

THE INFLUENCE OF DISASTER PREPAREDNESS BAG VIDEO MEDIA ON EARTHQUAKE PREPAREDNESS

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ABSTRACT

RT 08 Jenggalu, the only RT in Jenggalu and located on the coast, faces a high risk of earthquakes. From a survey on December 29, 2023 and an interview on January 18, 2024, among 190 families, one person knew about the disaster preparedness bag, five people did not understand, and two people knew but did not understand the contents. This study aims to study the effect of disaster preparedness bag video media on earthquake disaster preparedness in RT 08 Jenggalu. This type of research uses pre-experimental using a one group pretest - posttest design. The population of this study was the community of RT 08 Jenggalu with a total of 190 families, the sample in this study was 65 people. Sampling collection technique using purposive sampling. Data collection techniques with primary data and secondary data. Data analysis with normality test, univariate analysis and *Wilcoxon Signed Rank Test*. The research results were obtained from 65 respondents before being given the disaster preparedness bag video material, 24 respondents had high preparedness, 22 respondents had moderate preparedness and 19 respondents had low preparedness. After being given the disaster preparedness bag video material, 57 respondents had high preparedness and 8 respondents had moderate preparedness. There was a difference in knowledge about earthquake disaster preparedness in the community of RT. 08 Jenggalu before and after being given the disaster preparedness bag video material with a p-value = 0.000 < 0.05, meaning significant.

Keywords : Alert Bag, Preparedness, Earthquake

INTRODUCTION

In 2023, significant earthquake events were recorded by the Meteorology, Climatology, and Geophysics Agency (BMKG), PHIVOLCS, and the Thailand Meteorological Department (TMD) in Indonesia. Mount Semeru (alert level III), Ili Lewotolok (alert level II), Anak Krakatau (alert level III), Ibu (alert level II), Dukono (alert level II), and Marapi (alert level II) in Indonesia, and Mayon (alert level 3), Taal (alert level 1), Kanlaon (alert level 1), and Bulusan (alert level 1) in the Philippines reported recent volcanic activity (WHO, 2023)

Based on BMKG data (2022), throughout 2022, there were 912 earthquakes with a magnitude of 2.3 to 6.8 in the Bengkulu province. According to BMKG, there were fewer earthquakes during 2022 compared to 2021, which was 1,128 earthquakes in 1 year (BMKG, 2022)

The territory of Indonesia is classified as a country that is prone to natural disasters and disasters caused by humans. Indonesia is an archipelagic country that is geographically located

at the confluence of three large tectonic plates; the Euroasian and East Pacific plates in the north, and the Indo-Australian plate in the south. This makes Indonesia vulnerable to natural disasters such as earthquakes, floods, volcanic eruptions, and tsunamis. (BPBD, 2022)

Natural disasters are defined as disasters caused by events or a series of events caused by nature, including earthquakes, tsunamis, volcanic eruptions, floods, droughts, hurricanes, and landslides. One of the natural disasters that often occurs is an earthquake. An earthquake is a vibration or shock that occurs on the earth's surface caused by collisions between earth plates, active faults, volcanic activity or rock falls (BNPB, 2022)

Disaster is a potentially traumatic event experienced by individuals, preceded by a critical condition, and limited in time and disasters can be caused by natural, technological, or human events. The International Red Cross, which actively works to provide assistance at natural disaster sites, defines disasters based on the severity of the impact rather than the initial impact, a disaster is a sudden, terrible event that severely disrupts the functioning of a community or society and causes material and immaterial losses that may exceed the ability of humans to cope using their own resources (Rahiem, 2020)

Preparedness is one of the disaster management processes to anticipate and reduce the risk of disasters, which can be in the form of knowledge or attitudes that are carried out (Adi., nd). Disaster preparedness is very important because it can minimize the risk of loss of life, loss of property and changes in the community's way of life during natural disasters (Rahmad, et al., 2021). Increasing disaster preparedness in the community can be done in the form of social activities such as disaster training (Maula Mar'atus Solikhah1, 2020)

