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THE ASSOCIATION OF COMMUNITY PARTICIPATION ON THE PREVENTION OF DENGUE FEVER

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ABSTRACT

Dengue Hemorrhagic Fever is one of the most common health problems in the community that causes various health problems. This study aims to determine the influence of community participation on the implementation of Dengue Fever prevention programs at the Tanjung Morawa Community Health Center, Deli Serdang Regency. This study is a quantitative analytical survey study with a cross-sectional design. The sample used was 270 people. Data analysis used univariate analysis, bivariate analysis and multivariate analysis. The results of statistical tests using chi-square analysis showed no relationship between age (p = 0.851), education level (p = 0.688), occupation (p = 0.336), attitude (p = 0.167), stakeholder role (p = 1.000) with community participation in the implementation of DHF prevention, while there was a relationship between gender (p = 0.019), knowledge (p = 0.002) and information sources (p = <0.001) with community participation in the implementation of DHF prevention. The variables that meet the criteria are the gender variable with a p value of 0.019, the knowledge variable with a p value of 0.002, and the information source variable with a p value of <0.001.The conclusion of this study is that there is a relationship between gender and information sources and community participation in implementing dengue prevention.

Keywords: *Dengue Prevention, Participation, Community.*

INTRODUCTION

The community in preventing Dengue Fever must certainly play a role in reducing DHF cases. However, in reality, community participation is still low in mosquito nest eradication caused by several factors, namely, low knowledge of the community regarding DHF prevention programs, and low ability to monitor larvae at home. According to research by Kamal (2017), it explains that poor participation will experience a 2.57 times chance of contracting dengue fever compared to the group with good participation. Another factor that influences the incidence of DHF is the role of health cadres such as the role of Jumantik (Juru Pemantau Jentik). The role of Jumantik in the DHF early warning system is very important in DHF prevention activities because it functions to monitor the presence and inhibit the early development of DHF transmitting vectors (Pangestika, 2017).

Another environmental factor that influences dengue fever is waste management. Improper household waste management can become a breeding ground for mosquitoes. Burning, burying, and dumping waste into rivers are all inappropriate practices. People burn waste while waiting for enough to accumulate. This waiting period, when the waste is left in the open and exposed to rain, can create a breeding ground for mosquitoes to hatch their eggs (Pratiwi,

2017). A preliminary survey conducted with 30 community health center visitors in Tanjung Morawa District, Deli Serdang Regency, using short interviews, found that 70% of visitors were aware of the dengue prevention program, but only 40% of visitors wanted to take advantage of the opportunity to become mosquito larvae monitors, due to the busy schedules of the community.

Tanjung Morawa Community Health Center has 60 health workers in its working area consisting of 1 man and 59 women. Health workers are less active in providing information on dengue fever prevention and rarely conduct home visits because they have been done before. Health cadres are more active in providing information about KIA, and integrated health post services, there is 1 surveillance officer according to the need. The community's own less active behavior in eradicating mosquito nests is also considered to play a role in increasing dengue fever cases, the community also does not take the opportunity to participate in counseling activities conducted by the community health center, and every time abate powder is distributed by cadres to the community, many people do not sprinkle the abate into wells or bathtubs that are difficult to drain, because they are afraid that the water can no longer be used.

The hypothesis of this study is that community participation is considered influential in reducing the spread of dengue fever in the Tanjung Morawa Community Health Center's work area. Therefore, research is needed to examine the factors influencing community participation in the implementation of dengue fever prevention at the Tanjung Morawa Community Health Center, Deli Serdang Regency.

LITERATURE REVIEW

Dengue Fever

With increased mobility and population density, dengue fever (DHF) tends to increase in number of cases and spread more widely. This disease is both endemic and epidemic and is found almost worldwide, especially in tropical and subtropical countries. Dengue fever, caused by a virus, is very dangerous because it can cause death quickly. Worldwide, dengue vectors reproduce rapidly and cause 390 million infections each year (Pusdatin Kemenkes RI, 2017). Clinical symptoms of dengue fever include high fever that lasts for 2-7 days and signs of bleeding, usually characterized by red spots (patechia) on the body. Sufferers can also experience shock and death (Hafni, 2019).

One factor that influences sensitivity to viral infections is age, because younger children have weaker immune systems compared to adults, so children are more susceptible to diseases, including diseases caused by viruses (Riyanka, 2015). Pertiwi's (2016) research found that dengue fever often occurs in children aged 10-14 years, with the number of cases IR: 396.9. Fitriani's (2012) research found that the distribution of dengue fever cases was almost the same between boys and girls, indicating that the risk of contracting dengue fever does not depend on gender.

