

**EDUCATION, KNOWLEDGE, AND ATTITUDES IMPACTING 1 HOUSE 1
JUMANTIK IMPLEMENTATION: A STUDY IN THE KENTEN LAUT
HEALTH CENTER'S WORKING AREA IN 2019**

Ristawati^{1*}, Misnaniarti², Mohammad Zulkarnain³

Sriwijaya University Palembang, Indonesia

Email : ristawaty@gmail.com¹, misnaniarti@fkm.unsri.ac.id²,

mzulkarnain@unsri.ac.id³

*Correspondence

ABSTRACT

Keywords: romantic; dengue fever; phc.

Dengue hemorrhagic fever is a major global problem because 2.5 to 3 billion people are at risk of developing this disease. *Aedes Aegypti* is the primary epidemic vector, an illness that usually affects urban areas but is starting to affect rural areas, estimated at around 50-100 million cases yearly. Dengue fever is transmitted through the bite of a female *Aedes aegypti* / *Aedes albopictus*, which carries the virus from other dengue fever sufferers. Therefore, dengue fever often causes death for sufferers. Given the danger of dengue fever, there needs to be a comprehensive eradication effort. The government has issued a Mosquito Nest Eradication policy (PSN 3M-Plus) to tackle dengue fever. This is the primary way considered effective, efficient, and economical to eradicate the vector of Dengue Disease transmission, considering that drugs and vaccines that kill the dengue virus have not been found. Research method with a cross-sectional design, a sample of 100 households that meet the inclusion and exclusion criteria in the work area of the Kenten Laut Health Center. Data analysis with chi-square. The results of the study obtained There is a relationship between education (0.03), knowledge (0.041), and the implementation of the One House 1 Jumantik movement at the Kenten Laut Health Center. The puskesmas is advised to develop the One House 1 Jumantik movement so that the community is more responsible with their respective homes and can assist the Jumantik coordinator in implementing PJB.



Introduction

Dengue hemorrhagic fever is a major global problem because 2.5 to 3 billion people are at risk of developing this disease. *Aedes Aegypti* is the primary epidemic vector, an illness that usually affects urban areas but begins to attack rural areas. It is estimated that at around 50-100 million cases per year, 500,000 cases demand hospital treatment, and the average depth of issues 5% is epidemic cyclical (recurs over a certain period) (Rahayu et al., 2023).

The number of new settlements has also indirectly created breeding places for *Aedes aegypti* mosquitoes, as well as other wider communities that still have a culture of storing clean water traditionally, such as bathtubs/toilets, crocks, drums and others that every family (Dania, 2016). DHF caused by the dengue virus that affects children and adults can result in close gastrointestinal bleeding and cases with increased vascular permeability (Utami, 2015). Transmission of DHF through bites of female *Aedes*

aegypti /Aedes albopictus who have previously carried the virus in their bodies from other dengue sufferers. Therefore, DHF often causes death for sufferers. Given the danger of dengue disease, there needs to be a comprehensive eradication effort. The government has issued a Mosquito Nest Eradication policy (PSN 3M-Plus) to tackle dengue fever (Dewi et al., 2022). This is the primary way considered adequate, efficient, and economical to eradicate the vector of transmission of Dengue Hemorrhagic Fever (DHF), thinking that drugs and vaccines to kill the dengue virus have not been found. Eradication of vectors can be done against adult mosquitoes and their larvae. DHF sufferers, both those who are still tired and carriers, have the potential to transmit the disease to others. So, prevention efforts that can be done are to break the chain of transmission of dengue disease because, as we know, the dengue virus is transmitted from one person to another through the intermediary bite of the female Aedes aegypti mosquito (Prasetyani, 2015). Therefore, efforts to prevent dengue fever can be carried out through the eradication of dengue mosquito nests by all levels of society in homes and public places and their respective environments continuously (Ministry of Health of the Republic of Indonesia, Guidelines for Dengue Dengue Fever Control in Indonesia).

The need for correct information about dengue disease management to the community, accompanied by the increasingly individualistic social life of urban communities, makes it increasingly more challenging for existing communities to able to work together to eradicate Aedes aegypti mosquitoes, both adult mosquitoes For this reason, it is necessary to hold regular and continuous counseling so that the community can carry out Mosquito Nest Eradication (PSN) with 3M-Plus to places that are mosquito breeding sites (Sandi & Kartika, 2016). The implementation of DBD PSN with 3M-Plus involves the entire community and is adjusted to the conditions of the business. The government has carried out various coping strategies by spending funds to overcome the increase and spread of dengue cases, one of which, and the most important, is empowering the community in dengue PSN activities through the 3M movement. This activity has been intensified since 1992, and in 2000, it was developed into 3M-Plus, namely by using larvicide, raising fish, and preventing mosquito bites. However, these various countermeasures have not shown the expected results, as evidenced by the high incidence of dengue fever in multiple regions yearly. This is due to the absence of changes in community behavior in PSN efforts (Boekoesoe, 2015).

