The Influence of Comic Media Education "SIMEBA" (Siap Menghadapi Banjir) on the Self-Efficacy Level of Flood Disaster Preparedness Among Mts Muhammadiyah Sirau Students in 2023

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ABSTRACT

Background: Floods cause various kinds of losses in the form of property losses and social losses. Floods in Sirau Village routinely occur every year because of the village's geographical location which is concave, but the community is always not ready to make any preparations if a flood occurs, such as planning evacuation locations, carrying out evacuation simulation exercises, not preparing a first aid box or preparing a special place to store archives. important. People need to have good self-efficacy and knowledge to overcome problems in order to avoid their impacts. Method: This research used a pre-experimental design with one group pretest-posttest. The sample was 46 respondents using proportional random sampling technique. Then the Wilcoxon test is used for statistical tests. This research instrument uses a questionnaire to collect data, and comic media as an educational intervention. Results: This research shows that the majority of respondents received a good category after the intervention with a Self Efficacy level of 73.9%. The p value obtained from the Wilcoxon test is 0.00 < 0.05. This means that there is a significant influence on the level of self-ability on preparedness for flood disasters. Conclusion: Good Self Efficacy will influence the Respondent's abilities and skills in managing or dealing with uncontrollable situations such as disasters.

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1. INTRODUCTION

Disaster is a disruption to the normal functioning of a community or society that has natural or non-natural or human-caused factors so that the disaster results in environmental damage, loss of property, psychological impact, or loss of life[1].Conditions that often occur after a disaster are losses in the form of property and social losses which can affect various aspects of life, such as being an economic and health burden and affecting the quality of life of the victims. the community needs to have strong Self-Efficacy to overcome this flood problem in order to avoid its impact[2]. Disaster preparedness education is critical to ensure that people are informed and mentally prepared to respond quickly and appropriately before, during and after a

disaster. The possibility of future or unexpected dangers can also be reduced by disaster education. To support increased self-knowledge, especially for school children, an effective strategy is needed in a simple and easy-to-understand way to convey messages that they can still understand at home.

A study on the prevention of burns in Italy with 370 school children found a significant increase in Self Efficacy and knowledge after being given a burns prevention package, one of which was comics. Comics can attract attention because messages can be conveyed through pictures and words. Comics are a popular form of graphic art and are in great demand apart from their attractive illustrations, so they can be used as a potential medium for education [3].

A preliminary study conducted by researchers on August 20 2022 by interviewing 5 "Junior High School" (SMP) students in Sirau Village found that 3 respondents said they did not make any preparations in the event of a flood, such as planning evacuation/family evacuation locations, conducting simulation exercises evacuation within the family and storing important document archives. However, 2 other respondents understood preparedness measures for flood disasters. From 5 respondents, information was also obtained that 3 respondents did not understand preparedness for flood disasters and avoid hazard risks and the impacts of disasters in the surrounding environment, did not have the information, knowledge and ability to respond.

The vulnerable age group of school children and the elderly is included in the disaster vulnerable group and is a group with basic understanding to prevent further disaster effects, so effective strategies are needed to convey messages that they can still understand in the home environment. Observing the background matters, it can be concluded that there are still many individuals who do not know about knowledge and preparedness for flood disasters.

Self-Efficacy can influence the effects of flood disasters directly or indirectly. The level of Self Efficacy will later influence individual activity choices based on their thoughts based on feeling optimistic or pessimistic about their ability to survive challenges or uncontrolled conditions

The development of effective communication strategies is needed to support increasing independent knowledge, especially for school children, where the government has launched a program through the Disaster Preparedness School (SSB) and Disaster Resilient Village (DESTANA) programs. Comics can attract attention because messages can be conveyed through pictures and words. Comics are a popular form of graphic art and are in great demand apart from their attractive illustrations, so they can be used as a potential medium for education [4] From the above phenomenon, the researcher concludes that it is still very rare to use media to increase Self Efficacy, one of which is Comic media. So researchers use Comic media as a form of disaster education material that is interesting, easy to understand and in accordance with the characteristics of school age children.

