Descriptions of Knowledge, Attitude, and Action of Community in DHF Prevention in RW 10 Cawang Urban Village, East Jakarta in 2016

Abstract

Dengue fever is still a health issue in Indonesia. The persistent problem is inconsistent preventative behavior. The research design was descriptive by observing descriptions of knowledge, attitude, and community action in DHF prevention in RW 10 Cawang Urban Village, East Jakarta. The research result showed that the knowledge level of the respondents was good (80,8%), adequate (16,7%), and poor (2,5%). The attitude of the respondents was good (78,3%), adequate (15%), and poor (6,7%). The DBD prevention action of the respondents was good (50,8%), adequate (29,2%), and poor (20%). The community's knowledge level, attitude, and action were in the category of good.

Keywords: Dengue Fever, DHF Prevention

Introduction

Dengue hemorrhagic fever (DHF) is commonly found in tropical and sub-tropical regions [1]. Dengue fever is a disease caused by the dengue virus, which enters human blood through the bite of the Aedesaegypti mosquito. DHF can appear throughout the year and can attack all age groups [2]. Dengue hemorrhagic fever is a major global problem because 2.5 to 3 billion people are at risk of developing the disease. There are at least around 50-100 million cases per year. As many as 500,000 cases of patients were hospitalized, and 5% of them died. [3]

In the WHO monitoring area, Thailand is the first country to report cases of dengue hemorrhagic fever and ranks first in cases of this disease. Then Indonesia was ranked second, with the number of cases of dengue hemorrhagic fever reported more than 10,000 cases each year [4].

Survey data from the DKI Jakarta Provincial Health Office note that East Jakarta has the highest cases of DHF. In East Jakarta in 2012, there were 3801 cases of DHF, and then in the following year, there was a significant increase of 6288. In 2014 it began to experience a decrease of 4910 cases, and in 2015 there was a decrease to 3167 cases. The high number of dengue cases has forced the government and society to make efforts to control it [5]. Efforts can be made by eradicating mosquito nests as prevention against DHF. The policies made by the government are very dependent on the role of the community [6]. In addition, adequate knowledge and responses are needed to be aware of the disease. Health workers are also expected to be able to participate in meeting the health needs of the community and provide health knowledge regarding the prevention of DHF. [7]

This study aimed to describe knowledge, attitudes, and community actions in preventing dengue hemorrhagic fever (DHF) in RW 10, Cawang Village, East Jakarta, in 2016. Based on the background of the problems above, the problem can be formulated as follows: "Description of knowledge, attitudes, and community action in preventing DHF in RW 10, CawangSubdistrict, East Jakarta in 2016". The research aims to overview the community's knowledge, attitudes, and actions in preventing DHF in RW 10, Cawang Village, East Jakarta, in 2016.

Literature Review

Dengue hemorrhagic fever (DHF) or dengue hemorrhagic fever (DHF) is a disease caused by the dengue virus, transmitted by the bite of the Aedesaegypti mosquito. These mosquitoes breed in clean water reservoirs such as bathtubs, jars, used tires, and used cans [8]. DHF is most commonly found in tropical and sub-tropical regions. Dengue fever is a disease caused by infection with the dengue virus. The dengue virus belongs to group B of the Arbovirose virus, the genus flavivirus, and the family Flaviviridae. It is about 50 nm in size with single-stranded RNA and has four types of serotypes, namely DEN-1, DEN-2, DEN-3, and DEN-4. These four serotypes can be found in Indonesia, and the most common serotype is DEN-3 [9].

Dengue transmission occurs from human to human through the bite of a female Aedessp mosquito that contains the dengue virus [10]. The virus experiences incubation and replicates for 8-10 days in the mosquito's salivary glands, then is carried and transmitted to other individuals. Mosquitoes suck blood during the day, especially in the evening. The Aedesaegypti mosquito's characteristic feature is its black body with distinctive black and white spots on its thorax. These mosquitoes breed in clean water, such as bathtubs, water storage jars, empty cans, etc. The eggs will hatch into mosquito larvae within 6-8 days and then become pupae. In less than two days, the pupa will develop into an adult mosquito [11; 12].

