HOME ENVIRONMENTAL SANITATION RELATIONSHIP WITH DHF

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ABSTRACT

Jasinga is one of dozens of sub-districts in Bogor City with high DHF cases, namely the DHF morbidity rate. In 2018-2019 there were 1151 cases. One of the causes of this DHF incident is poor environmental sanitation around residential areas, efforts to prevent DHF is to break the chain of transmission by controlling vectors through the Eradication of Mosquito Nests (PSN) and implementing the 3M movement. The purpose of this study was to determine the relationship between sanitation in the home environment and the incidence of DHF. This research is a quantitative study with a cross-sectional study design, the samples taken were 83 people by taking the whole and the research respondents. The sampling technique uses total sampling or the number of samples is the same as the population. The data collection method uses primary data in the form of interviews with questionnaire research instruments and checklist sheets. The time of the research was carried out on 7 October 2022 – 1 August 2023. The results of the bivariate analysis showed that there was a relationship between respondents regarding environmental sanitation and the incidence of dengue hemorrhagic fever. Based on the research results, it is suggested to the public to pay attention to environmental conditions to prevent DHF. To Tanah Sareal Health Center staff to improve the environmental health program and the mosquito nest eradication program (PSN) in the working area of the Tanah Sareal Health Center, Bogor Regency so that it can reduce the incidence of DHF. The time of the research was carried out on 7 October 2022 – 1 August 2023. The results of the bivariate analysis showed that there was a relationship between respondents regarding environmental sanitation and the incidence of dengue hemorrhagic fever. Based on the research results, it is suggested to the public to pay attention to environmental conditions to prevent DHF. To Tanah Sareal Health Center staff to improve the environmental health program and the mosquito nest eradication program (PSN) in the working area of the Tanah Sareal Health Center, Bogor Regency so that it can reduce the incidence of DHF. The time of the research was carried out on 7 October 2022 – 1 August 2023. The results of the bivariate analysis showed that there was a relationship between respondents regarding environmental sanitation and the incidence of dengue hemorrhagic fever. Based on the research results, it is suggested to the public to pay attention to environmental conditions to prevent DHF. To Tanah Sareal Health Center staff to improve the environmental health program and the mosquito nest eradication program (PSN) in the working area of the Tanah Sareal Health Center, Bogor Regency so that it can reduce the incidence of DHF. It is suggested to the public to pay attention to environmental conditions to prevent dengue fever. To Tanah Sareal Health Center staff to improve the environmental health program and the mosquito nest eradication program (PSN) in the working area of the Tanah Sareal Health Center, Bogor Regency so that it can reduce the incidence of DHF. It is suggested to the public to pay attention to environmental conditions to prevent dengue fever. To Tanah Sareal Health Center staff to improve the environmental health program and the mosquito nest eradication program (PSN) in the working area of the Tanah Sareal Health Center, Bogor Regency so that it can reduce the incidence of DHF.

Keywords: Environmental Sanitation, DHF

INTRODUCTION

Infectious diseases are also a major health problem in Indonesia which can be transmitted from one person to another through the spread of diseases, one of which is Dengue Hemorrhagic Fever. Dengue Hemorrhagic Fever (DHF). Dengue fever is a flu-like virus that is spread by the Aedes Aegypti virus and enters the human bloodstream. 1

In the last two years, dengue fever has been increasingly prevalent in Indonesia. In recent years, the disease has increased in hospital symptoms and is getting more severe. Indonesia is a country with a population of around 261 million people. However, DHF has spread widely in big cities and rural areas in Indonesia and has spread to remote towns. 1

DHF is unique to climate change, including the physical environment. Climate change will affect transmission, because vectors will reproduce better with temperature, wind speed and humidity contained in the material for their life. 41

The survival of mosquitoes can also be affected by the presence of water or ponds as a breeding medium from eggs to mosquitoes. As a result, the mosquito's daily operation must be adequately heated and cooled and supported by humidity. In addition, mosquitoes are thought to be caused by the large number of mosquitoes laying their eggs in bathtubs, buckets, buckets, which are not for daily use. staples such as flower vases, used tires, trash cans, and dirt such as wood holes, media, stone holes, which will be good or not for cleaning later. 1

