Table of contents available atIOCScience

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COMMUNITY BEHAVIOR TOWARDS DENGUE INCIDENTS IN PASIR VILLAGE, CENTRAL TAPANULI REGENCY IN 2021

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ABSTRACT

Dengue Hemorrhagic Fever (DHF) is an infectious disease caused by the dengue virus and transmitted by Aedes aegypti and Aedes albopictus mosquitoes. Increased DHF incidences caused by the unclean lifestyle of people. This study was an analytical study with a cross-sectional approach. The aim was to determine the relationship between individual characteristics, behavior, and environment on the incidence of DHF. Data were collected by interview and observation using a questionnaire and observation sheet. Data analyzed by univariate and bivariate methods with a chi-square analysis test. The number of samples was 107 people with the sampling technique used was simple random sampling. The results showed that 15.9% of the community had dengue fever in the last six months. There were 4 variables that have a relationship to the incidence of DHF, namely age (p-value = 0,000), gender (p-value = 0.017, OR = 4.146), knowledge (p-value = 0.034, OR = 5.231), actions (p-value = 0.045, OR = 3.740), while education (p-value = 0.086), work (p-value = 0.748), attitude (p-value = 0.078), the existence of larvae (p-value = 0.716) does not have a relationship to the incidence of DHF and 1 variable cannot be connected namely the existence of a water reservoir because 100% have a water reservoir and 1 variable only looks at the description of DHF events by season.

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1. Introduction

Dengue Hemorrhagic Fever (DHF) is a disease caused by infection with the DEN-1, DEN-2, DEN-3, or DEN-4 viruses which is transmitted through the bites of Aedes aegypti and Aedes albopictus mosquitoes that have previously been infected by the dengue virus from other DHF sufferers. The four types of viruses have been found in various regions in Indonesia and the most are type 2 and type 3. Research in Indonesia shows dengue type 3 is the dominant viral serotype that causes severe cases (Candra, 2010).

Adefty ades mosquitoes become infective 8–12 days after sucking the blood of previous DHF sufferers. The Aedes aegypti mosquito is the most active and main spreader of DHF disease (vector) because it lives around residential areas. As for the Aedes albopictus mosquito, it is abundant in plantation areas and bushes (Purnama, 2017).

Prior to 1970, only 9 countries were endemic to Dengue. Now the disease already exists in 100 countries in the WHO region of Africa, America, the Eastern Mediterranean, Southeast Asia and the Western Pacific. The Americas, Southeast Asia, and the Western Pacific region are the most affected regions. Cases across the Americas, Southeast Asia, and the Western Pacific already exceeded 1.2 million in 2008 and more than 3.2 million in 2015 (based on official data submitted by member states). Recently the number of reported cases has continued to grow. In 2015, 2.35 million cases of dengue were reported in America alone, of which 10,200 cases were diagnosed as severe dengue fever causing 1181 deaths (E. Novitasari, 2018).

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In Indonesia, dengue fever was first discovered in the city of Surabaya in 1968, where as many as 58 people were infected and 24 people died, with a mortality rate of 41.3%. Since then, the disease has spread widely throughout Indonesia (Ministry of Health, 2016). DHF disease can appear throughout the year and can affect all age groups. This disease is related to environmental conditions and community behavior (Ministry of Health of the Republic of Indonesia, 2017). Based on the Indonesian Health Profile of the Indonesian Ministry of Health in 2017, dengue cases in 2017 amounted to 68,407 cases, with a total of 493 deaths.

There is still a high incidence of dengue fever, especially in the puskesmas work area, internally and externally such as knowledge, attitudes, behaviors of the community in understanding and carrying out cleanliness activities in the home environment in preventing dengue fever incidents from happening again. In increasing public knowledge about health problems, real efforts are needed, such as by providing health education.

2. Research Methods

2.1 Research Type and Design

This type of research is analytical with the Cross Sectional method , which is research to study the dynamics of correlation between risk factors and effects with observation or data collection at once at a time or point time approach (BPPSMK Ministry of Health, 2018).

2.2 Population And Sampel

The population is the whole object of study or the object under study. The population in this study is the community in Pasir Bidang Village, which is 2,674 heads of families. The population is the whole object of study or the object under study. The population in this study is the community in Pasir Field Village, which is 2,674 heads of families.

2.3 Analysis Techniques

Univariate Analysis Data Analysis in this study in the form of frequency distribution of individual characteristics including age, gender, education and occupation, behavioral factors including knowledge, attitudes, and actions, environmental factors including the presence of water reservoirs, the presence of mosquito larvae and a picture of dengue events based on seasons as an independent variable and the distribution of dengue events as dependent variables.