Participation

In general, participation means participating in an activity to gain benefits. Individuals, families, and communities are involved in the planning and

implementation of vector eradication in their areas, known as community participation. According to Beal in Totok Mardikanto and Subianto (2015), participation is a phenomenon that develops due to external influences or stimuli. Exogenous social change is a phenomenon that can be identified as participation. Therefore, participation is a process that will create new social networks in which everyone strives to carry out steps to achieve the ultimate goals of society or relevant social structures. According to Notoadmojo (2015), motivation, communication, and mobility are some of the components of community participation.

Gautama (2020) stated that community participation is crucial for the success of dengue prevention and eradication programs. If broad community participation is difficult to achieve due to geographic, occupational, or demographic reasons, community organizations and volunteer groups can help maintain community participation. Every day, members of these community organizations interact according to their duties, such as at religious events, public gatherings, women's organizations, and schools. Yuliandira (2019) found that the Dengue Prevention and Eradication Program failed to prevent and reduce the high number of dengue cases. She attributed this to community members' lack of participation in program planning and implementation.

Policy Implementation

Disagree with policy implementation. Mulyadi (2015) states that implementation refers to actions taken to achieve the goals established by a decision. Transforming the decision into an operational pattern is the goal of this action. It also seeks to make major or minor changes consistent with previous decisions. After being given legitimate direction for a policy, the activity known as policy implementation involves managing inputs to produce outputs or outcomes for the community.

Policies are only the beginning and cannot be used to measure the success of achieving goals and objectives. The implementation stage of established policies is a far more crucial process. Because policies are projections of the future, they are more conceptual, abstract, and imprecise. However, success and failure will only be known when the various elements influencing the policy interact. A policy is considered successful if it meets the needs of the community when implemented.

RESEARCH METHODS

This quantitative analytical survey study was designed with a cross-sectional design. Once data were collected (Sastroasmoro & Ismael, 2017), this study aimed to evaluate variables that influence community participation in dengue fever prevention programs. This study was conducted at the Tanjung Morawa Community Health Center, which is one of the sub-districts that still has a large number of dengue fever sufferers. The number of samples obtained from the ISSAC and MICHAEL tables was calculated based on the population in the Tanjung Morawa Community Health Center's working area, with a 10% margin of error. Predisposing factors for respondents consisted of age, gender, education

and occupation, knowledge and attitudes, as well as supporting factors, such as the role of the village head and health workers/cadres. Respondents' predisposing factors included age, gender, education and occupation, knowledge and attitudes, and supporting factors, such as the role of the village head and health workers/cadres. In this study, the dependent variable was the level of community participation in the dengue fever prevention program. The hypothesis of this research is that community participation is considered to have an influence on reducing the spread of dengue fever in the Tanjung Morawa Community Health Center work area. This study collected data by providing respondents with a list of questions and their answers directly.

Data Analysis Methods

The data processing process involves modifying, coding, entering, analyzing, refining, and tabulating the collected data. Next, univariate analysis is performed; this analysis provides an explanation of each variable studied, including the independent and dependent variables. This analysis is useful for assessing data quality and determining further analysis plans.

To analyze the data, a chi-square statistical test with a 95% confidence level was used. The statistical calculation results were considered significant if $p < 0.05$. The chi-square test was used to examine the relationship or influence of two noun variables. It was also used to measure the strength of the relationship between one noun variable and another. Finally, a multivariate analysis was conducted to see how the independent variables as a whole impacted community participation in the dengue prevention program. This was done to identify the most dominant independent variables. A multiple logistic regression test was used with a p value < 0.25.

RESULTS AND DISCUSSION

Univariate Analysis

Age, gender, education, and occupation are characteristics of the respondents in this study. Table 1 shows the frequency distribution of each variable.

Table 1. Frequency Distribution of Respondents' Predisposing Factors

Respondent Characteristics	Frequency (Total = 270)	Percentage (%)
Age		
Early Adulthood (26-35)	93	34.4
Late Adulthood (36-45)	177	65.6
Gender		
Male	89	33.0
Female	181	67.0
Education		
Secondary (Junior High School-Senior High School)	242	89.6
Higher (D3-S3)	28	10.4
Work		

Non-Employees (Housewives, Farmers, Entrepreneurs)	253	93.7
Employees (Civil Servants/TNI/POLRI)	17	6.3

Based on table 1, it is known that the dominant age of respondents is respondents aged 36-45 years (65.6%). Respondents who filled out the questionnaire based on gender were predominantly female, amounting to 181 people (67%). For the level of education of respondents, it is known that the most dominant in this study were those with secondary education (junior high school-high school) amounting to 242 people (89.6%). Then, respondents who participated in this study were known to have jobs as non-employees (housewives, farmers, entrepreneurs) amounting to 253 people or 93.7%.
Knowledge is everything that respondents know about Dengue Fever Prevention. Based on Table 5, it is known that 79.6% (215 people) of respondents are aware of the 3M Plus program as a dengue fever prevention effort. It is also known that 253 respondents (93.7%) stated that mutual cooperation in cleaning the environment is one of the dengue fever prevention activities. Then, 118 respondents (54.8%) throw away and cover used items that can hold water to prevent the breeding of dengue-transmitting mosquitoes.