Dengue hemorrhagic fever is primarily found in tropical and subtropical regions. Data from all over the world shows that the Asian continent ranks first in the number of dengue sufferers yearly (Antoro & Nova Nurwindasari, 2021). Based on the World Health Organization (WHO), in 2009, it is estimated that 50 million people are infected with Dengue Hemorrhagic Fever (DHF) every year, and 2.5 billion people live in dengue-endemic areas. From 1968 to 2009, WHO recorded Indonesia as the country with the highest dengue cases in Southeast Asia and the second highest in the world after Thailand (Kemnekes RI, 2013).

Data on dengue cases in South Sumatra Province in 2015 showed a relatively high number, which was 3,401 cases and 16 people were reported dead, while in 2016, there

was an increase in cases of 3,851 points and reported deaths of as many as 25 people. This shows the higher the risk of spreading transmission (of the South-to-North, State Council, & Committee, 2016). In 2016, Banyuasin Regency reported 87 dengue cases, and one person died, while in 2017, there was an increase of 95 points, and one person died. In the Kenten Laut Health Center area 2016, 10 dengue cases were reported, and no deaths were reported (Puskesmas). In 2017, there was an increase in cases of 15 points, and in 2018 (until August), 26 patients were reported, and two people died; this shows a very significant increase compared to last year. Kenten Laut is one of the dengue endemic areas in Banyuasin Regency, and every year, dengue cases are reported. The Kenten Laut area is directly adjacent to the city of Palembang, where the city of Palembang has the highest number of dengue cases in the province of South Sumatra (Puskesmas). The government has made various efforts to overcome dengue cases, but it cannot make these efforts unilaterally; it needs other parties to support its actions (Ananta, 2017).

The Banyuasin Regency Government, through the Health Office, has earnestly made various efforts to tackle the emergence of dengue cases, namely by conducting counseling on multiple levels of society and schools about the dangers and management of dengue outbreaks, as well as by promoting the 1 House 1 Jumantik Movement (G1R1J). The low behavior of the community in efforts to eradicate mosquito nests (PSN) is influenced by several factors, including trust, education, knowledge, age, and attitude. As you get older, the level of development will be based on the knowledge you have gained and your own experience. Behavior and positive action can be shaped through processes and occur in the interaction of humans and the environment. Factors that influence activity are knowledge, perception, emotions, motivation, and others (Notoatmojo, 2007).

Research Methods

Study Design and Data Collection

This type of research is an analytical observational study using a cross-sectional study design. The research was conducted in the working area of the Kenten Laut Health Center. The number of respondents in this study was 100.

Sampling Techniques

The sampling technique in this study is proportional sampling, with the following inclusion and exclusion criteria.

Inclusion Criteria:

- a. Respondents who are domiciled in the PKM work area. Kenten Sea
- b. Respondents can be found at the time of the study
- c. Respondents are willing to be interviewed by filling out informed consent.

Exclusion Criteria:

- a. Respondents domiciled < 6 months
- b. Respondents were not successfully met after two visits

Ethical Consent

This research was conducted after obtaining approval from the Health Research Ethics Committee of the Faculty of Public Health No: 039/UN9.1.10/KKE/2020.

Data Analysis

After the data is collected, the data is analyzed using univariate, bivariate, and multivariate. Univariate analysis to see the results of the assessment of the implementation of the one House 1 Jumantik movement in the working area of the Kenten Laut Health Center. Bivariate analysis was used to determine the influence between independent variables (education, knowledge, attitude, motivation, means, and supervision) with alpha 5%—multivariate analysis to find the most dominant factors associated with the One House One Romantic movement. Data analysis was performed using SPSS version 21.0.

Results and Discussion

Univariate Analysis

Table 1
Frequency Distribution of Dependent and Independent Variables

| No | Variable | Measurement Results | Number of Samples | |
|----|-----------------------------------------------|---------------------|-------------------|----|
| | | | n | % |
| 1 | Implementation of Movement 1 House 1 Jumantik | Not Implementing | 54 | 54 |
| | | Implement | 46 | 46 |

Based on Table 1, the One House 1 Jumantik movement implementation that did not affect the House Jumantik movement was 54%, and those who carried out the One House One Jumantik movement were 46%.