Families who are able to work together and recognize and collect the resources needed in a disaster, both before and after a disaster, are more likely to be able to cope with the risk of disaster in the family. (Nurhidayati, I., & Bahar, 2018)

Audio-visual media (video) can be developed for extension media if optimally prepared because it has been proven effective in increasing public knowledge (Habibah, 2021). The use of puzzles, posters and videos are media that are thought to be suitable for educating children and adolescents about natural disasters because they contain game, entertainment and educational values.

The results of the study show that a disaster preparedness bag (Tasina) is one of the important requirements that must be owned by every person or every family in facing a disaster (Kusumastuti, 2020). A disaster preparedness bag (Tasina) is an urgent need in providing an understanding of disaster preparedness that may come at any time. These important items are grouped to facilitate understanding, including personal protective equipment, personal hygiene equipment, first aid equipment, communication equipment, clothing and food and multipurpose equipment (Laksoro, 2021).

The impact of the disaster will also affect family archives. These archives are evidence that if damaged or destroyed due to a disaster can harm all parties. Especially archives that are records of activities or events in various forms and media that are made and received by family members in supporting family activities (Augustinah, 2021). Therefore, this disaster preparedness bag (Tasina) is also designed to be waterproof and heat resistant, so that it can minimize the possibility of damage to equipment, documents, or other archives when a disaster occurs.

To reduce the impact of a greater disaster, the community's ability to know disaster preparedness bags makes it easier for the community when facing a disaster (Nadia., 2022).

Disaster preparedness bag is a bag prepared for family members when a disaster or other emergency occurs. Used to help evacuate to a safe location and to survive until help arrives. What is prepared in the disaster preparedness bag: Important letters, Medicine/First Aid Kit, Mask, Lighting aids and Whistle (Nurul Fitria et al., 2023). on 03-03-2023, Initial information from the Health Crisis Center regarding the Earthquake disaster that occurred in 9 sub-districts,

namely Selebar, Gading Cempaka, Teluk Segara, Muara Bangka Hulu, Kampung Melayu, Ratu Agung, Ratu Samban, Singaran Pati, Sungai Serut, Bengkulu City (Ministry of Health, 2023)

One of the coastal areas in Bengkulu City that deserves attention regarding disaster mitigation is Gading Cempaka District, Bengkulu City. Jenggalu 3 which is part of Lingkar Barat Village, Bengkulu City. Jenggalu 3 is included in the coastal area. Coastal areas are areas that are vulnerable to natural disasters, so special attention is needed in disaster mitigation. The Jenggalu 3 area is an area located right in front of the entrance to the Indian Ocean, there is no boundary between land and water areas. In addition, the majority of the population works as fishermen (Fernalia et al., 2022).

RT 08 Jenggalu is the only RT in the Jenggalu area. RT 08 itself is the area that experiences the worst impacts when an earthquake occurs because its position is right on the coast. RT 08 has 5 alleys named Jl Jenggalu 1, Jl Jenggalu 2, Jl Jenggalu 3, Jl Jenggalu 7 and Jl Citanduy 3.

Based on an initial survey conducted on the community of RT 08 Jenggalu on December 29, 2023, there were 190 families and an initial survey was conducted again by conducting interviews on January 18, 2024. From the results of interviews with 9 people as respondents, 1 person knew about disaster preparedness bags, 5 people were less aware of disaster preparedness bags and 2 people already knew about disaster preparedness bags but did not know the contents of the disaster preparedness bag.

RESEARCH METHODS

This research was conducted on June 25 - in RT 08 Jenggalu with the object of research being residents of RT 08. This type of research uses pre-experimental using a one group pretest - posttest design. In this study, the population is the community of RT 08 Jenggalu with a total of 190 families. The sample to be taken using purposive sampling is 65 people. Data analysis techniques use normality tests, univariate and bivariate analysis use *Wilcoxon Rank Test*.

