

EFEKTIVITAS PENDIDIKAN KESEHATAN DEMAM BERDARAH DENGUE TERHADAP TINGKAT BEBAS LARVA (ABJ) DI PUSKESMAS PEJERUK MATARAM

Sopian Khalid, Misroh Mulianingsih, Zulkahfi, Anna Laila, Aswati

Stikes Yarsi Mataram

Email: misroh.yarsi@gmail.com

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Abstrak

The number of DHF sufferers in NTB in 2015 occurred 1,000 cases, with two people being declared dead. From January to November Mataram Public Health reported 388 total number cases, the total number of cases was 388. The data obtained at Pejeruk Primary health care regarding dengue cases showed that IR: 26.27 with 11 cases, Larvae-free rate (AB in 2017 amounted to 88.95%. This study aims to determine the effectiveness of dengue hemorrhagic fever education on Zero Number of Larva in Karang Baru. Only the working area of Puskesmas Pejeruk, Mataram City. This type of research is a quasi-experimental research design with one group pretest-posttest design. The population is 32 people, with a sample of 15 people. The research instrument is a questionnaire. The data analysis uses the Wilcoxon test. The results show that there are differences Free Rate of Dengue Hemorrhagic Fever (ABJ DBD) between before and after Health Health education (Jumantik) in the Karang Baru Environment in the Work Area of Puskesmas Pejeruk, Mataram City, with a p-value (0,000). Health educators (Jumantik) can increase the Larvae-free rate of Dengue Hemorrhagic Fever (ABJ DBD) in Karang Baru Wila Environment yeah, the work at Pejeruk Primary health care, Mataram City. Conclusion: Health workers can provide health education to increase public knowledge about DHF and the importance of PSN activities in preventing high cases of DHF.

BACKGROUND

World population averages about 2.5 billion (40%) of the world's population at risk of dengue transmission. WHO estimated 50-100 million cases of dengue infections every year, including 500,000 dengue cases and deaths caused by dengue. (WHO, 2015).

According to data from the Ministry of Health Republic Indonesia (2010), Southeast ASIA is the highest case of DHF every year. (Kemenkes RI, 2010).

From the data from the Directorate of Prevention and Control of Vector-borne and Zoonotic Diseases, the Indonesian Ministry of Health in 2014 that every year the number of cases of dengue fever fluctuates to 100,347,907 of whom die. Meanwhile, in 2015 there were 129,650 people with 1071 deaths. And in 2016, about 202,314 people with 1,593 deaths. (Profil Kesehatan Indonesia, 2018).

Various efforts have carried out vector eradication for decades, but the results have not been optimal for solving Indonesia's disease problems (Sunarsih et al., 2016). In 2017, from January to May, 17,877 cases and 115 deaths were recorded. The 2015 Incidence Rate (IR) increased to 50.75 per 100,000 population; in 2016, it rose to 78.85 per 100,000 population in 34 Provinces. This figure is still far from the national IR target of 49 per 100,000 population (Profil Kesehatan Indonesia, 2018).

Based on data from public health Office NTB, within two months, the DHF cases reached more than 300 patients. Meanwhile, in 2015 from January to December, it increased to 1,000 patients with two deaths (Dikes NTB, 2015).

Based on data from the Mataram City Health office, reported that from January to November 2017, there were a total of 388 cases where the distribution according to gender was 204 cases of men and 184 women, with one person avowed dead (Dikes Mataram, 2015).

* Corresponding Author
E-mail: misroh.yarsi@gmail.com

The data obtained at Pejeruk Primary health care regarding dengue fever recorded an IR: 26.27 with 11 cases. ABJ in 2015 was 83.86%, while ABJ in 2016 was 86.63% and ABJ in 2017 was 88.95%, and there were no cases of death (Puskesmas Pejeruk, 2017)

The government has made various efforts to prevent the disease by increasing public awareness of health education's importance. Health education on DHF has also been carried out in multiple regions to improve the mindset, behaviour, and public awareness to prevent dengue disease. The community has long been familiar with communication methods from 2004, which will impact a change in applying mosquito nest eradication through the Communication for Behavioral Impact approach, which aims to implement, implement, monitor, and evaluate. However, the community has not fully participated in the prevention of DHF because of the lack of public interest in health education regarding DHF.

DHF cases can be prevented by dealing with the main cause, namely the *Aedes aegypti* mosquito, because mosquitoes live in the environment around residents' homes, both inside and outside the house. The community must participate in the physical and chemical eradication of the *Aedes aegypti* mosquito, which determines a program's success. (Kemenkes RI, 2012).