Immunopathological mechanisms play a role in the occurrence of DHF. The immune response that plays a role in the pathogenesis of DHF is the humoral response in the form of antibody formation. It plays a role in the process of virus neutralization, complement-mediated cytolysis, antibody-mediated cytotoxicity, T-lymphocytes, both T-helper (CD4) and T-cytotoxic (CD8) play a role in the immune response cellular response to dengue virus where T-helper differentiation, namely TH1, will produce interferon-gamma, IL-2, and lymphokines. In contrast, TH2 produces IL-4, IL-5, IL-6, and IL-10, the role of monocytes and macrophages in phagocytosis of viruses by opsonization antibodies and complement activation by immune complexes that lead to the formation of C3a and C5a [13]. Mosquitoes carry the dengue virus and transmit it to humans.

The virus enters the human bloodstream and then replicates/multiplies itself. As a resistance, the body will form antibodies, then a virus antibody complex will form with the virus that functions as its antigen. The antibody-antigen complex will release substances that damage blood vessels, called an autoimmune process. This process causes capillary permeability, which is indicated by the widening of the capillary pores. It will result in the leakage of blood cells, including platelets and erythrocytes. As a result, the body will experience bleeding from spotting to severe bleeding on the skin, digestive tract, respiratory tract, and vital organs, often resulting in death [14]. Based on the Dengue Guidelines for Diagnosis, Treatment, Prevention & Control issued by WHO in 2009, the clinical picture of dengue sufferers consists of [15]: febrile phase, critical phase, and recovery phase.

DHF patients' management is based on the disease's clinical course following the sequence of phases, namely the febrile, critical and convalescent phases [16]. To prevent dengue hemorrhagic fever, the ways that can be done are [17; 18]: a) Implement clean and healthy living habits (PHBS) in the family. One way is to drain the tub at least once a week; b) Always maintain cleanliness around the house, such as cleaning used cans around the house; c) Raising larvae-eating fish in fish ponds, and d) Prevent mosquito bites.

To prevent and avoid the development of the Aedesaegypti mosquito through: a) The house is always bright; b) Do not hang clothes; c) Tubs/water reservoirs are frequently cleaned and water changed at least once every four days; d) Bury used goods which are possible as a place for rainwater to collect; e) Close the water reservoir. According to the Indonesian Ministry of Health (2013), DHF control can be carried out in the following ways [19]: a) Physical control (PSN 3M); b) Biological control; c) Chemical control; and d) Integrated vector control.

Knowledge is taken from the word "know," which happens after people see certain objects. Knowledge is crucial in shaping one's actions (over behavior). The knowledge included in the cognitive domain has six levels, namely [20]: to know, to comprehend, to apply, to analyze, to synthesize, and to evaluate. Attitude is a willingness to react (disposition to react) positively (ravorably) or negatively (untavorably) towards certain objects. Attitude has four main components: beliefs, ideas, and concepts towards an object, emotional life or evaluation of an object, and the tendency to act. These four components will form a complete attitude. Knowledge plays an important role in determining attitudes [21].

According to Notoatmojo (2007), various levels of attitude, namely [22]: receiving, responding, valuing, and responsible. Being responsible for everything chosen with all the risks is the highest attitude. Action is an overt behavior or a person's real response to a stimulus. Actions taken by someone are carried out after someone knows and evaluates a stimulus. Action is an open response that is easily observed or seen by other people when compared to attitudes that are closed responses, so it is difficult to observe clearly. One thing that influences the formation of practice or action requires support from other parties, such as family, relatives, community leaders, and so on [22].

Based on the quality, the action is divided into three levels, namely [23]: guided response, mechanism response, and adoption. Adoption is an action that is not just a routine; it has been developed and modified so that it becomes a quality behavior. According to Lawrence Green's theory cited by Notoadmodjo, behavior is determined by three main factors, namely [24]: a) Predisposing factors are factors that can facilitate behavior in a person, for example, knowledge, attitudes, beliefs, beliefs, values, etc.; b) Supporting factors (enabling factors) include the availability or unavailability of health facilities or facilities, for example, health centers, medicines, sterile equipment and so on; and c) Reinforcing factors that are manifested in the behavior of health workers or someone who is a reference group for community behavior.

