Jurnal Ilmiah Penelitian
Multidisiplin Ilmu
Terbit Online :
https://journal-mandiracendikia.com/index.php/mdi/index
ISSN: 3032-1638
Mandira Cendikia

THE INFLUENCE OF POSTER MEDIA ON FLOOD DISASTER EMERGENCY RESPONSE KNOWLEDGE IN ADOLESCENTS

Tria Nopi Herdiani, Suhita Tri Oklaini, Septa Putri Utami
[1]Undergraduate Midwifery Study Program at Tri Mandiri Sakti Health College, Bengkulu
Email: direja.mandira1415@gmail.com

ABSTRACT

Floods can damage and destroy homes and farms, displace families, pets and livestock, damage crops, and disrupt agriculture and businesses. This study aims to study the Influence of Poster Media on Emergency Response Knowledge in Facing Flood Disasters among Adolescents at SMPN 11 Bengkulu City. This type of research uses pre-experimental using the One Group Pretest-Posttest design. The population of this study was all students of SMPN 11 Bengkulu City in the 2023/2024 academic year totaling 536 respondents. The sample in this study84 studentsusing Cluster Random Sampling technique. Data collection technique with primary data. Data analysis with univariate analysis, normality testusing kolmogorov smirnov techniqueand bivariateusing the Wilcoxon signed rank test. The results of the study were obtained from 84 respondents before being given poster media material, 2 respondents had Good Knowledge with a percentage (2%), sufficient knowledge 29 respondents with a percentage (35%) and insufficient knowledge 53 respondents with a percentage (63%). From 84 respondents after being given poster media material, 79 respondents had Good Knowledge with a percentage (94%), sufficient knowledge 5 respondents with a percentage (6%) and no respondents with insufficient knowledge. There is an influence of poster media on adolescent knowledge with emergency response in dealing with flood disasters at SMPN 11 Bengkulu City with a ρ value <0.05 or 0.000.

Keywords: Knowledge, Poster, Disaster Emergency Response

INTRODUCTION

According to WHO (World Health Organization), a disaster is any event that causes damage, ecological disruption, loss of human life, or deterioration of health or health services on a certain scale that requires a response from outside the community or area affected. Which disasters are also grouped into three types, namely; Natural disasters such as earthquakes, tsunamis, volcanoes, storms and droughts, Social disasters due to human actions such as conflict, war, terrorist attacks, technological failures and pests, Mixed natural and human disasters such as floods, forest fires and food shortages. While floods are events where land that is usually dry is not a swampy area becomes inundated by water, this is caused by high rainfall and topographic conditions of the area in the form of lowlands to concave(Rahim et al., 2023).

Based on data collected from the National Disaster Management Agency (BNPB) from data collected by all Regional Disaster Management Agencies (BPBD) during 2021, there have

been 5,402 disaster events and 99.5% of the events throughout 2021 were hydrometeorological disasters. The prominent disaster events that resulted invictimlives and damaged homes throughout 2021 were the flood disaster in West Sulawesi (January 15, 2021) resulting in 107 deaths, 11,123 injuries and 60,505 displacement. Then the Cyclone Seroja disaster in East Nusa Tenggara (April 4, 2021) resulted in 184dieworld, 47 missing and 136 injured. Meanwhile, throughout the period from January 1 to July 31, 2022, the number of disaster incidents recorded was 2,152 incidents.(BNPB, 2022).

According to the Bengkulu City BPBD, there were three sub-districts affected by the flood, including Muara Bangkahulu Sub-district, precisely Bentiring, Rawa Makmur and Pematang Gubernur Villages. Sungai Serut Sub-district in Tanjung Agung, Tanjung Jaya, and Sukamerindu Villages. Then Ratu Agung Sub-district, precisely in Sawah Lebar, Sawah Lebar Baru, Nusa Indah and Tanah Patah Villages. The flood was triggered by heavy rain accompanied by strong winds pouring down on Bengkulu City with moderate to heavy rain intensity causing flooding in several areas and Water Level (TMA) ranging from 20 cm to 200 cm. The impacts caused by the flood were 2,242 families affected, 956 families evacuated, 2 schools submerged, 2 village offices submerged, 3 mosques submerged, 50 hectares of rice fields submerged (BPBD, 2023).

Floods are one of the most frequent natural disasters and cause hardship to communities and economic losses. Floods can damage and destroy homes and farms, displace families, pets and livestock, damage crops, and disrupt agriculture and businesses. Floods are a disaster that always occurs every year in Indonesia, especially during the rainy season. Based on its morphological conditions, floods are caused by the relief of the Indonesian landscape which is very varied and the many rivers that flow between them. Floods generally occur in the western part of Indonesia which receives more rainfall than the eastern part of Indonesia.(Susanti & Husna, 2021).

