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COMMUNITY KNOWLEDGE AND ACTIONS IN CONTROLLING DENGUE HEMORRHAGIC FEVER

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ABSTRACT

Dengue Haemorrhagic Fever (DHF) is an endemic disease in Indonesia, including in NTT Province. The city of Kupang as the capital of NTT Province is also an endemic area for dengue fever and almost every year there are deaths due to dengue fever. This study aims to determine the knowledge and actions of the community in controlling DHF in Kupang City in 2020. This descriptive study was conducted in Kupang City, NTT Province with the research variables being knowledge and action in controlling DHF. The population in this study is all people who live in Kupang City, with the research sample being respondents who are willing to take online surveys and submit answers on google form, which are 111 people. Primary data was obtained by distributing online questionnaires in google form via IG, FB, WA and email. The collected data is processed and analyzed descriptively by calculating the number and percentage of respondents' answers for each research variable sought. This study found that the community's knowledge about DHF and its control was mostly in the sufficient category (67%), and knowledge about House Jumantik was mostly in the poor category (56%). There are still some DHF control measures that are still lacking, namely the use of mosquito nets during naps, installation of wire netting in home ventilation, reuse of used goods, planting of mosquito repellent plants, cleaning the yard at least once a week and spreading fish larvae eater in a water container. For this reason, there is still a need for health promotion related to DHF and its control, including when mosquitoes suck blood, as well as ways that can be done in eradicating and controlling DHF in Liliba Village, Kupang City.

Keywords: action; control; DHF; knowledge

BACKGROUND

Dengue Hemorrhagic Fever (DHF) is a disease whose causative agent is the dengue virus, which is transmitted through the bite of female Aedes aegypti and Aedes albopictus mosquitoes. This desease can impact on outbreak in many areas in Indonesia and also in NTT Province. The Kupang City as the capital of NTT Province is also one of the highest endemic DHF cases and with deaths that always occur every year. Based on Kupang City Health Office data in January-April 2019 it was found that the highest dengue cases were in Oebobo District, which was 132 cases, and Liliba Village was in the first place with the highest DHF cases in Oebobo District with 32 cases and followed by Kayu Putih Village and Kelurahan Kayu Putih with 26 cases.

In preventing and controlling DHF, community participation will determine success in suppressing the increase in dengue cases, especially in eradicating DHF mosquito breeding places (PSN). This is as found in a previous study where the group with the poor participation group was 2.57 times more likely to suffering from Dengue Hemorrhagic Fever than the group with good participation (Kamal & Dharmadi, 2017). The Indonesian Ministry of Health has launched the One House One Jumantik (IR IJ) program since 2018, with the aim of reducing morbidity and mortality due to dengue fever by increasing community participation and family-based community empowerment (Kemenkes RI, 2016). This IR IJ program can also be applied in the prevention and control of Zika disease, apart from especially for the prevention of DHF

(Kemenkes RI, 2018). Jumantik (Lartic Observer) is a person who conducts inspection, monitoring and eradication of mosquito larvae, especially Aedes aegypti and Aedes albopictus. DHF control must be carried out properly so that dengue prevention can be effective in preventing the transmission of the dengue virus and reducing the transmission of dengue cases. This study aims to determine the knowledge and actions of the community in controlling DHF in Liliba Village.

METHOD

This descriptive quantitative research, namely to get an overview of the knowledge, and actions of the community about controlling DHF and Jumantik Rumah in Liliba Village Kupang City. This research was conducted with an online survey, without direct face-to-face contact with research respondents and without any treatment. The variables of this research are knowledge, and action in controlling DHF. The population in this study are all people who live in Liliba Village, Oebobo District. The research sample are people who are willing to take part in this research by filling out and sending answers on a google form that has been created and distributed to the community in Liliba Village, Kupang City. The research data used primary data, namely data obtained by researchers directly from interviews using questionnaires in google form sent to media IG, FB, email and WA to the community. The data obtained in this study were presented in the form of tables and pie charts were analyzed descriptively to determine the number and percentage of the research variables studied.

RESULTS

This study found that from 111 community knowledge about dengue control in Liliba Village, Kupang City was mostly good and sufficient, namely 32% and 66%, and only 2% had poor knowledge, as shown in Figure 1.