The Indonesian Ministry of Health has done everything it can to handle dengue cases in Indonesia. The first method is fogging, followed by sprinkling larvicides in water reservoirs, but this method has not been optimal in eradicating adult mosquitoes. The Ministry of Health has developed a way of handling dengue cases by involving the community to improve mosquito eradication behaviour (PSN) continuously and can be applied in daily activities because this method

is very effective compared to the previous form. the way is doing 3M Plus activities (closing, draining water reservoirs, burying used items that can hold rainwater, and using the spray and insect repellent to prevent mosquito bites. (Kemenkes RI, 2013).

Most people have the paradigm that fogging is an effective way of eradicating mosquitoes, but this method is not suitable in reality. The fogging activity starts from case finding and submitting fogging to the nearest hospital. (Depkes RI, 2007).

Various methods are used to eradicate mosquitoes, only the need for attention, thoroughness, and tenacity of all family members, the importance of environmental hygiene to avoid mosquito bites, and reduce the number of infectious mosquito populations knowledge of how mosquitoes live.

Based on the above background, it is necessary to research the Effect of Dengue Hemorrhagic Fever Health education on Larvae-free rate (ABJ) in the KarangBaru Environment, the Work Area of the Pejeruk Primary health care , Mataram City

METHODS

This research type is quasy-experimental with one group pretest-posttest design (S. Notoatmodjo, 2012). This study aimed to see the effect of dengue fever health education on achieving the mosquito nest eradication program in the Karang Baru Environment, the Work Area of the Pejeruk Primary health care Mataram City. The experimental group, namely the group, was given dengue hemorrhagic fever health education. The control group was not to receive dengue fever education. The Control group and intervention group receive the pretest before the treatment. Post-test was done on both group after the intervention group receive the treatment (Nursalam, 2012)

RESULT

Jumantik Characteristics

Table 1. Distribution of Respondents based on age, education, and occupational characteristics of Jumantik in the Karang Baru Environment, the Work Area of the Pejeruk primary health care, Mataram City in 2018.

No.	Variable	N	(%)
1	Age		
	Youth End (17-25)	2	13.33
	Adult Early (26-35)	5	33.33
	Adult End (36-45)	7	46.66
	Elderly Early (46-55)	1	6.66
	Total	15	100
2	Education		
	Elementary school	4	26.67
	Junior High	1	6.66
	High school	6	40
	PT	4	26.67
	Total	15	100
3	Profession		
	Housewife	7	46.67
	Traders	4	26.67
	Teacher	2	13.33
	Civil servants	2	13.33
	Total	15	100

Based on the table above shows that the majority of respondents are in the final adult category as many as seven people (46.66%), six people (40%) have a high school education, seven people (46.67%) with jobs. , namely the housewife

Table 2. The status of the larva's presence in the respondent's house

No.	Status	Frequency (Org)	Percentage (%)
1.	Larva free	15	100
Total		15	100

Table 2 shows that the respondent's house's free larva status is 15 people (100%).

Table 3. Presence of larvae before and after health education larvae-free rate

No.	Variable	Existence Larva	Σ	%
1	Before jumantik	Negative	11	73.3
		Positive	4	26.7
		Total	15	100
2	After Jumantik	Negative	15	100
		Positive	0	0
		Total	15	100

The table above shows that there is an increase in 4 houses (26.7%) that have the larvae-free rate

Table 4. Analysis of the influence of health education on

No.	Wilcoxon test	Negative Ranks	Positive Ranks	Ties	Z	p-value
1	After Before Extension	4	0	11	-2,000	0.046

The table above shows 11 houses (73.3%) with negative larvae and four houses with positive larvae before health education. After health education, there were 15 houses (100%) with negative genetics. In other words, after health education, all houses

were free from larvae. Based on Wilcoxon test p-value (0.046) $< \alpha$ (0.05), which means that there is an effect of dengue hemorrhagic fever health education on Larvae-free rate (ABJ) in the Karang Baru area. from Pejeruk Primary Health Care, Mataram

Distribution of larva presence

Table 5. Distribution of larvae in RT 01 to RT 03 in the Karang Baru Environment, the Work Area of the Pejeruk Primary Health Care, Mataram

No.	RT	Σ Home checked	Examination larva	
			House	
			(+)	(-)
1	01	5	-	18
2	02	5	-	5
3	03	5	-	2
Total 15			0	25

The table above shows th at the mosquito larvae checks were mostly found in RT 01 out of 18 respondents, while the few found in RT 03 were two respondents.