The selection of media or learning tools in conveying information is very important because it determines the success or failure of the process of sharing information with targets to achieve predetermined goals.(Ahmad et al., 2023). The use of poster media can be developed for outreach media if it is optimally prepared because it has been proven to be effective in increasing public knowledge and is a media that is thought to be suitable for use in educating teenagers about natural disasters.(Prayogi, 2022).

Posters are a communication medium that can be used to convey messages so that they are easier to understand. Persuasive communication can be needed in designing poster media and social media as a place to share information to the public. The creation of poster themes can use problems that exist in the local environment.(Salsabila & Ramlan, 2023).

Based on researchPangestu et al, (2022)entitled development of educational poster media for disaster preparedness for school students. This study focuses on poster media as an intermediary for preparedness materials for school students. The conclusion of this study is the achievement of research objectives and the use of poster media learning media can help teachers to improve student knowledge.

Based on data from SMPN 11 Kota Bengkulu from the curriculum representative, there are 536 students consisting of 179 students from class VII, 178 students from class VIII, and 179 students from class IX. Most of the students of SMPN 11 Kota Bengkulu have experienced flooding, especially those who live in the Rawa Makmur, Sawah Lebar, Bentiring and Tanjung Agung areas, where these areas are flood-prone and often experience flooding. This incident caused problems in the students' learning process, so the researcher felt the need to examine the attitudes of students whose homes had experienced flooding. Therefore, the researcher was interested in conducting research on students of SMPN 11 Kota Bengkulu who live in flood-prone areas such as Rawa Makmur, Sawah Lebar, Bentiring, and Tanjung Agung with the title "The Influence of Poster Media on Knowledge of Flood Disaster Emergency Response in

Adolescents at SMPN 11 Kota Bengkulu". Then the results of the initial survey conducted by researchers on December 10, 2023 by interviewing 9 students, there were 5 students who could not answer questions and 4 students who could answer questions about flood disasters.

RESEARCH METHODS

This type of research uses pre-experimental with One Group Pretest-Posttest design. The population of this study were all students at SMPN 11 Bengkulu City who live in flood-prone areas such as Rawa Makmur, Sawah Lebar, Bentiring and Tanjung Agung. Data obtained from the Deputy Curriculum, the number of students in grades VII, VIII, and IX of SMPN 11 Bengkulu City was 536 students.Determinationsampledone withusing the Random Sampling technique as much as84 students.Data collection techniques using primary data, namely after the questionnaire sheet.Data analysis techniques usingunivariate analysis, normality test withkolmogorov smirnov technique, andbivariate analysis with the Wilcoxon signed rank test.

RESEARCH RESULT

1. Univariate Analysis

This analysis was conducted to obtain an overview of emergency response knowledge.disasterflooding in adolescents at SMPN 11 Bengkulu City. After this research was conducted, the following data were obtained:

Table 1. Description of knowledge of emergency response to flood disasters among adolescents at SMPN 11 Bengkulu City before the provision of poster media

Knowledge	Frequency (n)	Percentage
Good	2	2%
Enough	29	35%
Not enough	53	63%
	84	100%

Based on table 1 above, it shows that before being given the poster media material, the knowledge obtained by adolescents at SMPN 11 Bengkulu City was Good Knowledge of 2 respondents with a percentage (2%), sufficient knowledge of 29 respondents with a percentage (35%) and insufficient knowledge of 53 respondents with a percentage (63%).

Table 2. Description of knowledge of emergency response to flood disasters among adolescents at SMPN 11 Bengkulu City after providing poster media

Knowledge	Frequency	Percentage
Good	79	94%
Enough	5	6%
Not enough	0	0%
	84	100%

Based on table 2 above, it shows that after being given poster media material, the knowledge of adolescents at SMPN 11 Kota Bengkulu was obtained. They had Good Knowledge of 79 respondents with a percentage (94%), sufficient knowledge of 5 respondents with a percentage (6%) and no respondents with poor knowledge. The data shows that there is

an increase in knowledge about flood disaster emergency response after being given poster media material.

2. Bivariate Analysis

a. Normality Test

This data normality test is carried out to determine whether the data is distributed normally.normalwith the Kolmogorov-Smirnova and Shapiro-Wilk tests as follows:

Table 3. Data Normality Test Results

	Kolmogorov-Smirnova			Shapiro Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Pre-test	.163	84	.000	.935	84	.000
Post-test	.334	84	.000	.800	84	.000

a. Lilliefors Significance Correction

Based on the table above, it shows that the p-value obtained is 0.000 forknowledgebefore being given poster media material and p-value = 0.000 for knowledge after being given poster media material in the Kolmogorov-Smirnov test. In addition, in the Shapiro-Wilk test, the p-value = 0.000 for knowledge before being given poster media material and the p-value = 0.000 for knowledge after being given poster media material.