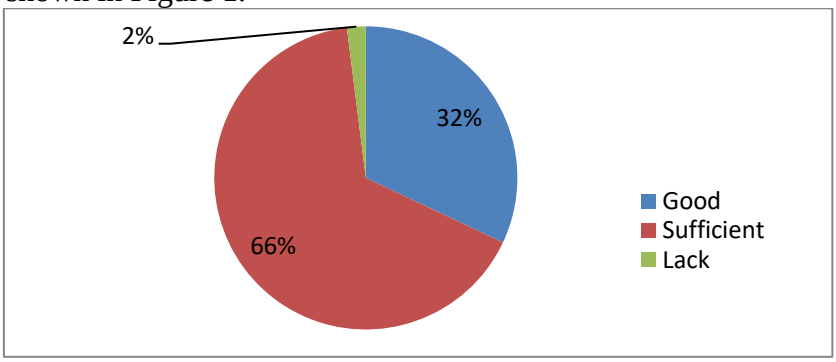

Figure 1. Public Knowledge about DHF and how to control it

This study also found that the community's knowledge about house Jumantik (Lartic Watch) is lower than knowledge about dengue control, namely good knowledge is only 14%, as shown in Figure 2.

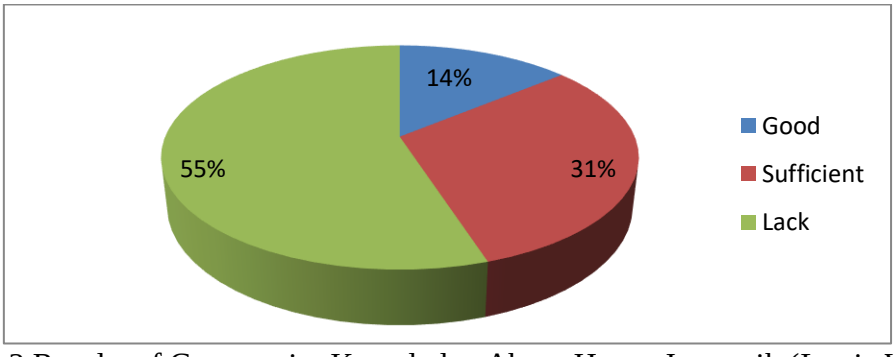

Figure 2 Results of Community Knowledge About House Jumantik (Lartic Watch)

Community actions in controlling DHF do not differ much from their knowledge, where there are still many community actions that are still not good, including only 44% who take naps using mosquito nets, only 52% who use mosquito repellent (repellent), and only 23% who install mosquito nets. netting on windows and home ventilation. People also rarely use used goods such as used tires, used buckets) into other necessities, which is only 24%, there are mosquito repellent plants (eg lemongrass) only 36%, cleaning the yard at most once a week (57%) and only 18% which feed larvae-feeding fish in large water reservoirs such as ponds or baths, as shown in Table 1.

Table 1.
Actions in Controlling DHF of Communicty

Action Items	Yes	%
Close the container tightly	71	64
Sprinkle temephos in the container	76	68
Using mosquito nets during naps	49	44
Cleaning the TPA (bathtub, flower vase, drip dispenser, etc.) a maximum of once a week	94	85
Using mosquito repellent lotion (mosquito repellent)	58	52
Install mosquito nets on windows or home ventilation	25	23
Do not hang worn clothes	89	80
Reusing used goods (eg used tires, used buckets, etc.)	27	24
Plant mosquito repellent plants (e.g. lemongrass)	40	36
Cleaning the yard at least once a week	63	57
Preserve larval fish in containers	20	18
Clean the container by brushing the inner walls and rinsing with clean water	86	77

DISCUSSION

Based on the results of the study, the community's knowledge about dengue control in Liliba Village, Kupang City was mostly sufficient (67%), however, there were still some who were categorized as lacking. This is different from the results of previous studies in Bandung where good knowledge about DHF control by 3M Plus was 94.5% and there was no lack of knowledge (Gifari, Rusmartini, & Astuti, 2017). This means that knowledge about DHF control in Liliba Village, Kupang City is lower than the knowledge of the community in Turangga Village, Bandung City.