Table 2. Frequency Distribution of Knowledge about Dengue Fever Prevention Program

Knowledge	Answer					
	Yes		No	Total		
	n	%	n	%	n	%
The 3M Plus program is a dengue fever prevention effort.	215	79.6	55	20.4	270	100
One way to prevent Aedes aegypti mosquito bites is by using mosquito repellent.	210	77.8	60	22.2	270	100
Draining water reservoirs is part of the 3M Plus Program.	202	74.8	68	25.2	270	100
Fogging is an effort to eradicate mosquitoes.	75	27.8	195	72.2	270	100
Draining bathtubs is an effort to prevent dengue fever.	175	64.8	95	32.5	270	100
Discarding and covering used items that can hold water can prevent the breeding of dengue mosquitoes.	118	43.7	152	56.3	270	100
Every household should have at least one person acting as a mosquito monitor.	61	22.6	209	77.4	270	100
Aedes aegyphti mosquitoes can breed in dirty water reservoirs such as gutters.	194	71.9	76	28.1	270	100
Placing used clothing in closed containers can prevent the breeding of dengue-transmitting mosquitoes.	100	37.0	170	63.0	270	100

Sprinkle larvicide in water reservoirs that are difficult to drain can eradicate mosquito larvae.	148	54.8	122	45.2	270	100
Working together to clean the environment is one way to prevent dengue fever.	253	93.7	17	6.3	270	100
Installing wire mesh on windows and vents can prevent dengue mosquito bites and breeding.	75	27.8	195	72.2	270	100
Planting mosquito-repellent plants can prevent the breeding of Aedes aegypti mosquitoes.	45	16.7	225	83.3	270	100

Table 3. Distribution of Dengue Fever Prevention Knowledge Categories

Dengue Fever Prevention Knowledge	n	Presentation (%)
Good	148	54.8
Poor	122	45.2
Quantity	270	100,0

Attitudes are reactions or responses to dengue prevention programs. Table 3 shows that 161 respondents (59.6%) would attend a dengue outreach event by health workers during 2022 if invited. Furthermore, 211 respondents (78.1%) preferred to drain the bathtub only when it was dirty. Furthermore, 185 respondents (68.5%) would add larvicide to water reservoirs that were difficult to drain.

Table 4. Frequency Distribution of Information Sources on Dengue Fever Prevention

Resources	Answer					
	Yes		No		Total	
	n	%	n	%	n	%
Health workers conduct outreach activities regarding dengue fever prevention.	104	38.5	166	61.5	270	100
These outreach activities are conducted routinely.	38	14.1	232	85.9	270	100
Health workers only conduct outreach on dengue fever prevention if a member of the public is infected with dengue fever.	98	36.3	172	63.7	270	100
You will receive information individually from health workers regarding dengue fever prevention methods throughout 2022.	84	31.1	186	68.9	270	100

Table 5. Distribution of Categories of Information Sources for Dengue Fever Prevention

Dengue Fever Prevention Information Sources	n	Presentation (%)
Good	36	13.3
Poor	234	86.7
Quantity	270	100,0

The role of stakeholders is to motivate or encourage the community to prevent dengue fever. Based on table 5, it is known that 220 respondents (81.5%) said that the village head/village head/hamlet head/neighborhood head did not encourage the community to participate in preventing dengue fever during meetings. It is also known that 205 respondents (75.9%) said that there is no environmental cleanliness competition every month by the local village head/village head/hamlet head/neighborhood head. However, 157 respondents (58.1%) said that the village head/village head/hamlet head/neighborhood head monitors the cleanliness of the environment/homes of their residents. Furthermore, 203 respondents (75.2%) said that cadres/health workers do not monitor mosquito larvae every 3 months. And 217 respondents (80.4%) said that cadres/health workers do not visit homes to eradicate mosquito nests.