This means that allvariablehas a p-value < 0.05, which means that the data is not normally distributed, so it meets the requirements of the Wilcoxon signed rank test and the Paired sample T-Test is not performed.

The results of the recapitulation of the research on the influence of poster media on adolescent knowledge with emergency response in facing flood disasters at SMP N 11 Bengkulu City in facing earthquake disasters are presented in the following table:

Table 4. Differences in knowledge of adolescents at SMP N 11 Bengkulu City regarding emergency response in dealing with flood disasters before and after being given poster media material.

Knowledge	Mean	Median	SD	Min	Max	p-value
Pre Test	4.73	5.00	1,645	1	9	0.000
Post Test	8.33	8.00	0.717	6	10	

Based on table 4, the results show that the average knowledge before being given poster media material is 4.73 and the average knowledge after being given poster media material is 8.33 with a p value of 0.000 <0.05, which means that there is a difference in the knowledge of adolescents at SMP N 11 Bengkulu City regarding emergency response in dealing with flood disasters before and after being given poster media material. This means that there is an influence of poster media on adolescent knowledge with emergency response in dealing with flood disasters at SMP N 11 Bengkulu City.

b. Wilcoxon Signed Rank Test

Bivariate analysis was conducted to determine the influence of poster media onknowledgeadolescents with emergency response in facing flood disasters in class VIII SMPN 11 Bengkulu City Wilxocon Signed Ranks Test. Based on the research results can be seen from the following table:

Table 7. Ranks

	N	Mean Rank	Sum of Ranks
Negative Ranks	0a	.00	.00
Positive Ranks	84b	42.50	3570.00
Ties	0c		
Total	84		

a. Post-test Knowledge < Pre-test Knowledge
b. Post-test Knowledge > Pre-test Knowledge
c.KnowledgePost-test = Pre-test Knowledge

Based on the ranks table above, it shows that the negative ranks value is 0, which means that no respondents experienced a decrease in knowledge betweenbeforeand after being given poster media material. The positive ranks value obtained was 84, which means that 84 respondents experienced an increase in knowledge between before and after being given poster media material.

Table 7

	Post-test - Pre-test
Z	-7.993b
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 = 0.000 < 0.05 is obtained, which means it is significant. The results of this test explain that there is an influence of poster media on adolescent knowledge with responsivenessemergencyin dealing with flood disasters in class VIII SMPN 11 Bengkulu City.

DISCUSSION

Based on the resultsstudywhich has been conducted on the knowledge of adolescents at SMPN 11 Bengkulu City about flood disaster emergency response before being given material through poster media, the frequency distribution of knowledge shows that the majority of respondents (53 people or 63%) have insufficient knowledge. As many as 29 respondents (35%) have sufficient knowledge, and only 2 respondents (2%) have good knowledge.

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.

After being given educational materials through poster media, there was a significant increase in the knowledge of adolescents at SMPN 11 Bengkulu City regarding flood disaster emergency response. Based on the results of the study, the majority of respondents (79 people or 94%) had good knowledge, while 5 respondents (6%) had sufficient knowledge. No respondents had insufficient knowledge after this intervention.

In addition, Zara, et al. (2024) assessed that there was an increase in knowledge after being given education because of the knowledge provided so that respondents then obtained and remembered the knowledge so that the results before and after the intervention were different. This can be seen from the questions answered where previously respondents answered incorrectly but after being given an intervention in the form of education through posters, most respondents were then able to answer correctly.

Based on the results of univariate analysis before being given poster media material, it can be seen that out of 84 respondents, there were 2 people (2%) who were in the good knowledge category, 29 people (35%) in the sufficient knowledge category, and 53 people (63%) in the insufficient knowledge category. After being given poster media material, there was a significant change in the level of knowledge of adolescents about flood disaster emergency response. Of the 84 respondents, 79 people (94%) were in the good knowledge category and 5 people (6%) were in the sufficient knowledge category. There were no respondents in the insufficient knowledge category after the intervention.

Based on the results of the Wilcoxon Signed Ranks Test, the Z value = -7.993 with p-value = 0.000. The p-value < 0.05 indicates that the results are significant. This means that there isinfluencesignificant from the provision of poster media material on adolescent knowledge at SMPN 11 Bengkulu City. This poster material is effective in increasing adolescent knowledge and preparedness for flood disasters.

The results of the Wilcoxon test are in line with the descriptive results discussed previously, where the majority of respondents experienced an increase in knowledge to the categoryGoodafter being given material through poster media. This poster successfully conveys important information about the definition of flooding, the factors that cause it, the steps that must be taken when a flood occurs, and how to mitigate disasters in an interesting and easy-to-understand way for teenagers.