RESEARCH RESULT

Univariate Analysis

Analysis This was done to obtain the average level of preparedness of the Community of RT. 08 Jenggalu regarding earthquake disasters and disaster preparedness bags before and after the provision of disaster preparedness bag material videos. After this research was conducted, the following data were obtained:

Tabel 1. Average Community Readiness About Earthquake Disaster Preparedness And Disaster Preparedness Bags Before Distributing Disaster Preparedness Bag Video Materials in RT. 08 Jenggalu

Preparedness	Frequency (n)	Percentage	Average
Tall	24	37%	35.32
Currently	22	34%	
Low	19	29%	
Total	65	100%	

The table above shows that before being given the disaster preparedness bag video material, the preparedness of the Community of RT. 08 Jenggalu was obtained high preparedness of 24 respondents with a percentage (37%), medium preparedness of 22 respondents with a percentage (34%) and low preparedness of 19 respondents with a percentage (29%).

Table 2. Average Community Readiness Regarding Earthquake Disaster Preparedness and Disaster Preparedness Bags after Video Distribution
Disaster Preparedness Bag Material on Rt. 08 Jenggalu

Preparedness	Frequency (n)	Percentage	Average
Tall	57	88%	42.92
Currently	8	12%	
Low	0	0%	
Total	65	100%	

The table above shows that after being given the disaster preparedness bag video material, the preparedness of the Community of RT. 08 Jenggalu was obtained high preparedness of 57 respondents with a percentage (88%) and moderate preparedness of 8 respondents with a percentage (12%). The data shows that there is an increase in knowledge about earthquake disaster preparedness after being given the disaster preparedness bag video material.

1. Normality Test

This data normality test is carried out to determine whether the data is not normally distributed using the Shapiro-Wilk test as follows:

Table 3. Data Normality Test Results

	Kolmogorov-Smirnova			Shapiro Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Pre-test	.149	65	.001	.921	65	.000
Post-test	.136	65	.005	.950	65	.010

a. Lilliefors Significance Correction

Based on the table above, it shows that the p-value = 0.001 was obtained for preparedness before being given the disaster preparedness bag video material and the p-value = 0.005 for preparedness after being given the disaster preparedness bag video material in the Kolmogorov-Smirnov test. In addition, in the Shapiro-Wilk test, the p-value = 0.000 for preparedness before being given the disaster preparedness bag video material and the p-value = 0.010 for preparedness after being given the disaster preparedness bag video material.

This means that all variables have a p-value <0.05, so it can be concluded that the preparedness data is not normally distributed. So it meets the requirements of the Wolcoxon Signed Rank test and paired samples are not used.

Bivariate Analysis

The results of the recapitulation of the research on the influence of disaster preparedness bag video media on the preparedness of the RT. 08 Jenggalu community in facing earthquake disasters are presented in the following table:

Table 4. Differences in the preparedness of the RT. 08 Jenggalu community in facing the earthquake disaster before and after being given disaster preparedness bag video material

Preparedness	Mean	Median	SD	Min	Max	p-value
Pre Test	35.32	37.00	6,070	25	45	0.000
Post Test	42.92	43.00	3.465	31	49	

Based on table 6, the results show that the average preparedness before being given the disaster preparedness bag video material was 35.32 and the average preparedness after being given the disaster preparedness bag video material was 42.92 with a p value of $0.000 < 0.05$, which means that there is a difference in the preparedness of the RT. 08 Jenggalu Community in facing the earthquake disaster before and after being given the disaster preparedness bag video material. This means that there is an influence of the disaster preparedness bag video media on the preparedness of the RT. 08 Jenggalu Community in facing the earthquake disaster.