DHF is also a disease around it, namely a pathological disease in the form of damage or morphology of a substance caused by humans which disturbs everything in the environment that can carry disease. Good environment for DHF, especially in polluted water. Other factors that influence the occurrence of DHF in Indonesia are environmental, environmental and other physical factors, environment, for example restrictions, rainfall, humidity, season), population area (density, movement, behavior), culture, health. and the thickness of the mosquito is a vector for the spread of the Dengue virus, meaning that currently there are 4 types of Dengue virus serotypes namely Dengue 1,2,3,4.2

Environmental diseases actually affect cleanliness, according to Notoatmojo, environmental hygiene is environmental health which includes living in the house, garbage disposal, clean water and existing containers. Protecting the home environment is close to the growth and regeneration of mosquitoes, pathogenic impurities can cause many bacteria, one of which is DHF caused by the Aedes aegypti mosquito, namely mosquitoes can live in unclean places and come out of holes or containers that can hold water. when it rains.3

Unhealthy behavior in society and the environment is dangerous for preventing environmental diseases, one of which is DHF. The World Health Organization (WHO) says the nature of clean water storage, waste disposal, and habitat improvement is close to the breeding grounds of the Aedes aegypti vector.4

Since then the number of human cases has continued to increase and the number of people in conflict zones in Indonesian territory has been caused by various factors, including improvements in transportation, travel, displacement, human behavior such as the habit of storing water for daily needs such as retaining rainwater and good runoff, reservoirs such as baths and kennels that are not very clean can be breeding grounds for mosquitoes, habit of storing supplies or not checking the environment for water stored in containers and Lack of cleaning/addition of 3M, makes Aedes aegypti Mosquitoes a target the main cause of DHF in all corners of the country and the four outbreaks in a year

The best protection and efficiency is to turn off the Pest Control System (PSN) continuously and all at once, while Fogging is an effort to break the disease transmission path at the fogging area (Fogging Focus) for DHF victims in the city of Bogor.5

Data from the World Health Organization (WHO) 2018 - 2019 DHF cases occurred in 65 countries with an average of 925,896 incidents per year. Indonesia is the 2nd country in Southeast Asia with the largest endemic area and DHF cases. According to the West Java Health Office, DHF levels have been recorded to have increased, namely in 2018 there were 2,204, with 3,188 cases of dengue fever (DHF) in 2019. In the Bogor area, the number of DHF sufferers fell to 741 in 2018 and 410 in 2019. According to data from the Tanah Sareal Health Center in 2018 there were 56 cases of dengue while in 2019 there were 45 cases of dengue.

The cause of DHF is caused by a Dengue virus called group B Arthropod Borne Virus (Arboviroses), which is now known as the Flavivirus genus, Flaviviridae family, and four serotype species namely; DEN-1, DEN2, DEN-3, DEN-4. One model of disease may result in a vaccine against the anxiety anomaly, whereas insufficient vaccines are produced against the other serotypes, and so may not provide adequate protection for the other protective serotypes. models throughout her life. Flu can be found in many areas in Indonesia. In Indonesia, DHF has been diagnosed since 1975 in many hospitals, with four patients reported and reported throughout the year. The DEN-3 label is the most important and has previously been implicated in a number of serious pathogens.

DHF Communicable Diseases (KLB) can be prevented with early warning detection (SKD) and vector control has been adopted for reasonable, integrated and long-term operations. Vector control with vector surveillance is carried out by Mosquito Control (PSN) with community integration by RT / RW in PSN format with 3M keynote. The effectiveness of PSN games, among others, can be measured by virus free (ABJ). If ABJ is greater than or more than 95%, it is estimated that infectious diseases can be prevented or reduced. Prevention of dengue fever can be done in several ways, for example fogging using malathion and fenthion which are effective in reducing the transmission of Aides aegypti to a certain extent.

