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THE RELATIONSHIP BETWEEN THE LEVEL OF KNOWLEDGE AND DENGUE PREVENTION EFFORTS

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ABSTRACT
The bite of the Aedes aegypti mosquito is a means of spreading dengue fever. Population density, uncontrolled waste growth, and lack of knowledge about environmental sanitation are the main causes of dengue fever transmission. To prevent dengue fever, the 3M Plus method involves the elimination of mosquito nests (PSN), which includes minimizing the drying of bathtubs, sealing water reservoirs, recycling used items, applying larvicide powder to water reservoirs, using mosquito repellent and mosquito nets while you sleep, and planting mosquito repellent plants. The purpose of this study is to ensure the level of public awareness and the way the people of Klari village, Karanggede Regency, prevent dengue disease. Methods: This study was carried out in Klari village, Karanggede district in September 2024 with a total of 78 respondents by purposive sampling. Data collection was carried out using a questionnaire with two types of instruments, including the level of knowledge and prevention efforts. Data analysis using the Chi-Square test. The results of the study showed two variables with a p < value of 0.05 on the non-parametric test, namely age, education level, and occupation. Results: The analysis of the Chi-Square test produced a p value of 0.1055 > 0.05. Conclusion: There is no relationship between the level of knowledge and dengue prevention efforts in Klari village, Karanggede district.

Keywords: dengue; level of knowledge; prevention efforts

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INTRODUCTION

Dengue fever is a disease that is quite high in number in Indonesia. Dengue fever can be transmitted through the bite of the Aedes aegypti mosquito. The spread of dengue fever covers almost all of the tropics and subtropics of the world. Dengue fever transmission occurs due to population density, increase in human population, uncontrolled increase in waste, lack of availability of clean water and lack of awareness of environmental cleanliness (Ramayanti, Erlyn, et al., 2022). The negative attitude of the community in preventing dengue has an impact on the surrounding environment. People who are less able to handle dengue are caused by having a lack of knowledge about dengue disease both in terms of definition, gjala, causes, ways of transmission, and prevention. Until now, the eradication of mosquitoes and Aedes aegepty larvae has been prioritized over the prevention and cure of dengue virus infection, with unsatisfactory results. (Anggraini et al., 2021).

Dengue fever type 3 is a serotype of virus that causes the majority of dengue fever cases, according to research conducted in Indonesia. The number of dengue fever cases in Indonesia is increasing every year, reaching a peak every ten years. In controlling dengue cases, comprehensive and multisectoral measures are needed as an effort to reduce the risk of spreading dengue disease. Dengue cases in Boyolali in January 2024 have increased dramatically compared to January 2023, the increase has reached 100 percent. It was recorded that from January 2024 to September 2024 there were 785 cases of dengue fever in the Boyolali area. The most dengue cases are in the Karanggede sub-district area, which has 38

cases, Simo sub-district has 35 cases, and Klego sub-district has 17 cases. Wonosegoro District has 8 cases, Juwangi District has 28 cases, and Wonosamudro District has 12 cases. Therefore, The purpose of the research on the relationship between the level of knowledge and efforts to prevent dengue disease in Klari village is to find out the level of knowledge of the people of Klari village about dengue disease and analyze the relationship between the level of knowledge of the people of Klari village and the efforts to prevent dengue disease.

METHOD

This research is quantitative. The level of knowledge and dengue prevention efforts are variables in this study. Purposive sampling was used to select 78 active respondents for this study, which was conducted in Klari Village, Karanggede District, in September 2024. According to the inclusion criteria of the study, the respondent's area is an area affected by dengue disease, communicative and can read, expressing willingness to participate as a respondent. Exclusion criteria include respondents who did not complete the questionnaire. The questionnaire used used was using the Guttman scale with statements 1=Yes, 0=No. The validity test of the R-table used was 0.361. Pearson correlation = 0.402 (above 0.361) and or sig 2 tailed = (0.028) the value is below 0.05 means that there is a relationship between knowledge and prevention efforts. Thus, there is a relationship between knowledge and efforts to prevent dengue. The results were 0.031 and 0.032 more than 0.05, thus there is a relationship between knowledge and dengue prevention efforts. The reality test of the Cronbach Alpha value is 0.572, thus obtaining a relatively moderate reality value.