3. Result And Discussion

3.1 Result

TABLE 1
FREQUENCY DISBUTION OF DENGUE FEVER, AGE GROUP, GENDER, EDUCATION LEVEL, EMPLOYMENT STATUS, KNOWLEDGE, ATTITUDE, ACTION, EXISTENCE OF WATER RESERVOIRS, AND THE PRESENCE OF MOSQUITO LARVAE IN THE COMMUNITY

Variabel	n	%	Variabel	n	%
Kejadian DBD			Pengetahuan		
Sakit DBD	17	15,9	Buruk	9	8,4
Tidak sakit DBD	90	84,1	Baik	98	91,6
Kelompok Umur			Sikap		
< 15 Tahun	8	7,5	Buruk	7	6,5
≥ 15 Tahun	99	92,5	Baik	100	93,5
Jenis Kelamin			Tindakan		
Laki-laki Perempuan	20	18,7	Buruk	14	13,1
	87	81,3	Baik	93	86,9

Table of contents available atIOCScience

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Variabel	n	%	Variabel	n	%
Tingkat Pendidikan			Keberadaan Tempat Penampungan Air		
RendahTinggi	40	37,4	Ada Tidak	107	100
	67	62,6	Ada	0	0
Status Pekerjaan			Keberadaan Jentik Nyamuk		
Tidak	85	79,4	Ada Tidak	16	15
Bekerja	22	20,6	Ada	91	85
Bekerja					

Based on the results of the statistical test of the relationship between the sexes to the incidence of dengue fever, a p-value of 0.017 ≤ α (0.05) was rejected, which means that there is a meaningful relationship between the sexes to the incidence of dengue fever in RW 06 Ciracas Village, Ciracas District, East Jakarta in 2019. The OR value = 4,146 means that people of the male sex have a greater risk of developing dengue disease than people of the female sex. The poorly educated people who were sick with DHF were 10 people (25%) and those who were not sick with DHF were 30 people (75%), while the highly educated people who were sick with DHF were 7 people (10.4%) and those who were not sick with DHF were 60 people (89.6%).

TABLE 2
AGE AND VITAL SIGNS OF RESPONDENTS BY GROUP

Kejadian DBD								
Variabel	Sakit		Tidak Sakit		Total		OR	P Value
	N	%	n	%	n	%		
Kelompok Umur								
< 15 Tahun	8	100	0	0	8	100	-	0,000
≥ 15 Tahun	9	9,1	90	90,9	99	100		
Jenis Kelamin							4,146	
Laki-laki	7	35	13	65	20	100	(1,339 –	0,017
Perempuan	10	11,5	77	88,5	87	100	12,843)	
Tingkat Pendidikan							2,857	
Rendah	10	25	30	75	40	100	(0,989 –	0,086
Tinggi	7	10,4	60	89,6	67	100	8,252)	
Status Pekerjaan	13	15,3	72	84,7	85	100	0,813	
Tidak Bekerja	4	18,2	18	81,8	22	100	(0,237 –	0,748
Bekerja							2,791)	
Pengetahuan	4	44,4	5	55,6	9	100	5,231	
Buruk	13	13,3	85	86,7	98	100	(1,241 –	0,034
Baik							22,045)	
Sikap	3	42,9	4	57,1	7	100	4,607	
Buruk	14	14	86	86	100	100	(0,930 –	0,078
Baik							22, 819)	
Tindakan	5	35,7	9	64,3	14	100	3,750	
Buruk	12	12,9	81	87,1	93	100	(1,074 –	0,045
Baik							13,090)	
Keberadaan Tempat								
Penampungan Air	17	15,9	90	84,1	107	100	-	-
Ada Tidak	0	0	0	0	0	0		
Ada								
Keberadaan Jentik							1,269	
Nyamuk	3	18,8	13	81,3	16	100	(0,320 –	0,716
Ada Tidak	14	15,4	77	84,6	91	100	5,038)	
Ada								

The community behaved badly about psn activities who were sick with DHF as many as 3 people (42.9%) and those who were not sick as many as 4 people (57.1%), while the people who behaved well about PSN activities who were sick with DHF as many as 14 people (14%) and those who were not sick with DHF as many as 86 people (86%). Based on the results of the statistical test of the relationship between community attitudes regarding PSN activities towards the incidence of dengue fever, a p-value of 0.078 ≥ α (0.05) then Ho failed to be rejected, which means that there is no relationship between community attitudes regarding PSN activities towards dengue events in RW 06 Ciracas Village, Ciracas District, East Jakarta in 2019.

