



THE INFLUENCE OF HEALTH EDUCATION ON DROUGHT DISASTER MITIGATION KNOWLEDGE

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ABSTRACT	Keywords
Disaster health education is included in disaster mitigation which aims to increase public knowledge and minimize casualties caused when a disaster occurs. School-aged children are a vulnerable group who are still unfamiliar with disaster knowledge, so there is a need for health education about disasters. The aim of the research is to determine the influence of health education on students' knowledge of drought disaster mitigation. This research uses a Pre-Experimental research type that uses a One-Group Pre-Test and Post-Test Design, and uses a total sampling technique with a sample size of 46 respondents. The results of the research before being given health education showed that 29 (63.0%) respondents were at a good level of knowledge with an average score of 10.17. The research results after being given health education increased students' knowledge level, namely 41 (89.1%) respondents had good knowledge with an average score of 11.93. The data analysis used was the Wilcoxon test, with a significance level of $\alpha=0.05$, the result was $p\ 0.000<\alpha$ so that H_0 was rejected and H_a was accepted. From these results it can be concluded that there is an influence of health education on students' knowledge of drought disaster mitigation.	Health Education, Knowledge, Drought Disasters

INTRODUCTION

The unitary state of the Republic of Indonesia is a country with the equator at a cross position between two continents and two oceans and is located at 6° north latitude-11° south latitude and 95° east longitude-141° east longitude and has geographical, geological, hydrogeological conditions, as well as demographics that are

prone to disasters (BNPB, 2020). One of them is a drought disaster, this can occur because the prevailing climate in Indonesia is monsoon which is known to be sensitive to changes in ENSO or El-Nino Southern Oscillation (Mediani A et al., 2019). Drought itself is a disaster that occurs slowly and can last for a long time, this is due to the

nature of drought disasters which arise in a crawling manner.

Disasters can happen at any time and to anyone, whether children, adults or the elderly. School-aged children are one of the vulnerable groups most at risk of being affected by disasters, this is because there is still a lack of understanding of the risks around them which results in a lack of knowledge about disasters, especially the mitigation stages (Lestari R T P et al., 2020). Elementary school students are in middle childhood, during middle childhood they will be very psychologically vulnerable and have the possibility of experiencing stress due to disasters. In this case, it is very important to increase understanding through early knowledge.

Based on the Decree of the Regent of Sukoharjo No. 360/358 of 2023 concerning the Emergency Alert Status for Drought, Forest and Land Fires from 1 June to 30 September 2023, Bulu District is one of the sub-districts included in this status. In Bulu sub-district there are several villages that experience water difficulties during the dry season, one of which is Kamal village and Kunden village which have the same geographical location, namely being in the highlands, apart from that, according to the latest BPBD data dropping clean water for Sukoharjo Regency until January 5 2024 In Kamal village there were 240 people affected and in Kunden village there were 650 people affected. This is the basis for researchers in conducting research on public elementary school students in the village.

From the results of a preliminary study conducted on December 16 2023 at one of the elementary schools in Bulu District which is in an area with emergency alert status for drought disasters in grades 5 and 6, it was found that 16 students still felt confused and did not understand the drought disaster even though they had previously received socialization or encouragement.

Apart from that, the results of the interview with the school principal showed that the elementary school environment experienced difficulties in clean water due to the dry season for the last 5 to 6 months, even from 3 sources of water access points it was difficult to get out, drought occurred every time. The aim of the research was to determine the influence of health education on knowledge of mitigation. drought disaster for students in the school area. From the results of this preliminary study, the author is interested in conducting research with the title "The Effect of Health Education on Students' Knowledge of Drought Disaster Mitigation".

METHOD

This research is a type of Pre-Experimental research that uses a One-Group Pre-Test and Post-Test Design, with the disclosure of cause and effect relationships by involving one group of subjects, without a comparison group. The research was conducted in April-June 2024 on 46 respondents with a total sampling technique consisting of students in grades 5 and 6. The instrument used in the research was a questionnaire consisting of 14 valid statements with the results of the validity test being r calculated > 0.3440 and the reliability test results are $0.747 > 0.60$, so the statement can be said to be reliable.

RESULTS

Univariate Analysis

Table 1. Characteristics of Respondents

Characteristics of Responden	Frequency	%
Age		
10 years	2	4.3
11 years	22	47.8
12 years	17	37.0
13 years	4	8.7
14 years	1	2.2

Total	46	100
Gender		
Male	31	67.4
Female	15	32.6
Total	46	100
Class		
Class V	17	37.0
Class VI	29	63.0
Total	46	100

The majority of respondents were aged 11 years, 22 (47.8%) respondents

Table 2. Descriptive pre-test and post-test statistics

Descriptive Statistics	Pre-Test	Post-Test
Mean	10.17	11.93
Standard Error	0.251	0.244
Median	10.50	12.00
Mode	11	13
Standard Deviation	1.704	1.652
Sample Variance	2.902	2.729
Kurtosis	-0.611	-0.563
Skewness	-0.312	-0.541
Range	7	6
Minimum	6	8
Maximum	13	14
Sum	468	549

In this data, it is known that the mean value before being given health education was 10.17 and after being given health education the mean value increased to 11.93. For the median value before being given health education, namely 10.50, after being given health education, the median value is 12.00. The mode value before being given health education was 11 and after being given health education was 13.