Table 6. Frequency Distribution of Stakeholder Roles in Dengue Fever Prevention

Stakeholder Roles	Answer					
	Yes		No		Total	
	n	%	n	%	n	%
The village head/village head/hamlet head/neighborhood head encourages you to participate in preventing dengue fever during meetings.	50	18.5	220	81.5	270	100
The village head/village head/hamlet head/neighborhood head invites you to participate in community service at least once a month.	113	41.9	157	58.1	270	100
The village head/hamlet head/neighborhood head holds a monthly cleanliness competition.	65	24.1	205	75.9	270	100
The Village Head/Village Head/Hamlet Head/Kepling Head monitors the cleanliness of their residents' neighborhoods/homes.	157	58.1	113	41.9	270	100
The Village Head/Hamlet Head/Kepling Head urges residents to promote environmental cleanliness in their respective neighborhoods.	130	48.1	140	51.9	270	100
Health workers distribute brochures about dengue fever.	49	18.1	221	81.9	270	100
Health workers provide free mosquito repellent every month.	79	29.3	191	70.3	270	100

Health workers monitor mosquito larvae every 3 months.	67	24.8	203	75.2	270	100
Health workers visit homes to eradicate mosquito nests at specific times each month.	53	19.6	217	80.4	270	100
Health workers visit homes to educate on dengue fever prevention and eradication methods, such as the 3M Plus program.	111	41.1	159	58.9	270	100

Table 7. Distribution of the Role Categories of Village Heads and Health Workers/Cadres in Dengue Fever Prevention

The role of the village head and health workers/cadres in preventing dengue fever	n	Presentation (%)
Good	16	5.9
Poor	54	94.1
Quantity	270	100,0

Community participation is a mental, mental, emotional and feeling involvement that encourages people to contribute to efforts to achieve certain goals and to share responsibility for the activities carried out to achieve them. Based on Table 7, it is known that 169 respondents (62.6%) drained the bathtub at home, then 228 respondents (84.4%) sprinkled abate powder into water reservoirs that were difficult to drain. Furthermore, 179 respondents (66.3%) cleaned mosquito breeding sites (gotong royong) once a week. And 220 respondents (81.5%) cleaned wastewater drains to prevent stagnant water, thus preventing the development of dengue mosquitoes.

Table 8. Frequency Distribution of Community Participation in Dengue Fever Prevention

Community Participation		Answer				
		Yes	No		Total	
	n	%	n	%	N	%
Drain the bathtub at home.	169	62.6	101	37.4	270	100
Drain the bathtub only once a week.	90	33.3	180	66.7	270	100
Close water containers tightly.	66	24.4	204	75.6	270	100
Bury unused items that can collect water.	28	10.4	242	89.6	270	100
Check regularly for mosquito larvae.	120	44.4	150	55.6	270	100
Sprinkle abate powder into water reservoirs that are difficult to drain.	228	84.4	42	25.6	270	100
Manage solid waste to prevent it from becoming a breeding ground for dengue mosquitoes.	86	31.9	184	68.1	270	100

Clean mosquito breeding sites (gotong royong) once a week.	179	66.3	91	33.7	270	100
Clean wastewater drains to prevent stagnant water, thus preventing the development of dengue mosquitoes.	220	81.5	50	18.5	270	100
Remove hanging clothing to prevent dengue mosquitoes from resting.	138	51.1	132	48.9	270	100

Table 9. Distribution of Community Participation Categories in Dengue Fever Prevention

Community Participation in Dengue Fever Prevention	N	Presentation (%)
Good	101	37.4
Poor	169	62.6
Quantity	270	100,0

Bivariate Analysis

The bivariate analysis of this study consisted of eight variables: age, gender, education, occupation, knowledge, attitude, information source, and stakeholder role. The goal was to determine the p-value of each variable. The results of the bivariate analysis used the chi-square test, with the stipulation that if the value <α = 0.05, Ha is accepted and Ho is rejected. Thus, it can be concluded that there is a significant relationship. Conversely, if >α = 0.05, Ha is rejected and Ho is accepted. The conclusion is that there is no significant relationship. The bivariate analysis using the chi-square test can be seen in Table 10 below:

Table 10. Relationship between Predisposing Factors and Community Participation in the Implementation of Dengue Fever Prevention Programs

Variables	Implementation of Dengue Fever Prevention						*p-value*
	Good		Not enough		Amount		
	n	%	n	%	n	%	
Age							
36-45 years	65	36.7	112	63.3	177	100	0,851
26-35 years	36	38.7	57	61.3	93	100	
Gender							
Male	24	27	65	73	89	100	0,019
Female	77	42.5	104	57.5	181	100	
Level of education							
Secondary (Junior High School-Senior High School)	92	38	150	62	242	100	0,688
Higher (D3, S1)	9	32.1	19	67.9	28	100	

Work							
Non-Employee	97	38.3	156	61.7	253	100	0,336
Employee	4	23.5	13	76.5	17	100	

Judging from the age category, it is known that the proportion of 36-45 years old is 112 respondents (63.3%). Based on the results of statistical calculations, the p-value is (0.851) which means there is no relationship between age and the implementation of the DHF prevention program. For gender, women are 104 respondents (57.5%). Based on the results of statistical calculations, the p-value is (0.019) which means there is a relationship between gender and the implementation of the DHF prevention program. For the secondary education category (SMP-SMA) there are 150 respondents (62%). Based on the results of statistical calculations, the p-value is (0.688) which means there is no relationship between education and the implementation of the DHF prevention program. Furthermore, the occupational category has a lower proportion in the implementation of the DHF prevention program of 156 respondents (61.7%). Based on the results of statistical calculations, the p-value is (0.336) which means there is no relationship between occupation and the implementation of the DHF prevention program.