Wilcoxon signed rank test

Bivariate analysis was conducted to determine the effect of disaster preparedness bag video media on the preparedness of the RT. 08 Jenggalu Community in facing earthquake disasters using the Wilcoxon Signed Ranks Test. Based on the results of the study can be seen in the following table:

Table 5. Ranks

	N	Mean Rank	Sum of Ranks
Negative Ranks	0a	.00	.00
Positive Ranks	57b	29.00	1653.00
Ties	8c		
Total	65		

a. Post-test Knowledge < Pre-test Knowledge

b. Post-test Knowledge > Pre-test Knowledge

c. Knowledge Post-test = Pre-test Knowledge

Based on The ranks table above shows that the negative ranks value is 0, which means that no respondents experienced a decrease in knowledge between before and after being given the disaster preparedness bag video material. The positive ranks value is 57, which means that 57 respondents experienced an increase in knowledge between before and after being given the disaster preparedness bag video material. The ties value is 8, which means that there are 8 respondents who have the same value between before and after being given the disaster preparedness bag video material.

Table 6. *Wilcoxon Signed Ranks Test*

	Post-test - Pre-test
Z	-6.572b
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Based on the results of statistical tests *Wilcoxon Signed Ranks Test* above the p-value is obtained = $0.000 < 0.05$ means significant. The results of this test explain that there is an influence of disaster preparedness bag video media on the preparedness of the RT. 08 Jenggalu Community in facing the earthquake disaster.

DISCUSSION

Based on the results of the study of the average community preparedness regarding earthquake disaster preparedness and disaster preparedness bags before the provision of disaster preparedness bag material videos in RT. 08 Jenggalu, we can see significant variations in the level of community preparedness. In this study, the average preparedness was 35.32 with a standard deviation of 6,070. The minimum value was 25 and the maximum value was 45.

A total of 24 respondents or 37% of the total respondents are in the high preparedness category with an average value of 41.58. This shows that a large group of people have good knowledge and adequate preparedness in facing earthquake disasters. This group has mostly been exposed to information about emergency procedures and mitigation steps that must be taken before, during, and after an earthquake occurs.

However, there are 22 respondents or 34% who are in the moderate preparedness category with an average value of 35.22. This group has basic knowledge about disaster preparedness but is not fully prepared or does not fully understand the steps to be taken. This indicates a need to improve understanding and skills in dealing with disasters. With this improvement, it is hoped that they can join the group that is ready and able to respond to disasters more effectively.

The most concerning is that there are 19 respondents or 29% of the total respondents who are in the low preparedness category with an average value of 27.52. This condition shows that almost a third of the community does not have adequate knowledge and readiness to face an earthquake disaster. This lack of preparedness can be caused by various factors such as minimal access to information, low levels of education, or lack of experience in dealing with previous disasters. This condition is very risky considering that earthquakes can occur suddenly and have a destructive impact.

Community knowledge about disaster preparedness has a significant influence on their readiness in facing emergency situations. Communities that have sufficient knowledge about early signs of disaster, evacuation procedures, and disaster preparedness bag preparation will be better prepared and able to reduce the risks faced. Conversely, lack of knowledge can cause confusion and delays in taking appropriate action when a disaster occurs, which can ultimately increase the risk of injury or even death.

Overall, these data reflect that although some communities are prepared, there are still some communities that need more attention in terms of disaster education and preparedness. The total number of respondents was 65 people, and from these data, it is clear that increasing knowledge and preparedness through effective methods is very much needed. Providing disaster preparedness bag video material is expected to be one of the effective solutions in increasing community preparedness. Video material can provide clear, structured, and easy-to-understand information so that it can be accessed by all levels of society.

The importance of disaster preparedness cannot be ignored. Educational efforts through appropriate media such as educational videos must continue to be improved. In addition, there needs to be regular training and disaster simulations so that the community not only knows the theory but is also able to apply this knowledge in real situations. Thus, the community in RT. 08 Jenggalu is expected to be able to achieve an optimal level of preparedness, so as to reduce the risk and impact of earthquake disasters.