This research was conducted in Klari village, Karanggede district, Boyolali, Central Java in September 2024. People living in Klari village, especially in Blimbing hamlet, constitute the study population. Using the purposive sampling approach and the Slovin formula with a 10% error tolerance, the study sample was individuals whose environment was affected by dengue fever. Seventy-eight respondents who filled out a questionnaire with 20 items were found based on the sum of Slovin's formula calculations, and the Guttman scale was used for the calculation. The data collection instrument in this study uses a questionnaire, namely a questionnaire on the level of knowledge and efforts to prevent dengue. The research ethics committee of the Regional General Hospital (RSUD) dr. Moewardi. With the number 2.298/IX/HREC/2024. Participants give consent based on the information provided. The author ensures that all procedures have complied with applicable guidelines and regulations.

RESULT

Table 1.
Characteristics of Respondents (n=78)

Respondent characteristics	f	%
Age		
20-29 Years	34	43,6
30-39 Years	13	16,7
40-49 Years	12	15,4
50-59 Years	12	15,4
60-69 Years	7	9,0
Education		
Primary school	9	11,5
Junior High School	15	19,2
High School	39	50,0
Bachelor	15	19,2
Work		
Housewives	21	26,9
Farmers	13	16,7
Private Servants	31	39,7
Civil Servants	13	16,7

Klari Village is a village located in the Karanggede sub-district area. Klari Village is one of several villages infected by dengue disease. This study was conducted by taking several samples of respondents whose areas were infected with dengue disease. This study was taken using a questionnaire about the level of knowledge and efforts to prevent dengue.

Table 1 above, 34 individuals (43.6%) were respondents between the ages of 20 and 29, according to an analysis based on response characteristics. According to an analysis based on educational attainment, 39 children (50.0%) are enrolled in high school. The analysis was based on the work of respondents, specifically 31 people (39.7%) who were private employees.

Table 2.
Knowledge Level Frequency Distribution

Respondent characteristics	f	%
Good (80-100)	57	73,1
Fair (40-79)	20	25,6
Less (0-39)	1	1,3

The analysis of the respondents' knowledge level showed that the level of knowledge of respondents related to dengue disease was with good characteristics (80-100) as many as 57 people (73.1%), sufficient characteristics (40-79) as many as 20 people (25.6%), and poor characteristics (0-39) as many as 1 person (1.3%).

Table 3.
Frequency Distribution of Dengue Prevention Efforts

Respondent characteristics	f	%
Good (80-100)	66	84,6
Fair (40-79)	12	15,4

The analysis of dengue prevention efforts showed that the prevention efforts made by the respondents regarding dengue disease were with the characteristics of doing good prevention efforts (80-100) as many as 66 people (84.6%), carrying out prevention efforts with sufficient characteristics (40-79), namely 12 people (15.4%), and carrying out prevention efforts with less characteristics, namely 0 respondents (0%).

Table 4.
The Relationship between Knowledge Level and Dengue Prevention Efforts

Knowledge	Total Prevention Efforts				p-value
	Good	Enough	Less		
	f	f	f	f	0,1055
Good (80-100)	51	14	1	66	
Fair (40-79)	6	6	0	12	

The analysis of the Chi-Square test produced a P value of 0.1055 > 0.05. This P value indicates, statistically, that the variables under investigation are not significantly related to each other. The findings of the study showed that there was no meaningful correlation between dengue fever prevention initiatives and awareness levels in Klari village, Karanggede Regency.

DISCUSSION

Level of knowledge

With a p value of 0.1055, the researcher showed that 78 respondents represented that the average majority of knowledge levels in the community. This shows that there is no relationship regarding the level of knowledge of initiative respondents in dengue fever prevention in Klari Village, Karanggede District. According to the survey findings, 12 respondents had adequate knowledge, and 66 respondents had good knowledge.

The spread of dengue fever is faster in urban areas than in rural areas due to population density factors, but it is also undeniable that the spread status of dengue fever has increased in rural areas due to inadequate environmental factors (Cholil et al., 2020). When the dengue virus initially infects humans, it causes symptoms such as fever, headache, nausea, muscle aches, body aches and pains, rashes, and even shock and death. (Sutriyawan & Suherdin, 2022). In order to increase public understanding, steps are needed in health promotion efforts, such as providing counseling through lectures or other media (Birman, 2022). Another symptom is that humans infected with dengue fever can experience shock, bleeding, and even cause death (Panjaitan et al., 2020). If a person is infected with dengue fever, it will not always be dengue fever, as well as the symptoms are not always accompanied by real bleeding. This is what causes people not to immediately seek treatment because there are no or no signs of bleeding from dengue fever itself (Harfiani et al., 2023).