From the results of previous research by scientists at RT 06 RW 03 Desa Kota Bogor using the Checklist method, namely the implementation of the PSN-DBD (Dengue Hemorrhagic Fever due to Mosquito) Program by 3M, namely when 27 homeowners did not practice the PSN-DBD method, only 25% of homeowners who are part of the PSN process, because most of them are houses have not done PSN-DHF so this creates risky habitats (mosquito shelters) in outdoor areas close to the location. Take care of animals (mosquitoes laying eggs) in the home environment . In this case, dozens of homeowners reported that now there are police from the Community Health Center and the Department of Public Health who check the reproductive organs, but not all of them, the mosquito officers visit the house. Regarding environmental hygiene, a survey was conducted on 27 houses, found that most Pamagersari Village residents have clean water, 60% of the owners have 2 toilets. - 3 times a month, 20% of houses for Rent every 2 months and 20% of houses damaged if found dirty means time is running out and most of the containers are not closed. This disease causes the release of clean water in containers, bathtubs, drums, buckets, trash cans and other water sources which can kill the Aedes aegypti fly bacteria. In addition, in the management of household equipment, 75% of waste that is not developed, not piled up is also collected in the yard of the house and 15% is management waste, burning waste and 10% is burial waste in the house. cans, etc. 20% of houses for Rent every 2 months and 20% of houses damaged if found dirty means time is running out and most of the containers are not covered. This disease causes the release of clean water in containers, bathtubs, drums, buckets, trash cans and other water sources which can kill the Aedes aegypti fly bacteria. In addition, in the management of household equipment, 75% of waste that is not developed, not piled up is also collected in the yard of the house and 15% is management waste, burning waste and 10% is burial waste in the house. cans, etc. 20% of houses for Rent every 2 months and 20% of houses damaged if found dirty means time is running out and most of the containers are not covered. This disease causes the release of clean water in containers, bathtubs, drums, buckets, trash cans and other water sources which can kill the Aedes aegypti fly bacteria. In addition, in the management of household equipment, 75% of waste that is not developed, not piled up is also collected in the yard of the house and 15% is management waste, burning waste and 10% is burial waste in the house. cans, etc. in the management of household equipment, 75% of the waste is not developed, not stacked and also collected in the yard of the house and 15% is management waste, burning waste and 10% is burial waste in the house. cans, etc. in the management of household equipment, 75% of the waste is not developed, not stacked and also collected in the yard of the house and 15% is management waste, burning waste and 10% is burial waste in the house. cans, etc.

Based on this history, the author wants to explore the research on "The relationship between sanitation in the home environment and the incidence of DHF".

RESEARCH METHODS

This study used a randomized controlled trial. Examination is a study or examination that seeks to find out the causes and causes of a health problem (Notoatmodjo, 2002: 145). In this study, there is no study of subclasses (populations), but only a few individuals (eg). This researcher uses a reading course or calls it a (free) study called the Department of Environmental Protection, and focuses on prevention which is the cause of DHF (Alimul, 2003). The method used for this research is a down-to-earth search which is called analysis where the data is useful information so that the data analysis uses research data. The 47 people in this study were all areas in the Puskesmas office area, 83 people. Then the population in this unit is used as a sample as a conclusion. The research sample totaled 83 people by taking the whole and the research respondents. The reason the researcher used total sampling was because the population was relatively small, only 83 people

RESEARCH RESULTS

Table 1 Gender of Respondents

No	Gender	Frequency	Percentage (%)
1	Man	49	59%
2	Woman	34	41%
	Total	83	100%

Based on the table of the characteristics of the sex respondents in the Tanah Sareal Puskesmas area, from 83 respondents, it was found that the sex of the most respondents was male with a total of 49 respondents (59%).

Table 2 distribution of the frequency of sanitation in the home environment in RT 06 RW 03 Desa Kota Bogor

Home environmental sanitation	Frequency	Percentage (%)
Good	62	74,7
Bad	2	25,3
Total	83	100%

Based on the table above, the results show that the majority of 74.7%, namely 62 respondents, have good environmental sanitation.

Table 3. Frequency distribution of dengue hemorrhagic fever (DHF)

Incidence of dengue hemorrhagic fever (DHF)	Frequency	Percentage (%)
Ever been infected	54	65,1
Never caught	29	34,9
Total	83	100%

Based on the table above, it was found that the majority of 65.1%, namely as many as 54 respondents, experienced DHF incidents.

Table 4 Results of bivariate analysis of environmental sanitation and DHF events

Environment sanitation	Dengue blood fever				Total		*P Value*
	Never been infected		Ever been infected				0.025
	F	%	F	%	F	%	
Good	51	82.3%	11	17,7	62	65,1	
Bad	3	14,3	18	85.7	21	34,1	
Amount	54	65,1	29	34,9	83	100	

It is known that from 83 respondents the relationship between environmental sanitation and the incidence of dengue hemorrhagic fever was good sanitation as many as 62 respondents (74.7) and the incidence of dengue hemorrhagic fever was infected by as many as 54 respondents (65.1)

DISCUSSION

1. Sanitation of the Home Environment at the Tanah Sareal Health Center

   Based on research conducted at the Sareal Tanah Health Center, the results obtained were that the environmental conditions of the houses of good sanitation respondents totaled 62 people (74.7).