Table 11. Relationship between Predisposing Factors and Community Participation in the Implementation of Dengue Fever Prevention Programs

Predisposing Factors	Community Participation in Dengue Fever Prevention Program Implementation						
	Good	%	Not enough	%	n	%	*p-value*
Knowledge							
Good	68	45.9	80	54.1	148	100	0,002
Poor	33	27	89	73	122	100	
Good Attitude							
Poor	55	42	76	58	131	100	0.167
Good Attitude	46	33.1	93	66.9	139	100	

The results of the Bivariate analysis with chi-square test on the relationship between predisposing factors and community participation in the implementation of the DHF prevention program at the Tanjung Morawa Community Health Center, Table 16 shows that of the 148 respondents with good knowledge of the implementation of the DHF prevention program, 45.9 percent. Likewise, a good attitude in community participation in the implementation of the DHF prevention program shows that of the 131 respondents with a good attitude, 42 percent. The results of the bivariate analysis for knowledge using the chi-square test obtained a p-value of 0.002 ($<\alpha = 0.05$) which means there is a relationship between knowledge and community participation in the implementation of the DHF prevention program at the Tanjung Morawa Community Health Center. Meanwhile, based on the results of the bivariate

analysis of attitudes using the chi-square test, a p-value of 0.167 (<α = 0.05) was obtained, which means Ha was rejected and Ho was accepted. Thus, it can be concluded that there is no significant relationship between predisposing factors, namely attitudes, and community participation in the implementation of the DHF prevention program at the Tanjung Morawa Community Health Center.

Table 12. Relationship between Supporting Factors and community participation in the implementation of the DHF prevention program

Supporting Factors	Community Participation in the Implementation of Dengue Fever Prevention Programs						
	Good	%	Not enough	%	n	%	*p-value*
Information Source							
Good	26	72.2	10	27.8	36	100	<0,001
Poor	75	32.1	159	67.9	234	100	

The results of bivariate analysis using chi-square test on the relationship between supporting factors and community participation in the implementation of dengue prevention programs at Tanjung Morawa Community Health Center. Table 12 shows that out of 234 respondents, poor information sources were obtained with good community participation in the implementation of dengue prevention programs amounting to 67.9 percent. Based on the results of bivariate analysis using chi-square test, the p-value obtained was <0.001 (<α = 0.05) which means Ha is accepted and Ho is rejected. Thus, it is concluded that there is a significant relationship between supporting factors, namely information sources, and community participation in the implementation of dengue prevention programs at Tanjung Morawa Community Health Center.

Table 13. Relationship between Driving Factors and Community Participation in the Implementation of Dengue Fever Prevention Programs

Driving Factors	Community Participation in Dengue Fever Prevention Program Implementation						
	Good	%	Not enough	%	n	%	*p-value*
The Role of Village Heads/Health Workers/Cadres							
Good	6	37.5	10	62.5	16	100	1.000
Poor	95	37.4	159	62.6	254	100	

The results of the bivariate analysis using the chi-square test on the relationship between driving factors and community participation in the implementation of the dengue prevention program at the Tanjung Morawa Community Health Center. Table 13 shows that out of 254 respondents, 62.6 percent said the role of the village head/health workers/cadres in participating

in the implementation of the dengue prevention program was lacking. Based on the results of the bivariate analysis using the chi-square test, a p-value of (1,000) was obtained, which means there is no relationship between driving factors, in this case the role of stakeholders, and community participation in the implementation of the dengue prevention program at the Tanjung Morawa Community Health Center.

Multivariate Analysis

This study employed multiple logistic regression for multivariate analysis. After bivariate analysis of all independent variables, the independent variables were then entered into multivariate analysis, with the criterion that if the independent variable had a p-value <0.25, it was considered significant in the study. Independent variables meeting this criterion are listed in Table 19.

Table 14. Multiple Logistic Regression Selection Results

Variables	*p value*
Gender	0,019
Knowledge	0,002
Information Sources	<0,001

Based on Table 14, it is known that the independent variables that meet the criteria for multivariate analysis can be seen based on the p-value in the bivariate test results with a p-value <0.25. The variables that meet the criteria are the gender variable with a p-value of 0.019, the knowledge variable with a p-value of 0.002, and the information source variable with a p-value <0.001. Next, a partial test was carried out that included all independent variables in the regression model presented in Table 20.

Table 15. Multivariate Analysis using Multiple Logistic Regression Test with Backward step wise Method.