Research Method

The type of research used is descriptive to see an overview of the community's knowledge, attitudes, and actions in preventing DHF. When the research was conducted in November - December 2016, it was held in RW 10, Cawang Village, East Jakarta. The population in this study were all people living in RW 10, Cawang Village, East Jakarta, with a total of 1155 people. The sampling technique is non-random accidental sampling. Sampling is done by taking cases or respondents who happen to exist or are available somewhere according to the research context.

The data collection tool used is a questionnaire. Based on the statement form, the questionnaire used is a closed questionnaire, which has provided answers, and respondents only choose answers. The form the questionnaire used was a closed questionnaire, and the respondents only chose the answers that had been provided. There are 35 questions, consisting of 12 knowledge questions, 11 attitude questions, and 12 action questions. Knowledge and action questionnaire to assess the level of knowledge and action by answering questions consisting of 12 questions, each with a choice of answers for knowledge. Researchers expect a review of these questions to determine people's attitudes, consisting of 11 questions with choices. Data analysis begins with managing data. Data processing is done through editing, coding, and data entry. The procedure or type of data analysis used univariate analysis (descriptive analysis). The aim is to explain or describe the characteristics of each research variable. The research variables are knowledge, attitudes, and actions in preventing dengue hemorrhagic fever (DHF) in RW 10, Cawang Village, East Jakarta. Respondent characteristics include gender and community education.

Result and Discussion

Research on the description of knowledge, attitudes, and community actions in preventing dengue hemorrhagic fever (DHF) in RW 10, Cawang Village, East Jakarta, in 2016 using a sample of 120 people. Respondents with non-random accidental sampling technique. This chapter describes the results of the research and discussion regarding the description of knowledge, attitudes, and community actions in preventing dengue hemorrhagic fever in RW 10, Cawang Village, East Jakarta, in 2016. Univariate analysis in this study will describe the characteristics of respondents based on gender, education, knowledge, attitudes, and actions.

Table 1. Distribution of Frequency and Percentage of Respondents by Gender in RW 10, CawangSubdistrict, East Jakarta, 2016

Gender	Frequency	Percentage %
Male	54	45,0
Female	66	55,0
Total	120	100,0

The table above shows that the most respondents were women, 60 people (55%), and men, 54 people (45%).

Table 2. Distribution of Frequency and Percentage of Respondents by Education in RW 10, CawangSubdistrict, East Jakarta, 2016

Education	Frequency	Percentage %
Not attending school	1	8
Elementary School	7	5,8

Junior High School	18	15,0
Senior High School	73	60,8
College Graduate	21	17,5
Total	120	100,0

The table above shows that the education level of the most respondents is high school graduates (73 people (60.8%), followed by university graduates with 21 people (17.5%), then junior high school graduates with 18 people (15%), graduated from elementary school seven people (5.8%), while the lowest education was one person (8%).

Table 3. Frequency Distribution and Percentage of Respondents According to Knowledge in RW 10, CawangSubdistrict, East Jakarta, 2016

Knowledge	Frequency	Percentage %
Good	97	80,8
Medium	20	16,7
Poor	3	2,5
Total	120	100,0

Based on the table, it can be seen that most respondents' knowledge level is in a good category, namely as many as 97 people (80.8%), followed by knowledge in the medium category, as many as 20 people (16.7%). At the same time, the little knowledge is in the poor category, as many as three people (2.5%).

Table 4. Frequency Distribution and Percentage of Respondents' Answers to Each Attitude Question about Dengue Prevention in RW 10, CawangSubdistrict, East Jakarta, 2016

Attitude	Frequency	Percentage %
Good	94	78,3
Moderate	18	15,0
Bad	8	6,7
Total	120	100,0

The table above shows that the attitude of the respondents is in a good category, with as many as 94 people (78.3%), followed by a moderate attitude of as many as 18 people (15%). At the same time, attitudes in the bad category are as many as eight people (6.7%).