2. RESEARCH METHOD

This research is quantitative research, with a pre-experimental design type one group pretest-posttest. This research was conducted in February 2023 in Sirau Village, Banyumas Regency with a total research sample of 46 respondents with the inclusion criteria: Students who are physically and mentally healthy, MTs Muhammadiyah Sirau students, willing to be respondents, willing to participate in the research until completion.

The data collection tool in this study was a modified questionnaire sheet from previous researchers, the questionnaire consisted of 15 items for the Self Efficacy level and 10 items for the Knowledge questionnaire, the questionnaire was declared Valid and Reliable because the R table value was above 0.361 and the Alpha value was above 0.60. respondent characteristics (age, gender). This questionnaire uses a Likert scale for Self Efficacy and Guttman for Knowledge.

The data analysis used was univariate analysis to determine the frequency distribution of the respondent's characteristics (age, gender), and bivariate analysis to determine the effect of the independent variable (Comic Media Education) on the dependent variable. (level of Self Efficacy and Knowledge).

3. RESULT AND DISCUSSIONS
3.1. Univariat
1. Characteristics of Respondents

The results of respondent age and gender at MTs Muhammadiyah Sirau are presented in table 1.

Table 1. Distribution Frequency Age Responden and Gender

Characteristics	Frequency	Presentage
1. Age		
14 Years	20	43.5%
15 Years	22	47.8%
16 Years	4	8.7%
2. Gender		
Men	23	50%

Woman		23	50%

Based on the data above, it can be seen that the number of respondents was 46 people with 4 people aged 16 years (8.7%), 14 years 20 people (43.5%) and the most being 15 years (47.8%). The gender of the respondents consisted of 23 female respondents and 23 male respondents. Based on the data above, it can be seen that the number of respondents was 46 people with the number of presentations (50% : 50%).

2. **Self Efficacy Level Category**

The research was conducted on February 4 2023 at Madrasah Tsanawiyah Sirau. The respondents in this study were 46 students from grades VIII and IX who were chosen randomly. The research results were obtained from the pre-test and post-test questionnaire sheets which are primary data. The data that has been collected is processed by computer using SPSS in accordance with the objectives of this research. In the following, the researcher will present a univariate analysis on each table as well as a bivariate analysis to determine the influence between the Comic media "SIMEBA" and the level of Self Efficacy and Knowledge using the Wilcoxon test with p value ≤ 0.5.

The results of the Self Efficacy Level Category before and after being given an intervention using the "SIMEBA" comic media are presented in the table 2.

Table 2. Frequency Distribution of Self-Efficacy before and after given Intervention

	Category	Frequency	Precentage
1.	**Before**		
	Good	4	8.7%
	Enough	5	10.9%
	Not Enough	**37**	**80.4%**
2.	**After**		
	Good	**34**	**73.9%**
	Enough	11	23.9%
	Not Enough	1	2.2%
	Total	**46**	**100%**

From table 2 above, it is found that the average Self Efficacy of respondents before the intervention with the Poor Category was 37 respondents with a percentage (80.4%), the Enough Category was 5 respondents with a percentage (10.9%), and the Good Category was 4 people with a percentage (8.7%). However, after the intervention was carried out, it was found that the average Self Efficacy of respondents in the Good Category was 34 respondents with a percentage (73.9%), the Enough Category was 11 respondents with a percentage (23.9%), and the Less Category was 1 respondent with a percentage (2.2%).

The data above shows that there is an increase in Self Efficacy from the smallest and largest categories of respondents after being given Disaster Preparedness Education about floods using comic media.

3.2. **Bivariat**

The Influence of "SIMEBA" (Ready to Face the Flood) Comic Media Education on the Level of Self-Efficacy and Knowledge of Class VIII and IX Students of MTs Muhammadiyah Sirau.

Table 3. Relationship Between Self-Efficacy, Motivation and Level of Independence

	Variabel	**N**	**P**
1. **Self Efficacy**			
Pre Test Sel Efficacy	Komik "SIMEBA"	46	**0.00**
Post Test Self Efficacy	Komik "SIMEBA"	46	**0.00**

Based on table 3.1 above, the results of the Wilcoxon test on respondents' level of self-efficacy regarding preparedness for flood disasters show that the significant value of p 0.00 is smaller than ≤0.05, so it can be concluded that there is an influence on providing comics as a medium for students' knowledge about preparedness for flood disasters

4. DISCUSSIONS

In general, the role of adolescents in disaster risk management can be divided into three categories, namely pre-disaster, during-disaster and post-disaster roles. Regarding the pre-disaster role, the results of the study by Wisner and Fothergill [5] show that adolescents need to have knowledge regarding first aid measures. The study found that during a disaster, teenagers were often present near other young people who were injured. Therefore, knowledge of first aid is important to minimize or prevent severe injuries and fatalities.