	Variables	Coefficient (B)	Sig.	Exp (B)	95 % CI For Exp (B)	
					Lower	Upper
1	Gender	0.882	0.004	2.416	1.322	4.414
2	Knowledge	1,054	0.000	2.870	1.636	5.033
3	Information Sources	1,929	0.000	6.882	3.011	15.729
4	*Constant*	-1.861				

The final result of this multivariate analysis states that the most dominant variable in influencing community participation in the Implementation of the Dengue Fever Prevention Program at the Tanjung Morawa Community Health Center is the information source variable with a PR result of 6.882 which means that the information source has a 6 times chance of participating in the Dengue Fever prevention program at the Tanjung Morawa Community Health Center. Furthermore, the results of the multivariate analysis above are entered into a logistic regression equation model (Sudigdo, 2017) to identify the opportunities for community participation in Dengue Fever prevention at the Tanjung Morawa Community Health Center, as follows:

Table 16. Logistic regression equation model

P	=	$\frac{1}{1+e^{-(a+b1x1+b2x2+b3x3+\cdots b_i x_i}}$
P	=	$\frac{1}{1+2{,}14^{-(-1{,}861+0{,}882+1{,}054+1{,}929)}}$
P	=	0,82122 x 100, Jadi P = 82%

Based on the logistic regression equation model, the results obtained are the opportunity for community participation in DHF prevention where (P) = 82%, which means that the variables of gender, knowledge, and information sources have the opportunity to be factors that influence community participation in DHF prevention by 82%, while other factors that influence community participation in DHF prevention are research variables of 18%.

DISCUSSION

The influence of age on community participation in the implementation of dengue fever prevention programs.

Research conducted on 270 respondents found that the proportion of respondents' ages was mostly in the Late Adult category (36-45 years). In this study, respondents in the 26-35 (Early Adult) age category who participated in the implementation of the DHF prevention program in the less category were 57 respondents (61.3%) out of 93 respondents, while in the proportion of 36-45 years old (Late Adult) as many as 112 respondents (63.3%) had less participation in the implementation of the DHF prevention program from a total of 177 respondents. This is not in line with the research of Sutryawam A, et al (2022) which stated that those aged >45 years or those categorized as old carried out more complete PSN.

In connection with the findings of research conducted on 270 respondents obtained the results of bivariate analysis using the Chi-square test on the relationship between age and community participation in the implementation of the DHF prevention program in the Tanjung Morawa Community Health Center work area, then obtained a p-value of 0.851 > α = 0.05 which means Ha is rejected and Ho is accepted. Furthermore, it can be concluded that there is no significant correlation between age and community involvement in the implementation of the DHF program in the Tanjung Morawa Community Health Center work area. Age, according to Azmi (2014), is the number of years of life of respondents calculated from the date of birth to their last birthday. In the Tanjung Morawa Community Health Center work area, participation in the DHF prevention program can cause the relationship to be assumed to be meaningless.

The influence of gender on community participation in the implementation of dengue fever prevention programs

Based on the results of bivariate analysis using the chi-square test on the relationship between gender and community participation in the implementation

of the dengue prevention program in the Tanjung Morawa Community Health Center work area, a p-value of 0.019 < α = 0.05 was obtained, which means Ha was accepted and Ho was rejected. Furthermore, it can be concluded that there is a significant relationship between gender and community participation in the implementation of the dengue prevention program in the Tanjung Morawa Community Health Center work area. The majority of the study's 181 respondents were female. According to Gunarsa (2012), humans consist of men and women with different physical and psychological characteristics, and the roles society assigns to their families vary depending on culture.

Based on the results of the study, it shows that the highest gender in good community participation in the implementation of the DHF prevention program is female, with 76 respondents (42%). This study shows that there is a relationship between gender and community participation in the implementation of the DHF prevention program in the Tanjung Morawa Community Health Center work area. This is in accordance with Notoatmodjo (2010), who said that gender is one of the demographic characteristics that influences the use of health services. Kristina (2017) stated that gender not only differentiates humans physiologically, but is also related to their respective functions and duties.

One factor that can influence community and psychological empowerment is gender. Compared to men, women tend to act differently to prevent dengue fever in their families. Women participate because of their social role in their communities. Josef and colleagues also emphasize the role of women, giving them full responsibility for family health care, disease prevention, and household chores such as cleaning the house, including mosquito larvae control. The creation of mosquito repellent lotion from lemongrass stalks in Tulungagung Regency is one of many successful examples of disease prevention efforts carried out by women's communities (Diyah, 2022).

The influence of education on community participation in the implementation of dengue fever prevention programs.