Table 2
Independent variable frequency distribution

| No | Variable | Measurement Results | Number of Samples | |
|----|-----------|-------------------------|-------------------|----|
| | | | n | % |
| 1 | Pedidikan | Low (\leq SMA) | 32 | 32 |
| | | High ($>$ High School) | 66 | 66 |
| 2 | Knowledge | Not Good | 28 | 28 |
| | | Good | 72 | 72 |
| 3 | Sikap | Not Good | 48 | 48 |
| | | Good | 52 | 52 |

Based on Table 2, Higher respondent education is 66%. Knowledge of respondents with poor categories amounted to 28%. The respondent's attitude towards the One House 1 Jumantik movement is a good variety, 52%.

Bivariate Analysis

Table 3
Bivariate Analysis of Independent and Dependent Variables

| Variable | Implementation of Movement 1 House 1 Jumantik | | | | Sum n | p-value | OR (95% CI) |
|-------------------------|-----------------------------------------------|------|-------------|------|----------|---------|------------------------|
| | Not Implemented | | Implemented | | | | |
| | n | % | n | % | | | |
| Education | | | | | | | |
| Low (\leq SMA) | 24 | 68,5 | 11 | 31,5 | 35 | 0,032 | 1,087 (0,658-3,798) |
| High ($>$ High School) | 18 | 28 | 47 | 72 | 65 | | |
| Knowledge | | | | | | | |
| Not Good | 32 | 59,2 | 22 | 40,8 | 54 | 0,041 | 1,960 (1,687-6,340) |
| Good | 21 | 45,6 | 25 | 54,4 | 46 | | |
| Sikap | | | | | | | |
| Not Good | 25 | 73,5 | 9 | 26,5 | 34 | 0,807 | 0,584 (0,272-2,498) |
| Good | 27 | 41 | 39 | 59 | 66 | | |

Based on the results of bivariate analysis of independent variables and dependent variables, it was found that there was a relationship between education and the implementation of 1 house one jumantik with $p\text{-value} = 0.032 < 0.05$. Low education has a risk of 1,087 times, causing the performance of the One House 1 Jumantik movement not to be implemented. Based on statistical tests between knowledge and the implementation of the movement of 1 home, one jumantik obtained $p\text{-value} = 0.041 < 0.05$. These results show a relationship between learning and the performance of the One House 1 jumantik movement. Knowledge has a risk of 1,960 times, causing the implementation of the one House 1 Jumantik activity not to be implemented. Based on statistical tests between attitudes and the performance of the movement of 1 house, one jumantik obtained $p\text{-value} = 0.807 < 0.05$. These results show no relationship between attitudes and implementing the 1 House 1 Jumantik movement.

The Relationship between Education and the Implementation of the 1 House 1 Jumantik Movement in the Working Area of the Kenten Laut Health Center

The higher the level of education a person has, the more knowledge about various kinds of knowledge is expected. The education story can affect participation because the educational background a person acquires will make it easier for people to communicate with outsiders. A person's level of education will affect his insight and perspective in dealing with a problem. Someone with higher education tends to put forward rationale when facing new ideas compared to those with low education (Notoadmojo, 2012). The level of education influences awareness of the importance of health, both in oneself and in one's environment. So, this theory can encourage the prevention of DHF. The same research conducted by Prambudi (2009) in Ketitang Village, Nogosari District, Boyolali Regency, shows that factors that influence the participation of jumantik cadres in dengue eradication show that there is a relationship between education and cadre

participation in dengue eradication. The same research was also conducted by Hafshah (2012). There is a relationship between the level of education and the involvement of jumantik cadres in efforts to prevent mosquito nests. Higher education can make a person reason, making it possible to avoid disease dengue. The higher the education, the easier a person receives and develops knowledge and technology, increasing productivity and improving health.

Knowledge Relationship with the Implementation of the 1 House 1 Jumantik Movement in the Working Area of the Kenten Laut Health Center

Knowledge is information obtained after people sense a particular object (Notoatmodjo, 2007). This study obtained jumantik knowledge through several questions about jumantik and dengue prevention efforts. Jumantik still needs to learn the breeding place of larvae, whereas Jumantik still considers sewers, sewers, and swamps as mosquito breeding sites. Based on theory, mosquitoes will breed in puddles that are not grounded, while sewers and swamps are not puddles of water based on soil or dirty water (Ministry of Health RI, 2012).

This research is in line with the study of Nahdah et al. (2013) and Gafur et al. (2015), which states that knowledge is related to the existence of larvae. The survey conducted by Nofryadi and Deri (2012) also says that respondents with low knowledge have a 5,060 times higher risk of having low ABJ than respondents with high knowledge. In this study, knowledge is also known as a confounding factor, where knowledge is related to ABJ and the implementation of PJB. Good knowledge will raise awareness of dengue prevention efforts and impact the creation of a larvae-free house Luthaefa, Hadaana (2016). Research by Lathu (2012) and Lontoh (2016) explained that knowledge contributes to people's mindsets, ultimately changing people's behavior towards healthy living behaviors, namely DHF prevention behavior. In theory, knowledge is also explained as a predisposing factor and an essential domain of a person acting (Green, 2005; Notoatmodjo, 2007). It can be interpreted that Jumantik's knowledge of dengue prevention efforts can affect their activeness in implementing PJB and the status of ABJ from each work area.