Based on the results of research conducted by (Komariah et al., 2021), one of the factors that influences a person's knowledge is exposure to information. Information can be obtained from various sources, both at school and by reading from various mass media such as the internet and also books or magazines and newspapers.

In addition, research (Ismawati 2022) explains that the most important aspect of disaster preparedness and response is training and education because the quality of disaster training and education received often determines subsequent preparedness for disaster response.

Based on the research conducted on the average community preparedness regarding earthquake disaster preparedness and disaster preparedness bags after the provision of disaster preparedness bag material videos in RT. 08 Jenggalu, it can be seen that there has been a significant increase in the level of community preparedness. In this study, the average preparedness was 42.92 with a standard deviation of 3,465. The minimum value was 31 and the maximum value was 49

As many as 57 respondents or 88% of the total respondents are now in the high preparedness category with an average value of 43.84. This shows that the majority of the community has achieved a good level of knowledge and preparedness in dealing with earthquake disasters. This increase is due to the effectiveness of the disaster preparedness bag video material which provides clear and easy-to-understand information about the steps to take before, during, and after an earthquake occurs.

In addition, there were 8 respondents or 12% who were in the moderate preparedness category with an average value of 36.37, which previously this group was a respondent with low preparedness. This shift indicates a significant increase in knowledge and preparedness after they were given the disaster preparedness bag video material. There were no respondents in the low preparedness category after the material was given, indicating that all respondents experienced an increase in their knowledge and preparedness.

This data reflects that providing disaster preparedness bag video material is very effective in increasing community preparedness. The total number of respondents remains at 65 people, and from this data, it is clear that increasing knowledge and preparedness can be achieved through the right educational methods. Video material can provide structured and easy-to-understand information so that it can be accessed by all levels of society.

Adequate knowledge about disaster preparedness is very important because it can affect the readiness of the community in facing emergency situations. Communities that have sufficient knowledge about early signs of disaster, evacuation procedures, and preparation of disaster preparedness bags will be more prepared and able to reduce the risks faced. Conversely, lack of knowledge can cause confusion and delays in taking appropriate action when a disaster occurs, which can ultimately increase the risk of injury or even death.

The importance of disaster preparedness cannot be ignored. Educational efforts through appropriate media such as educational videos must continue to be improved. In addition, there needs to be regular training and disaster simulations so that the community not only knows the theory but is also able to apply this knowledge in real situations. Thus, the community in RT. 08 Jenggalu is expected to be able to achieve an optimal level of preparedness, so as to reduce the risk and impact of earthquake disasters.

The results of this study are in line with research conducted by (Komariah et al. 2021), explaining that audio-visual educational media about earthquake disaster preparedness can provide a better understanding to someone who pays attention to it so that the theoretical concepts that have been conveyed can become certain skills to deal with earthquake disaster preparedness.

In addition, according to (Romdhonah, et al., 2019) education is an activity or effort to convey a message to the community, group or individual. With the hope that with this message the community, group, or individual can gain better knowledge. After being given education about preparedness in facing earthquake disasters in the control group, there was a difference in the level of knowledge of the pre-test and post-test as expected.

Based on the results of univariate analysis before being given the disaster preparedness bag video material, it can be seen that out of 65 respondents, there were 24 people (37%) with an average value of 41.58 who were in the high preparedness category, 22 people (34%) in the medium preparedness category with an average value of 35.22, and 19 people (29%) in the low preparedness category with an average value of 27.52. After being given the disaster preparedness bag video material, there was a significant change in the level of community preparedness. Of the 65 respondents, 57 people (88%) were in the high preparedness category with an average value of 43.84 and 8 people (12%) were in the medium preparedness category with an average value of 36.37. There were no respondents in the low preparedness category after the intervention. These data indicate that there was a significant increase in community knowledge and preparedness for earthquake disasters after being given the disaster

preparedness bag video material. Previously, 22 people who were in the moderate preparedness category were respondents who were previously in the low preparedness category, which means that all respondents experienced an increase in knowledge.