Based on the results of the study, it shows that the highest level of education of respondents was at the secondary education level (SMP-SMA), namely 242 respondents. Based on the results of the bivariate analysis using the chi-square test on the relationship between education levels in Community Participation in the Dengue Fever Prevention Program in the Tanjung Morawa Health Center work area, a p-value of 0.688> α = 0.05 was obtained, which means Ha was accepted and Ho was rejected. Furthermore, it can be concluded that there is no significant correlation between the implementation of the dengue prevention program and the level of education of the community in the Tanjung Morawa Community Health Center's work area. Education, according to Notoatmodjo (2003), is defined as an effort to influence others, whether individuals, groups, or communities, so that they do what is expected of the person providing the education.

This study found that there was no relationship between education level and community participation in the implementation of dengue prevention programs. Overall, 10.4 percent of respondents in the Tanjung Morawa

Community Health Center's work area had higher education, with 19 respondents (67.9%) showing little participation in the implementation of dengue prevention programs. Education is typically related to the respondent's occupation, with respondents with higher education typically finding it difficult to find free time. Meanwhile, 150 respondents (62%) with secondary education showed less participation in the implementation of dengue prevention programs. Those with higher education are more likely to consider health as important, so they are more likely to utilize health services such as doctors compared to those with lower education.

However, researchers' findings do not always indicate greater awareness of action, but rather that those with lower education levels have higher awareness of dengue prevention efforts. Therefore, both high and low levels of education can contribute to high or low levels of participation in dengue prevention. Cultural and educational factors also play a significant role in this regard, as they allow both highly and low-educated individuals to participate (Montung, 2012). Therefore, community willingness to participate does not depend on educational attainment.

The influence of work on community participation in the implementation of dengue prevention programs

Based on the results of bivariate analysis using chi-square test on the relationship between occupation and community participation in the implementation of dengue prevention programs in the Tanjung Morawa Community Health Center work area, a p-value of 0.336> α = 0.05 was obtained, which means Ha was rejected and Ho was accepted. Thus, it can be concluded that there is no significant relationship between occupation and community participation in the implementation of dengue prevention programs in the Tanjung Morawa Community Health Center work area. Based on the results of the study, it shows that the highest occupation of respondents is non-employee (Housewife, Farmer, Entrepreneur) which is 253 respondents. The results of this study categorize occupations into non-employee and employee. In this case, respondents with non-employee occupations amounting to 156 respondents (61.7%) lack community participation in the implementation of dengue prevention programs, while occupations with employee categories amounting to 13 respondents (76.5%) have less participation in the implementation of dengue prevention programs in the Tanjung Morawa Community Health Center area.

Research by Harmani and Hamal (2013) showed no significant relationship between employment and maternal behavior in preventing dengue fever. However, the results showed that respondents, both employed and unemployed, had an equal opportunity to prevent dengue fever. This aligns with Harmani and Hamal's (2013) findings that unemployed people spend more time at home than employed people.

The influence of knowledge on community participation in the implementation of dengue fever prevention programs.

Based on the results of bivariate analysis using the chi-square test on the relationship between knowledge and community participation in the implementation of the dengue prevention program in the Tanjung Morawa Community Health Center work area, a p-value of 0.002> α = 0.05 was obtained, which means that it is concluded that there is a significant relationship between knowledge and community participation in the implementation of the dengue prevention program in the Tanjung Morawa Community Health Center work area. One intrinsic component that influences desire is knowledge. Knowledge is the result of "knowing," which occurs after a person senses an object (Notoatmodjo 2007). According to Notoatmodjo in Naomi (2019), knowledge is the result of knowing. Knowledge is a very important field in determining the actions of an individual or society, and achieving the results of knowing after an individual or society uses the senses of a particular object (Notoatmodjo, 2014).

It is known that respondents who knew that the 3M Plus Program is part of the DHF prevention program were 215 respondents (79.6%). This shows that the majority of the community is aware of one of the DHF prevention programs that is expected to encourage public participation and awareness to carry out DHF prevention.

Furthermore, it is known that respondents who did not know the program that each household must have at least one person as a JUMANTIK were 205 respondents (77.4%). This is assumed to be due to a lack of information conveyed to the community. Meanwhile, the Ministry of Health's directive (2015) which as of June 2015 has introduced and directed the community to be actively involved in the 1 House 1 Jumantik program. Furthermore, 152 respondents (56.3) did not know that throwing away and covering used items that can hold water can prevent the breeding of DHF mosquitoes. This shows that the lack of socialization and information regarding the DHF prevention program certainly affects public motivation and awareness.

The influence of information sources on community participation in the implementation of dengue fever prevention programs.