Jumantik is one form of community empowerment and people closest to the community. It can encourage the community to prevent dengue fever so that ABJ can meet the national index (Ministry of Health, 2010). Therefore, the puskesmas need to conduct training for jumantiks. Exercise is one of the efforts to improve Jumantik's knowledge and skills in carrying out the duties and responsibilities given to improve ABJ Nitami M, Tjahyani SB (2016).

Puskesmas is expected to routinely conduct socialization and counseling to jumantik so that public knowledge about the importance of eradicating mosquito larvae continues to grow and the community is encouraged to eliminate mosquito larvae regularly.

Conclusion

There is a significant relationship ($p < 0.05$) between independent variables (knowledge and attitudes) and the implementation of the One House One Jumantik movement in the work area of the Kenten Laut Health Center. The puskesmas is advised to develop the One House 1 Jumantik movement so that the community is more responsible with their respective homes and can assist the Jumantik coordinator in implementing PJB. Binwil puskesmas should be evaluated with Periodic Flick Checks (PJB) every three months and Performance appraisal to determine the success of Jumantik in carrying out the responsibilities given.

Bibliography

- Ananta, I. (2017). Penerapan pola pembayaran ina-cbgs bpjs kesehatan dalam tinjauan regulasi dan implementasi. *Prosiding Seminar Nasional Dan Call for Papers "Tantangan Pengembangan Ilmu Akuntansi, Inklusi Keuangan, Dan Kontribusinya Terhadap Pembangunan Ekonomi Berkelanjutan*.
- Antoro, Budi, & Nova Nurwindasari, A. P. (2021). Pendidikan kesehatan demam berdarah dengue (dbd) di puskesmas kedaton bandar lampung. *Jurnal Pengabdian Kepada Masyarakat*, 2(2), 49–53. <https://doi.org/10.57084/andasih.v2i2.713>
- Boekoesoe, Lintje. (2015). Kajian faktor lingkungan terhadap kasus demam berdarah dengue (DBD) studi kasus di kota gorontalo provinsi gorontalo. *Disertasi Doktor (DP2M)*, 2(949).
- Dania, Ira Aini. (2016). Gambaran penyakit dan vektor demam berdarah dengue (DBD). *Warta Dharmawangsa*, (48).
- Dewi, Nofia Sari Puspita, Rustanti, Elly, & Rozi, Fahrur. (2022). Hubungan Tingkat Pengetahuan Masyarakat dengan Perilaku Pencegahan DBD Menggunakan Tanaman Pengusir Nyamuk Di Dsn Munggur Kec Ngawi Kab Ngawi. *Jurnal Pendidikan Tambusai*, 6(1), 1256–1260. [https://doi.org/Mengingat bahaya penyakit DBD, perlu ada upaya pemberantasan yang komprehensif](https://doi.org/Mengingat%20bahaya%20penyakit%20DBD,%20perlu%20ada%20upaya%20pemberantasan%20yang%20komprehensif)
- Of the South-to-North, Office, State Council, P. R. C., & Committee, Water Diversion Project Construction. (2016). The south-to-north water diversion project. *Engineering*, 2(3), 265–267.
- Prasetyani, Radita Dewi. (2015). Faktor-faktor yang berhubungan dengan kejadian demam berdarah dengue. *Jurnal Majority*, 4(7), 61–66.
- Rahayu, Eni Rizki, Atikah, Dewi, Setiyadi, Agus, Sulistyono, Fajar Adhie, Putri, Sasni Triana, Purba, Sariaman, & Sulistyaningsih, Utami. (2023). Utilization of Modified Mosquito Killer as an Alternative for Aedes Aegypti Mosquito Control. *Journal of Health (JoH)*, 10(1), 73–78.
- Sandi, Made Suryahadi, & Kartika, Komang Ayu. (2016). Gambaran pengetahuan dan perilaku pencegahan penularan penyakit demam berdarah dengue di Desa Antiga wilayah kerja Puskesmas Manggis I. *E-Jurnal Medika*, 5(12), 1–6.
- Utami, Rahmawati Sari Budi. (2015). Hubungan pengetahuan dan tindakan masyarakat dengan kejadian demam berdarah dengue (DBD)(Studi Di Kelurahan Putat Jaya Surabaya Tahun 2010–2014). *Jurnal Berkala Epidemiologi*, 3(2), 242–253.