Table 5. Frequency Distribution and Percentage of Respondents' Answers to Each Action Question About DHF Prevention in RW 10, CawangSubdistrict, East Jakarta in 2016

Action	Frequency	Percentage %
Good	61	50,8
Moderate	35	29,2
Bad	24	20,0
Total	120	100,0

The table above shows that most of the respondents' behavior is in a good category, namely 61 people (50.8%), followed by moderate behavior, as many as 35 people (29.2%). Meanwhile, the bad behavior category is 24 people (20%). Based on

table 3, it can be seen that 97 people (80.8%) have good public knowledge of DHF prevention, 20 people (16.7%) have moderate knowledge, and three people (2.5%) have a bad category. This research is in line with the opinions of Ni NyomanYunitaKusumaBakta, and I Made Bakta (2014) in a study entitled The Relationship Between Knowledge and Attitudes Against Mosquito Nest Eradication (PSN) Behavior as Prevention of Dengue Hemorrhagic Fever (DHF) in Banjar Badung, Melinggih Village, Region The Payang Health Center. They stated that 11 people (84.6%) had good knowledge of the community about DHF prevention, ten people (66.7%) had moderate knowledge, and four people (7.7%) had insufficient knowledge.

In table 4, it can be seen that the attitude of the community in preventing DHF is categorized as good because the results obtained were 94 people (78.3%) had a good attitude, 18 people (15%) had a moderate attitude, and as many as eight people (6.7%) had a bad attitude. In contrast to the results which found that the relationship between knowledge and attitudes of the family with the prevention of dengue hemorrhagic fever (DHF) in the Mogolaing Village showed a fairly good (moderate) attitude in preventing DHF as many as 45 people (45%), then for the good category as many as 32 people (32 %) and less by 23 people (23%) [25]. It may be due to the different levels of knowledge in each region. Good knowledge will produce a good attitude too. Attitude is a person's willingness that has not been implemented.

From table 5, it was found that 61 people (50.8%) had good actions in preventing DHF, followed by 35 people (29.2%) in the moderate category and 24 people (20%) with bad actions. It is different from the results of the study, which said that the description of knowledge, attitudes, and actions regarding 3M (burying used goods, closing and draining water reservoirs) in families in Padang Bulan Village obtained moderate actions by 75 people (75.8%), then good actions by 18 people (18.2%) and less than six people (6.1%) [27]. Differences in community actions in preventing DHF can be due to the people in RW 10, Cawang Sub-District, having good knowledge, attitudes, and actions. Table 1 shows that most of the respondents were female, as many as 66 people (55%), while there were 54 men (45%). This difference occurred because the sample was taken randomly with 120 respondents.

The research results, which can be seen in table 2 of community education, show that out of 120 people, about 92%. The highest education was high school graduates, as many as 73 people (60.8%), and the second were university graduates, as many as 21 people (17.5%). The third junior high school graduates were 18 people (15%). Around seven people (5.8 %) graduated from elementary school, and finally, only one person (8%) did not study according to Grossman's theory that differences in educational levels lead to differences in basic health knowledge. The higher the level of education, the easier it is for them to receive and develop knowledge and technology. It will increase productivity, ultimately improving the family's health and welfare [27].

Conclusion

Based on the results of data analysis and discussion of the description of knowledge, attitudes, and community actions in preventing dengue hemorrhagic fever (DHF) in RW 10, Cawang Sub-District in 2016, the conclusions are as follows: a) Based on gender, 55% were mostly female and based on education, most of them 60.8% of people graduated from high school; b) Knowledge of respondents in the prevention of DHF as much as 80.8% of people who have good knowledge; c) Attitude of respondents in preventing DHF as much as 78.3% of people who have a good attitude;

and d) Actions of respondents in preventing DHF as much as 50.8% of good people take action. It is hoped that students from the Indonesian Christian University medical faculty will be able to provide counseling on the prevention of dengue hemorrhagic fever (DHF) to residents.

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