DISCUSSION

The presence of mosquito larvae has the potential to cause dengue fever. Based on the research results above, the free rate of mosquito larvae is 15 (100%). According to the research (Hardayati et al., 2011), most (92%) of the community houses in the district of Pekanbaru, a mosquito larva-free city, only 8% of the community houses found mosquito larvae. (Hardayati et al., 2011).

Based on the results of the Wilcoxon statistical test that there is a change with the increase in the free rate of DHF larvae between the pretest and posttest health education (jumantik) in the KarangBaru Environment, the Work Area of the Pejeruk primary health care, Mataram City with a p-value (0.046) < α (0.05).

In line with research conducted, Mangidi et al., (2019) show that the percentage of larvae-free rate (ABJ) in the intervention group increased between the pretest by as much as 56%. The posttest experienced an increase in the inter-count from week 1 to week 4 with a percentage of 72% (first week), 82% (week- 2), 87% (week 3), and 92% (week 4).

Following the research conducted by Kustini (2008) that after being given health education, it can improve the quality of active behaviour in the prevention of DHF cases with a mean value (11.636) higher than the mean value of active behaviour in prevention of DHF before health education (9,242). Same with the opinion of Notoatmodjo (2003) in Kustini (2008) that action is a reaction in a person after a thought, response, mind, and knowledge about dengue disease,

which aims to increase understanding about a disease, to improve one's awareness in overcoming an illness while acting.

The larvae-free rate reflects how big the density of *Aedesaegypti* mosquito larvae in an area. Low ABJ will result in residents of the state at high risk of having dengue fever (Fidayanto et al., 2013).

Based on monitoring mosquito larvae's observation results, one family was found in the water reservoir, namely a bath. Most of them work as HOUSEWIFE (7 families). One of the factors that caused mosquito larvae's presence at the respondent's house in the third week; namely, the respondent forgot to eradicate the mosquito nest or the sprinkling of abate powder jumantik they were busy in the fields. Some respondents sprinkled abate powder one week before the 3rd larva examination. This study is by Mubarokah (2013) research that they forgot to sow the abate powder given by Friday because they were busy in the fields.

The implementation of PSN activities is an activity that significantly affects the presence of mosquito larvae in the water reservoir. The larva in water reservoirs will reduce if the community implement PSN activities according to the procedures. If the organization has implemented the PSN DBD practice in the same way as they have participated in the prevention of DHF because this aspect is a health and environmental maintenance behaviour.

PSN activities can be maximized if all facilities and infrastructure support these activities, namely by involving the community to be more enthusiastic in

carrying out PSN activities, which are one of the best ways to prevent DHF. Yuli and Darnoto (2008) in Mubarokah (2013) argue that it is necessary to involve community leaders in increasing public awareness. For example, RT heads, religious leaders, and others will directly encourage the community in various community activities, one of which is the prevention of dengue disease.

In Murdani (2016) study in Banyuwangi, it was found that there was a relationship between the free larvae rate of dengue fever. If the surrounding area was free of larvae, then the site was also free from dengue.

Inspection of mosquito larvae is an activity carried out by checking the breeding grounds for the *Aedes aegypti* mosquitoes in accordance with procedures by jumantik or other health workers who aim to carry out mosquito larva checks by motivating families and the community to carry out PSN activities regularly through continuous visits accompanied by health education. (Kemenkes RI, 2012).

Health education can reduce the number of positive larva houses in the KarangBaru Environment, the Mataram City Primary health care Work Area. The results of this study are consistent with the research of Taviv et al (2010) that health education regarding the use of betta fish plus larva monitoring is effective in increasing ABJ and reducing the House Index (HI), Container Index (CI), and Breteau Index (BI).

This study's results are in line with Kustini (2008) research, which states that there are differences in dynamic behavior in preventing DHF between pre and post health education. This was proven by the increase in the quality of active action in preventing DHF with an average value after health education (11.636) higher than before health education of 9.24

CONCLUSION

The results showed differences in ABJ DBD between before being given Health Educator (Jumantik) and after being given Health Educator (Jumantik) in the Karang Baru Environment, the work area of the

Pejeruk primary health care, Mataram. The results of statistical tests using the Willcoxon method obtained a p-value of (0.000). So it can be concluded that Health Health education (Jumantik) can increase larva-free rate DBD in the KarangBaru environment, the Pejeruk Primary health care work area, Mataram City.

SUGGESTION

It is hoped that the community, both individuals and groups, can participate in the prevention of dengue by implementing routine mosquito nest eradication activities (PSN) at least once a week to reduce the number of DHF cases. Meanwhile, jumantik and other health workers can provide regular health education about DHF to increase public knowledge in preventing high issues of DHF.

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