   This research is in line with research conducted by Sholihah and Prasetyo (2014) which states that there is a significant relationship between environmental sanitation conditions and the incidence of DHF. This is not in line with Sholehuddin's research (2014) which states that there is no relationship between environmental sanitation and the incidence of DHF.

   The environmental conditions of the house referred to in this study are having wire screens on ventilation and windows, not hanging clothes that have been worn, and using lotion/mosquito nets when sleeping day and night), a building or house that has ventilation and windows that are not attached with wires. gauze or strimin will make it easier for mosquitoes to enter buildings to bite humans, rest, and find a place to breed.

   Researchers assume that residents in the Tanah Sareal health center environment who experience good sanitary conditions in their home environment routinely carry out 3M activities (closing, draining, stockpiling) and poor sanitation conditions in their home environment. screens on windows.

   Incidence of Dengue Hemorrhagic Fever (DHF) at the Tanah Sareal Health Center

   Based on the research conducted, the results obtained were that the majority of 65.1%, namely as many as 54 respondents experienced DHF incidents.

   This research is in line with research conducted by Sholihah and Prasetyo (2014) which states that there is a significant relationship between environmental sanitation conditions and the incidence of DHF. This is not in line with Sholehuddin's research (2014) which states that there is no relationship between environmental sanitation and the incidence of DHF.

Dengue Hemorrhagic Fever (DHF) can be overcome by using mosquito nets/mosquito nets to prevent mosquitoes from biting humans and avoid the occurrence of DHF disease. not easy to bite. The use of lotion/anti-mosquito/netting is a form of prevention from DHF which will occur more in society if people do not want to protect themselves.

Researchers assume that those who experience DHF often hang their black clothes every day because black clothes trigger mosquito nests because the clothes that are worn when hanging certainly retain the smell of sweat and moisture.

2. Bivariate Analysis

Relationship between home environmental sanitation and dengue hemorrhagic fever (DHF). Based on the results of the research on the relationship between environmental sanitation and the incidence of dengue hemorrhagic fever, it showed that 62 respondents (74.7%) had good environmental sanitation with good home environmental sanitation with a Chi-square test result with a p value = 0.025, which means that the p value $\alpha < (0.05)$, That there is a relationship between environmental sanitation and the incidence of dengue hemorrhagic fever.

This study is comparable to that conducted by Faizal Ghofarudin (2015) "Relationship between environmental sanitation and the incidence of Dengue Hemorrhagic Fever (DHF) in RW 21, Sendang Mulyo Village, Kedung Mundu District" with the results that there is a relationship between environmental sanitation and DHF events.

The researcher assumes that those who experience good sanitary conditions in their home environment routinely carry out 3M activities (closing, draining, stockpiling) and poor sanitary conditions in their home environment. On average, the settlements are close together, the housing conditions are damp, and there are no wire screens on the windows. 3 Researchers assume that those who experience DHF often hang their black clothes every day because black clothes trigger mosquito nests because the clothes that are worn when hanging certainly retain the smell of sweat and moisture.

CONCLUSION

1. It is known from the frequency distribution of house environmental sanitation at the Tanah Sareal Public Health Center that most of the respondents in good condition of the home environment, 62 people (74%).
2. It is known from the distribution of the frequency of occurrence of dengue hemorrhagic fever (DHF) that most of the Tanah Sareal Public Health Centers have experienced DHF incidents totaling 54 people (65.1).
3. It is known that based on the results of research on the relationship between environmental sanitation and the incidence of dengue hemorrhagic fever, it was shown that 62 respondents (74.7%) had good environmental sanitation with good home environmental sanitation with a Chi-square test result with a p value = 0.025, which means that the p value $\alpha < (0.05)$, That there is a relationship between environmental sanitation and the incidence of dengue hemorrhagic fever at the Tanah Sareal Health Center.

SUGGESTIONS

1. For the Tanah Sareal Community Health Center, Bogor Regency
   It is suggested to Tanah Sareal Health Center staff to be able to improve the mosquito nest eradication program (PSN) and routinely carry out the jumantik program in the work area of Tanah Sareal Health Center, Jasinga District, Bogor Regency so that it can reduce the incidence of DHF.
2. For the Wijaya Husada Bogor STIKes Institution
   It is suggested to Stikes Wijaya Husada Bogor to create an Environmental Health Laboratory (Kesling) to make it easier for lecturers to analyze the objects to be studied so that when lecturers go into the field they already have experience gained from the campus.

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