready	0	0	0	0
Less Ready	0	0	0	0
Almost Ready	5	13,5	0	0
Ready	32	86,5	3	8,1
Very ready	0	0	34	91,9

Table 2, it shows that the respondent's value before being given an intervention in the form of an earthquake disaster educational video has the highest value in the ready category with a total frequency of 32 students and a percentage of as much as (86.5%), whereas after being given an intervention in the form of an earthquake disaster educational video has the highest value in the very ready category with a total frequency of 34 students and a percentage of (91.9%).

Table 3.
Results of the Wilcoxon Test Attitudes Before and After Given Intervention to Grade 4 and 5 Students (n=37)

preparedness variable	f	*Mean*	Z	*Rank Positive*	Rank negative	Ties rank	P *value*
Pretest	37	1.14	-5.385	29[b]	0[a]	8[c]	0.000
Posttest		1.92					

Table 3 the results of the Wilcoxon test above, it can be seen that a comparison of students' attitudes was obtained before the intervention was carried out in the form of an earthquake disaster video and after being given an earthquake disaster educational video. With the Wilcoxon Signed Rank Test, the pretest and post test values obtained had a Z value of -5,385 significance or a p value of 0.000 ($p < 0.05$). Thus, it can be concluded that "Ha is accepted and Ho is rejected, which means that there is an influence of educational videos on the preparedness of students at Pundong 1 Elementary School Bantul Yogyakarta about earthquake disasters.

DISCUSSION

Table 2 for the frequency distribution before receiving the intervention the majority were in the ready category, namely the range (65 – 79), Pundong 1 Negri Elementary School was included in the red zone in Bantul district, the school had not received regular disaster-related education. Judging from the preparedness indicators, it was found that before the education was carried out, the answers that were most often obtained were in the ready category, although there were still those whose results were almost ready. Preparedness consists of several indicators, namely knowledge, activity plans, disaster warning and resource mobilization. Knowledge about disasters, facilities and infrastructure is a potential that can support or hinder disaster preparedness (Sakurai et al., 2020;Aksa et al., 2020).

This research is also in accordance with research conducted by (Setyaningrum & Setyorini, 2020) that earthquake disaster education can affect student preparedness, education is carried out to influence the level of students' knowledge about their readiness when facing earthquake disasters. Preparedness is an activity carried out to anticipate through organizing and through appropriate steps. Disaster education programs for children aim to change mentality and significant perceptions and behavior changes towards better disaster prevention (Sakurai et al., 2020). School Community Preparedness in Facing Disasters, the lack of school implementation in preparedness planning in the development of early warning systems in schools, maps and socialization of evacuation locations must be improved. Decision-making

and coordination pathways for disaster management must be direct, fast and flexible when a disaster occurs. Therefore, disaster management action plans need to be further developed to prevent panic when facing disaster hazards. It also aims to provide knowledge, skills, motivation to individuals and groups to make decisions so as to reduce vulnerability to disasters, even education for vulnerable groups is an effective action for others. (Torani et al., 2019).

Factors influencing earthquake preparedness in earthquake disaster preparedness training Students who receive earthquake disaster preparedness education have increased knowledge about earthquake phenomena, mitigation measures and emergency response (Suryani et al., 2008).The creation of knowledge about disaster in someone who already has preparedness is indicated by an understanding of the conditions in the environment where that person lives. The literature also suggests that it is important to carry out preparedness activities with interactive methods involving friends, family members, the community to increase positive reinforcement. (Novak et al., 2019). The intended environmental conditions include knowledge about disaster events and disasters that may occur in their area, the impacts they cause and their physical vulnerability, students' knowledge of what actions need to be taken during a disaster and how to deal with disasters. This knowledge is very necessary so that students can respond to disasters quickly and accurately (Setyaningrum & Rumagutawan, 2018).

Based on the theory that age, education, experience, information and facilities are factors that influence knowledge. Knowledge is a learning process by using the five senses that is carried out by someone on a certain object to be able to produce knowledge and skills. Knowledge is very closely related to education so that knowledge will also be wider, and also because education is an attempt to develop personality and abilities inside and outside school and lasts a lifetime. (Notoatmodjo, 2010). Based on the theory that age, education, experience, information and facilities are factors that influence knowledge. Knowledge is a learning process by using the five senses that is carried out by someone on a certain object to be able to produce knowledge and skills. Knowledge is very closely related to education so that knowledge will also be wider, and also because education is an attempt to develop personality and abilities inside and outside school and lasts a lifetime.

CONCLUSION

There is an influence of the earthquake disaster educational video on the level of preparedness of students at SDN 1 Pundong, Bantul Regency. Periodic school preparedness studies need to be carried out because students are exposed to very large disaster risks, even when they occur during school hours.

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