Dengue Fever

Typically lasting between two and seven days, dengue fever symptoms include bodily weakness and myalgia. If the community does not completely support keeping the environment clean, and because people still do not know enough about dengue fever and how to prevent it, dengue fever can spread swiftly (Mulyadi & Dewi, 2023). People do not take this dengue fever occurrence seriously since they are not aware of or understand dengue fever. Because disease-carrying mosquitoes spread quickly in highly populated areas and in areas where environmental cleanliness is inadequately maintained, the population frequently lacks awareness of and reminders that dengue fever can have deadly effects (Ashari et al., 2023).

This virus, which is typically characterized by a fever lasting two to seven days, can enter the human body through the Aedes aegepty mosquito (Masnarivan et al., 2023). Fever and joint and muscular discomfort, which typically gets worse during the first two days, are general symptoms or indicators for quick identification (Pingkan et al., 2022). Another sign of dengue fever is that infected people may become shocked, hemorrhage, or even die (Nugraheni et al., 2023). A person who has dengue fever may not always have the illness, and actual bleeding is not always present along with the symptoms. Because there aren't any symptoms of bleeding from dengue fever itself, people don't seek treatment very away (Permatananda et al., 2023).

The community's knowledge and behavior have an impact on the development of a positive attitude; if the community's attitude is poor in response to dengue illness prevention because of ignorance, the risk of dengue death will rise (Ramadhanti et al., 2022). In an attempt to prevent dengue illness and lower mosquito density, health counseling should be conducted together with instruction in creating basic ovitraps (Ramayanti, Zalmi, et al., 2022). Using commercially available synthetic anti-mosquito medications, such as burned repellents, electricity, sprays, and lotions, is the next step in preventing dengue sickness (Syam et al., 2022).

Due to their high chemical content, equipment, medications, and insect repellent items can all be considered harmful to one's health. By working together to clean the surrounding area, the community can be motivated to prevent dengue disease (Kurniawati & Ekawati, 2020). The 3M plus approach, which involves draining the bathtub at least once a week, tightly shutting the water reservoir, and recycling used items that contain water, is currently the most effective and efficient strategy to avoid dengue fever. The benefit is achieved through prevention (Irawati et al., 2021). A healthy lifestyle is necessary to prevent dengue sickness, and a good lifestyle is a prerequisite for the development of a society that is physically, mentally, and socially healthy (Nur Itsna, 2020).

Preventive Efforts

The majority of respondents who were active in carrying out dengue prevention efforts in Klari village, Karanggede district were 51 respondents, with a p value of 0.1055. This shows that the dengue prevention efforts carried out by the community have good characteristics. Prevention of dengue disease is centered on modifying vector control, namely the Aedes aegepty mosquito. A variety of techniques, including curvature mechanisms, biological, and chemical, can be used to achieve this regulation. (Buana et al., 2021).

The eradication of mosquito larvae can be carried out continuously by involving the entire community starting from the smallest scope, namely the family. Activities such as education carried out by health cadres can increase public knowledge and be a trigger to increase people's enthusiasm to participate (Mahardika et al., 2023). When the rainy season arrives, preventive measures should be taken by the government with PSN (mosquito nest eradication), the purpose of which is to minimize the occurrence of dengue fever cases which will surge drastically when the rainy season arrives (Herawati & Hakim, 2022). Due to their high chemical content, equipment, medicines, and insect repellent items can all be considered harmful to a person's health. The community can be encouraged to prevent dengue disease by cleaning the surrounding environment together with mutual cooperation (Fadillah et al., 2023).

The 3M plus approach, which involves drying bathtubs at least once a week, tightly closing water reservoirs, and recycling used items containing water, is currently the most effective and efficient strategy to avoid dengue fever. The benefits in question come from prevention. (Raisah et al., 2023). There are several ways to prevent this, including applying larvicide powder to hard-to-clean water reservoirs, applying lotions or mosquito repellents, sleeping with mosquito nets, raising fish that feed on mosquito larvae, planting plants that repel mosquitoes, and avoiding the practice of hanging clothes. (Brahmastha et al., 2023). A healthy lifestyle is necessary to prevent dengue fever, and a good lifestyle is a prerequisite for the development of a healthy society physically, mentally, and socially. (Halid, 2022).

CONCLUSION

In Klari Village, Karanggede Regency, this study investigated the relationship between community prevention initiatives and knowledge about dengue fever. In Klari Village, Karanggede Regency, it was determined that the main determinants of dengue awareness and prevention measures were age and education. Higher levels of education and younger age are associated with greater participation rates in dengue disease prevention initiatives. Strategies to increase awareness and support among people, especially those who are less educated, should be used to increase community engagement and initiative.

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