Table 3. Pre-test knowledge level

No	Characteristics	Frequency	%
1.	not enough	0	00.0
2.	enough	17	37.0
3.	good	29	63.0
Total		46	100.0

The level of knowledge of respondents before being given health education on drought disaster mitigation was mostly in the good category at 29 (63.0%) respondents with an average value of 10.17. Even though the majority of respondents are in the good and sufficient knowledge level category, this can certainly be improved so that more respondents are at a good level of knowledge about drought disaster mitigation.

Table 4. Post- test knowledge level

No	Characteristics	Frequency	%
1.	Not enough	0	00.0
2.	enough	5	10.9
3.	good	41	89.1
Total		46	100.0

The level of knowledge of post-test respondents increased in the good category to 41 (89.1%) respondents with an average score of 11.93.

Bivariate Analysis

Table 5. Normality Test Results

Knowledge	Shapiro-Wilk (p)	Information
Pre Test knowledge level	0.030	Not normally distributed
Post Test knowledge level	0.003	Not normally distributed

In the Shapiro-Wilk test, it is known that the probability value of the pre-test knowledge level is $p(0.030) < 0.05$, which means the data is not normally distributed, in the post-test probability data it is $p(0.003) < 0.05$ so the data is not normally distributed. From this data, the statistical test used is the Wilcoxon test

Table 6. Wilcoxon test results

Knowledge Level	N	Positive Ranks	Ties	Negative Ranks	Sig (2-tailed)
Pre Test –Post Test	46	35	11	0	0.000

Based on the results of the Wilcoxon test with a significance level of $\alpha=0.05$, a value of $p\ 0.000<\alpha$ was obtained, which means that H_0 was rejected and H_a was accepted, and there were 35 respondents who experienced an increase (positive rating) in knowledge after being given health education on drought disaster mitigation and there were no respondents. which experienced a decline (negative rating).

DISCUSSION

In line with research conducted by Hutasoit M et al (2019) regarding the influence of health education on students' knowledge in dealing with disasters, the majority of research respondents were aged 11 years. Children aged 10-14 years are in early adolescence, where at this age thinking patterns are still influenced by situational (environmental) factors (Hidayat B, 2023).

Based on the gender frequency distribution, the number of male respondents was 31 (67.4%) greater than female respondents. In the class frequency distribution table, out of 46 most of the respondents were in class VI with a total of 29 (63%) students. According to research by Damayanti M and Sofyan O (2022) regarding the relationship between the level of education and the level of knowledge of society, there is a relationship between the level of education and the level of knowledge, if the level of education is higher, the higher the level of knowledge.

The level of knowledge of respondents before being given health education on

drought disaster mitigation was mostly in the good category at 29 (63.0%) respondents with an average score of 10.17. Even though the majority of respondents are in the good and sufficient knowledge level category, this can certainly be improved so that more respondents are at a good level of knowledge about drought disaster mitigation.

This statement is in accordance with the Indonesian community service journal, Rakuasa H and Mehdila M C (2023) regarding the implementation of disaster mitigation education, that the level of knowledge about disaster mitigation still needs to be increased with the aim of maximizing the increase in students' knowledge about disaster mitigation and creating disaster resilient schools.

The level of knowledge of post-test respondents increased in the good category to 41 (89.1%) respondents with an average score of 11.93. These results are in line with research by Pratiwi N H et al (2020) on increasing knowledge of disaster mitigation through disaster preparedness activities, where the results obtained after being given action experienced an increase in knowledge, in pre-action, 5 (38.46%) children achieved completeness and after participating in activities for 2 cycles increased to 11 (84.61%) children.

Education has a causal relationship with awareness and changes in behavior, where education can influence a person's awareness, if awareness about something has arisen in a person it will cause changes in behavior (Dewi D J K, 2022).

Based on the results of the Wilcoxon test with a significance level of $\alpha=0.05$, the result was $p\ 0.000<\alpha$, which means that H_0 was rejected and H_a was accepted, and there were 35 respondents who experienced an increase (positive ranks) in knowledge after being given health education on drought

disaster mitigation and there were no respondents. which experienced a decrease (negative ranks). So it can be concluded that there is an influence of health education on drought disaster mitigation on students.

According to Widiyastuti N E et al (2022), success in health education can be influenced by material factors such as the theory presented and the method of delivery, natural factors which can be the conditions and situation of the research location, instrument factors used, as well as individual factors in learning.

In line with research by Simandalahi T et al (2019) regarding the influence of health education on students' knowledge about disaster preparedness, a p value of 0.01 was obtained and there was an influence of health education on students' knowledge about disaster preparedness.

According to Fitriani F et al (2022), increased knowledge can occur because it includes the provision of information and a learning process, where individuals can explore what is hidden within themselves by encouraging them to think and develop their personality and free themselves from ignorance.

Increasing students' knowledge of drought disaster mitigation is very meaningful as an effort to mitigate disasters which will reduce the risk in the event of a drought disaster and grow a generation with broader knowledge of disasters in the future. This is in line with the results of research by Ariyani R and Endiyono E (2020) regarding the influence of disaster mitigation education on community preparedness, where one way to reduce loss of life and property is through disaster mitigation measures such as learning and education.

CONCLUSIONS

Based on the results of research that has been conducted, the level of students' knowledge about drought disaster mitigation before being given health education was 29 (63.0%) respondents in the good category with an average score of 10.17. After being given health education, the level of students' knowledge about drought disaster mitigation increased to 41 (89.1%) respondents in the good category, with an average score of 11.93. In the Wilcoxon test with a significance level of $\alpha=0.05$, the result was $p\ 0.000<\alpha$ and it can be concluded that there is an influence of health education on students' knowledge of drought disaster mitigation.

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