3.2 Discussion

Dengue hemorrhagic fever basically does not affect a certain age group but can affect all ages of both children and adults (Hidayat, 2017). Based on the results of statistical tests on the relationship between age groups and dengue events, a p-value of 0.000 ≤ α (0.05) was rejected, which means that there is a meaningful relationship between age groups and dengue events. The results of this study are in line with Sunarsih's research which shows that there is a relationship between age and the incidence of dengue fever in the work area of the Tlogosari Wetan Health Center (Sunarsih, 2017).

This study shows that the age group of <15 years, namely children, is more dominantly affected by DENGUE disease Based on the results of the study on latrines, it was found that almost some respondents did not have qualified latrines (62.2%), while 34 respondents (37.8%) had qualified latrines. From the results of the chi square analysis, it showed that 44.6% of respondents whose latrines were not eligible had toddlers with diarrhea, while 79.4% of respondents whose latrines were eligible. Based on the results of the bivariate analysis, it showed that there was a significant relationship between the behavior of using latrines and the incidence of diarrhea in toddlers aged 10-59 months with a P-value of 0.024.

Infectious diseases mostly affect all sexes. Prevalence differences between men and women are usually due to lifestyle (Wardhani, Martini, & Ua, 2015). The results of the statistical test of the relationship between sexes to the incidence of dengue fever obtained a p-value of 0.017 ≤ α (0.05) then Ho was rejected, which means that there is a meaningful relationship between the sexes and the incidence of DHF in RW 06 Pasir Bidang Village. OR value = 4,146 means that people with male sex have a 4,146 greater risk of developing dengue disease than people with female sex.

The relationship between the sexes and the incidence of DHF is because according to Halstead's theory in Guha-Sapir & Schimmer (2005) states that the number of dengue sufferers who are male is more than that of women because of immunity factors in the body. Women have a better immune response than the immune response possessed by men. This is because the production of cytokine in women is greater than in men. Cytokine is a hormone that is responsible for regulating the intensity and duration of the immune response in a person's body. In addition, men also have mobility and work activities that tend to be high so that men can travel to areas that are endemic to DHF.

When Aedes aegypti mosquitoes bite, people answer more the time Aedes aegypti mosquitoes bite is every time, because they think mosquitoes can be found and bite humans every time. Public ignorance about the timing of Aedes aegypti mosquitoes bites can be at risk of developing DHF disease, therefore by knowing when Aedes aegypti mosquitoes bite the public will be more vigilant. The place where the mosquitoes cause dengue, the community thinks that the place where the mosquitoes that cause dengue is anywhere, including in empang, comberan, ditches with dirty water, because the respondent did not know the place where the Aedes aegypti mosquitoes were longing. Public ignorance of the correct place of mosquito shelter this risks the existence of a breeding place which has a significant influence on the presence of Aedes aegypti larvae and the incidence of DHF.

People who do not know the activities of PSN can influence the actions to be taken so that the actions taken are not appropriate. Therefore, it is important to have good knowledge and continue to seek information to increase knowledge related to dengue fever, because with good knowledge, a person will be able to take a good action as well and create a good environment, so that it is expected to prevent and break the chain of transmission of dengue disease. As well as special attention from the government is also very necessary to overcome dengue cases that are always endemic every year in various regions so that they do not spread widely to other regions so that the incidence of dengue fever can be minimized as early as possible (Kusumawardani & Achmadi, 2012).

4. Conclusion

There is a meaningful relationship between age groups (p-value = 0.000), gender (p-value = 0.017, OR = 4.146), knowledge (p-value = 0.034, OR = 5.231), and action (p-value = 0.045, OR = 3.740) with dbd events (p-value = 0.000). The whole community (100%) has a Water Reservoir (TPA) so

Table of contents available atIOCScience

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they cannot. It is recommended to the community to actively participate in the DBD PSN program through changing attitudes and increasing knowledge about DHF so that they can carry out PSN 3M Plus activities regularly and continuously. Optimizing counseling or socialization regarding dengue prevention efforts and organizing counseling when conducting PSN to each house and during community gatherings. Puskesmas increases counseling or promotional activities about PSN 3M Plus and jumantic one-house programs such as the thorough and routine distribution of larvicides, the installation of billboards or stickers about DHF, and or the distribution of pamphlets. Equipping jumantics with counseling media such as guidebooks, or brochures is one of the Enabling factors.

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