The results of the content study are in line with the research of Muskananfola & Feoh (2023) with a p value of 0.000, which means that there is an influence of health education with booklet media on knowledge about TSB in the community. Booklets were chosen as a medium because they have advantages, namely they can be carried, stored and shared with others. Booklets are also a medium with an interesting collection of words and letters so that readers can understand and remember the health information provided.

In addition, the research results of Purwani et al. (2019) with test resultseffectivenessmedia through paired test calculations using SPSS 22 obtained a t-count result of -42.083 with a significance value (2-tailed) of 0.000 so that 0.000 <0.05, it can be concluded that the use of graphic media is effective in increasing flood disaster preparedness in children aged 5-6 years.

CONCLUSION

1. Of the 84 respondents before being given the poster media material, it was obtained that the knowledge of adolescents at SMPN 11 Bengkulu City had Good Knowledge of 2 respondents with a percentage (2%), sufficient knowledge of 29 respondents with a percentage (35%) and insufficient knowledge of 53 respondents with a percentage (63%).
2. Of the 84 respondents before being given the poster media material, it was found that the knowledge of teenagers at SMPN 11 Bengkulu City was Good Knowledge for 79 respondents with a percentage (94%), sufficient knowledge for 5 respondents with a percentage (6%) and no respondents had poor knowledge.
3. There is an influence of poster media on adolescent knowledge of emergency response in facing flood disasters in class VIII of SMPN 11 Bengkulu City with a ρ value > 0.05 or 0.000.

BIBLIOGRAPHY

Ahmad, FF, Yunus, P., & Modjo, D. (2023). The Effect of Health Education Using Audio Visual on Flood Disaster Preparedness Knowledge and Attitudes of Students at SMP Negeri 7 Gorontalo. Journal of Educational Innovation and Public Health, 1(2), 144–153.

BNPB. (2022a). Basic Disaster Management and Disaster Risk Reduction. Bnpb, VIII, 21.

BNPB. (2022b). flood disaster in Bengkulu city, Bengkulu province. https://pusdalops.bnpb.go.id/2022/09/04/report-harian-pusdalops-bnpb-jumat-02-september-2022/

Komariah, A., Puspitasari, P., & Fazriana, E. The Influence of Education on Knowledge of Earthquake Natural Disaster Preparedness in Pagerwangi Village Cadres, Lembang. Bandung: Dharma Husada Bandung College of Health Sciences.

Muskananfola, IL, & Feoh, FT (2023). The Effect of Health Education with Disaster Preparedness Bag Booklet on the Knowledge of Cyclone Seroja Survivors in Kupang Regency. SUAKA INSAN NURSING JOURNAL (JKSI), 8(1), 30-35.

Novi, O., & Dwi Rahmah, F. (2021). The Relationship between Knowledge and Adolescent Preparedness in Facing Floods in Samarinda. Borneo Student Research, 2(2), 2011–2016.

Pangestu, P.A., Tisngati, U., Aristya, F., Guru, P., & Dasar, S. (2022). Development of Preparedness Education Poster Media. 2, 109–115.

Prayogi, A. (2022). Journal of Community Empowerment and Innovation. Journal of Community Empowerment and Innovation, 1(1), 32.

Purwani, A., Fridani, L., & Fahrurrozi, F. (2019). Development of graphic media to increase flood disaster preparedness. Jurnal Obsesi: Journal of Early Childhood Education, 3(1), 55-67.

Rahim, A., Rifai, A., Soleha, A., Fauziah, HJ, & Syain, M. (2023). The Role of Local Government in Flood Disaster Management According to Indramayu Regency Regional Regulation No. 3 of 2016. JIIP - Scientific Journal of Educational Sciences, 6(4), 2160–2163. https://doi.org/10.54371/jiip.v6i4.1841

Adolescent, AHP (2023). Adolescent Development. Developmental Psychology, 155, 2024.

Salsabila, A., & Ramlan, R. (2023). Application of Persuasive Communication Through Poster Design for Social Media Content of Perum Jasa Tirta II. VISWA DESIGN: Journal of Design, 3(1), 34–41. https://doi.org/10.59997/vide.v3i1.1409

Susanti, E., & Husna, C. (2021). Prevention of Infectious Diseases Caused by Floods Knowledge, Attitude, and Actions of Local Community to Prevent Infectious Diseases Caused by Flood. Scientific Journal of Nursing Faculty Students, 2(4), 1–9.

Zara, N., Novalia, V., Utariningsih, W., Yuziani, Y., Meutia, Z., & Imanda, F. (2024). Effectiveness of Short Education Movie and Poster Media on Knowledge in Prevention of Infectious Diseases Post Flood Disaster in the Community in the Keutapang Lhoksukon Fostered Village, North Aceh. Scientific Journal of Humans and Health, 7(1), 180-189.