Based on the results of bivariate analysis using chi-square test on the relationship between information sources and community participation in the implementation of dengue prevention programs in the Tanjung Morawa Community Health Center work area, the p-value obtained was <0.001 < α = 0.05, which means Ha is accepted and Ho is rejected. Thus, it can be concluded that there is a relationship between the availability of information sources and community participation in dengue prevention programs in the Tanjung Morawa Community Health Center work area. An information source is anything that serves as an intermediary for conveying information, such as information media for mass communication (Notoatmodjo, 2003). Information media can also be obtained through electronic media, such as television, radio, and the internet, as well as through health care workers' activities, such as providing training (Notoatmodjo, 2003). A person's level of knowledge will be influenced by the

information gathered from various sources. People who study extensively tend to have extensive knowledge.

This aligns with Langkap's (2004) research findings, which suggest that many parties can increase respondents' knowledge about dengue fever by disseminating information through various channels, sources, and media. This study found that 159 respondents, or 67.9 percent of the study population, still lacked information sources. This is because dengue prevention outreach activities are only conducted when a community member is suffering from the disease. There is a significant relationship between mosquito nest eradication behavior and information availability, meaning that more information about mosquito nest eradication will also increase mosquito nest eradication behavior. Erni's (2013) research showed that respondents were 5.2 times more likely to engage in mosquito nest eradication if information about mosquito nest eradication was readily available. Providing information is crucial for encouraging the public to prevent dengue fever. However, because health workers and cadres do not regularly provide outreach to the public, outreach is only conducted when a person is infected with dengue fever.

The influence of the role of village heads and health workers (cadres) on community participation in the implementation of dengue fever prevention programs.

Based on the results of bivariate analysis using the chi-square test on the relationship between stakeholder roles and community participation in the implementation of the dengue prevention program in the Tanjung Morawa Community Health Center work area, a p-value of 1,000> α = 0.05 was obtained, which means Ha is accepted and Ho is rejected. Thus, it can be concluded that there is no relationship between stakeholder roles and community participation in the dengue prevention program in the Tanjung Morawa Community Health Center work area. The results of this study showed that 159 respondents (62.6%) said that there was still a lack of stakeholder roles in encouraging community participation in the implementation of the dengue program in the Tanjung Morawa Community Health Center work area. This can be seen from the lack of invitations/appeals from the Village Head (village officials) to the community and the lack of dengue education.

The role of health workers can either encourage or discourage behavioral change. The responsibility health workers place on the community will influence their knowledge and supportive attitudes, which in turn will lead to positive mosquito breeding behavior. Statistical analysis shows that the role of health workers is crucial in implementing mosquito breeding behavior. Attitudes and increased knowledge are influenced by frequent outreach. With dengue fever cases occurring annually, individuals must remain vigilant. Individuals will engage in mosquito breeding activities to avoid dengue fever. The results of the logistic regression test showed that the role of health workers who were active in eradicating mosquito nests had a 5.3 times greater chance of behaving well in eradicating mosquito nests when compared to the role of health workers who were less active.

The results of multivariate analysis using multiple logistic regression indicate that, in the Tanjung Morawa Community Health Center work area with PR (6,882), the factor that provides the most information is community participation in the implementation of the DHF prevention program. The amount of knowledge a person has will be influenced by the amount of data collected from various sources. People tend to have extensive knowledge because they obtain a lot of information. According to Notoatmodjo (2003), the more people read, the better their knowledge will be compared to just hearing or seeing. Knowledge is negatively affected by the limited or lack of information that can be obtained, which makes it difficult for people to take action.

CONCLUSION

Regarding the research conducted on factors influencing community participation in the implementation of the dengue prevention program at the Tanjung Morawa Community Health Center, it was concluded that community participation in the implementation of the dengue prevention program was low, at 62.6%. Regarding predisposing factors, there was no influence of age, education, or occupation on community participation in the implementation of the dengue prevention program. Regarding predisposing factors, gender had an influence on community participation in the implementation of the dengue prevention program, with a p-value of 0.019. Regarding predisposing factors, knowledge had an influence on community participation in the dengue prevention program at the Tanjung Morawa Community Health Center, with a p-value of 0.002. Regarding supporting factors, the availability of information sources had an influence on community participation in the implementation of the dengue prevention program at the Tanjung Morawa Community Health Center, with a p-value of <0.001.

Regarding driving factors, there was no influence of the role of stakeholders (the village head and health workers/cadres) on community participation in the implementation of the dengue prevention program at the Tanjung Morawa Community Health Center, with a p-value of 0.787. The most influential factor on community participation in the implementation of the DHF prevention program in the Tanjung Morawa Community Health Center working area is the information source factor, where PR = 6.882 (CI 95% = 3.011-15.729). Based on the logistic regression equation model, the results obtained for the opportunity for community participation in the implementation of DHF prevention where (P) = 82%, which means that the variables of gender, knowledge, and information sources have the opportunity to be factors that influence community participation in DHF prevention by 82%, while other factors that influence community participation in DHF prevention are 18%.

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