Comics have advantages such as adding vocabulary to readers, attracting attention, fostering interest in reading, assisting in emotional development, helping facilitate learning and can stimulate imagination. Comics can be used as an alternative learning media in an effort to increase the self-efficacy of young students to understand natural disasters where the disaster itself cannot be prevented but victims can be minimized with early preparedness.

This is supported by the research of Apriyanto and Ningsih [6] in their research on the influence of comic media on self-efficacy in dealing with tidal floods. that the material being taught requires media that is concrete in form which is not only displayed in text form but also accompanied by various visual forms. Comics are one of the effective print communication media, in the form of a visual narrative, accompanied by text and images as visual reinforcements that seem to invite the reader to imagine. Communication will run smoothly if it is delivered clearly, coherently and interestingly. The results of this study are because comics are able to provide entertainment as well as education to school-age children so that there is an increase in self-efficacy.

Mason [7] said that disasters have many psychological impacts, especially for children and adolescents. The symptoms they experience are trauma, emotional disturbance, and depression. Media is important to support natural disaster learning. In education, the media functions as a means to achieve learning objectives. Learning media must be able to provide an enjoyable experience and meet students' individual needs, because each student has different abilities. Media has various types which can be classified into visual, audio visual and computer based. One of the appropriate visual-based media to support natural disaster learning is comics. Comics are a popular art form, especially among children and as such can be used as a potential medium for education and increasing Self Efficacy [8].

According to Hamida [9] comics are able to present simple stories and written in everyday language so that they are easily understood and interested by various groups, both children and adults. Comics can enrich visual intelligence and can encourage children to increase their knowledge with the stories told in comics. According to researchers, comics are able to present simple stories and written in everyday language so that they are easily understood and interested by various groups, both children and adults. Comics can enrich visual intelligence and can encourage children to increase their knowledge and self-efficacy with the stories presented in comics.

Formal disaster education can be carried out in schools involving the role of teachers as mentors. However, not every teacher understands and understands material about disasters and how to reduce disaster risk. So it is very necessary to provide material about disasters to school residents, especially students. Knowledge about disasters from an early age can have a big influence on changes in conditions before and after a disaster. Providing material about disasters, especially to students at school, can be done in various ways. Apart from including this material in every subject or implementing disaster preparedness in schools through extracurricular activities at school, schools also need to carry out disaster-based socialization for students.

Education about disaster response is very important for students, because it does not rule out the possibility that various student activities at school have the potential to pose a threat of disaster. One of the disasters that students can experience at school is a flood. Students at school must always be alert and responsive when a flood disaster occurs, especially to minimize the risks that will occur due to a flood disaster. In this case, a series of activities are very necessary that can reduce disaster risk, one of which is by providing education about disasters[10].

The educational activities aim to increase students' knowledge of flood disasters, so that students understand what to do and what not to do when a flood disaster occurs. Students will understand disaster response knowledge better if it is practiced directly in extracurricular activities. Because basically all activities involving student creativity and activeness are very easily captured by students' memories[11].

4. CONCLUSION AND RECOMMENDATION

Conclusion

Respondents were students in grades VIII and IX. The level of Self Efficacy and Knowledge of respondents before the intervention was carried out obtained the Less category totaling 37 people, Enough 5 people and Good 4 people for the Level of Self Efficacy and for knowledge obtained the Good category totaling 2 people, 5 people Enough and 39 people lacking. after the intervention, there were 34 people in the Good category, 11 people enough, 1 person less, for the Self-Efficacy Level and for Knowledge, there were 32 people in the Good category, 11 people enough, 2 people less

Recomendation

It is best for schools to hold extracurricular programs related to disaster management and regularly conduct training in the form of materials or practice in the field with assistance from competent parties working in the disaster sector. Future researchers can carry out further research by making comics more interesting, or by making comparisons

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