From the results of the bivariate analysis, the Wilcoxon Signed Ranks Test was conducted to determine the effect of providing disaster preparedness bag video material on community preparedness. The Wilcoxon Signed Ranks Test was used because the earthquake disaster preparedness data (pre-test) and (post-test) were not normally distributed. Based on the results of the Ranks test, the negative ranks value is 0, which means that no respondents experienced a decrease in preparedness. The positive ranks value is 57, which means that 57 respondents experienced an increase in preparedness. The ties value is 8, which means that there are 8 respondents who have the same preparedness value between before and after being given the material.

Based on the results of the Wilcoxon Signed Ranks Test, the Z value is -6.572 with a p-value of 0.000. A p-value <0.05 indicates that the results are significant. This means that there is a significant effect of providing disaster preparedness bag video material on community preparedness in RT. 08 Jenggalu. This video material is effective in increasing community knowledge and preparedness for earthquake disasters.

Adequate knowledge about disaster preparedness has a significant impact on community readiness in facing emergency situations. Communities that have sufficient knowledge about early signs of disaster, evacuation procedures, and disaster preparedness bag preparation will be better prepared and able to reduce the risks faced. Conversely, lack of knowledge can cause confusion and delays in taking appropriate action when a disaster occurs, which can ultimately increase the risk of injury or even death.

Therefore, improving disaster preparedness is very crucial. Educational efforts through appropriate media such as educational videos must continue to be improved. In addition, regular training and disaster simulations need to be carried out so that the community not only understands the theory but is also able to apply it in real situations. In this way, the community in RT. 08 Jenggalu is expected to achieve an optimal level of preparedness, so as to reduce the risk and impact of earthquake disasters.

The results of this study agree with (Komariah, et al. 2021), which states that video education about preparedness in dealing with earthquake disasters can support a person's knowledge and increase awareness of the importance of increasing knowledge about earthquake disaster preparedness.

The results of the study (Shodiq et al. 2022), confirmed that in education the process of changing preparedness can be based on community self-awareness, stimulus or stimulation is needed, namely by providing disaster management education. Where if the stimulus received by the community is good, the attention, understanding, and acceptance of the community will be better, resulting in a response or change in preparedness, where what they do can also be in accordance with what is expected, namely an increase in community preparedness in dealing with disasters.

The results of this study are in line with the findings of Ali's (2018) research, which showed an increase in knowledge after intervention using video media. Video media is considered effective because it channels knowledge through the sense of sight, which is empirically obtained around 75-87% of human knowledge. In the context of health promotion, video media functions as a means to clarify and facilitate understanding of information, achieving health education goals optimally.

The results of Aulady & Setiawan's (2024) research explain that when compared to research using poster media which also resulted in significant improvements, digital video learning media is a more effective media than poster media because it is considered more interesting and easier to understand.

Based on the description above, it was found that there was an influence before and after being given the Disaster Preparedness Bag video material on Disaster Preparedness Bags and Community Preparedness in Facing Earthquake Disasters in RT. 08 Jenggalu, meaning that the Disaster Preparedness Bag material had a good impact on increasing community knowledge and preparedness in facing earthquake disasters.

CONCLUSION

1. Of the 65 respondents before given the disaster preparedness bag video material obtained high preparedness of 24 respondents with a percentage (37%), medium preparedness of 22 respondents with a percentage (34%) and low preparedness of 19 respondents with a percentage (29%).
2. Of the 65 respondents after being given the disaster preparedness bag video material, 57 respondents were found to have high preparedness with a percentage of (88%) and 8 respondents had moderate preparedness with a percentage of (12%).
3. There is an influence of providing emergency bag video material on knowledge about earthquake disaster preparedness in the community of RT. 08 Jenggalu.

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