In addition, there are still many people in the Liliba Village who do not know the jumantik of the house, as many as 56% or only 14% who know well about the jumantik of the house. The One House One Jumantik Movement is a government program in community empowerment in order to increase the role of the community in controlling vector-borne diseases, especially dengue fever by involving every family in inspection, monitoring and eradicating mosquito larvae (Kemenkes RI, 2016). The house jumantik must come from a family member, it can be the head of the family, the mother or child or the little jumantik. In some places, many have even empowered young children as small jumantik cadres in the community where it turns out that the larval density of Aedes sp has decreased after the formation of the little jumantik cadres (Sukesi, Sulistyawati, & Mulasari, 2017). Research by Mubarokah and Indarjo (2013) found a difference in the larval free rate between before and after the mobilization of the Jumantik, so

it can be said that Jumantik is quite effective in carrying out dengue control activities (Mubarokah & Indarjo, 2013).

As many as 56% respondents with the poor knowledge about House Jumantik, so it is need to be evaluated the health promotion about House Jumantik. Factors that can influence knowledge about Jumantik Rumah is the level of education, most of which are students. Another factor that affects public knowledge about Jumantik Rumah is because this program is relative new DHF control program formed by the government so that there are still many people who do not know about Jumantik Rumah and the responsibility. Research in Gamping Sleman found that there is an effect of empowering family independent Jumantik on family knowledge in preventing Dengue Hemorrhagic Fever (Ummuhani, 2014), and research in Ngesrep Village also found that the number of Jumantik who have high knowledge is more because the average Jumantik has more than 35 years of age (Ma'rifah & Rachma, 2014).

This research in Liliba Village Kota Kupang finds most of the respondents knew about the mosquito that causes DHF, namely Aedes and the public knew the general symptoms of DHF, but the public did not know when to bite the Aedes mosquito where most of them still answered at night. Although previous research explained that there was no relationship between knowledge and action with the incidence of DHF (Wanti, Singga, Telan, & Ekawati, 2019), However, knowledge is the basis of a person's behavior. If the knowledge about DHF is not good, it will be followed by bad actions in controlling DHF, and then with bad actions in controlling DHF, there will also be a higher risk of DHF occurrence in that person. Likewise, if people do not know the time to suck blood from Aedes sp mosquitoes is during the day with peak activity in the morning and evening, then people will not know the right time to avoid mosquito bites or the right time to eradicate Aedes mosquitoes. Based on this research in Kupang City, it is still necessary to provide counseling to the community about when to suck Aedes sp mosquitoes, so that people can also try to avoid Aedes sp mosquito bites at that time, for example when sleeping during the day they must wear bed nets, or continue to use bed nets. mosquito coil or repellent during the day, especially in areas with a high density of Aedes sp mosquitoes.

The knowledge of the community in Liliba Village about DHF and how to control it needs to be improved again, considering that just 32% of DHF knowledge are good. This knowledge is needed to be improved so that the community knows ways to control DHF and can reduce the risk of transmission of DHF. This is in line with the research conducted which said that respondents had sufficient knowledge about the prevention and control of DHF but on the other hand knowledge about DHF and vectors was still very minimal (Pujiyanti & Trapsilowati, 2014). The community still needs information about the introduction of vector mosquitoes. Mosquitoes are indeed associated with disease transmission, but the specifications of the type, characteristics and behavior of these insects need to be further disseminated to the public.

Based on the results of the descriptive analysis, the community's actions in controlling DHF are generally good. A total of 85% respondents carried out activities to clean the water container (bathtub, flower vase, place drip dispenser etc.) at most once a week in the household, as many as 77% respondents carried out activities to clean the tub or bucket by brushing the inner walls and rinsing with clean water. Cleaning the water container should be by brushing the walls and also rince with clean water so can cause the container walls to be clean and the mosquito eggs attached to the walls of the container can be released which results in the eggs not being able to hatch again in the container (Wanti, Yudhastuti, et al., 2019).

As many as 68% respondents carried out sowing themephos at the container and as many as 64% respondents closed the water container. Research says that the landfill material with the most larvae in endemic areas is iron and in free areas is plastic, this can be related to people's habits that are less in terms of recycling/reusing used goods (eg used tires, used buckets, etc.), so that if the materials are not recycled, these items (for example, used tires, used buckets, etc.) can be a potential place for the development of dengue mosquito larvae in accordance with the theory that dengue mosquito larvae like clean water that is not in direct contact with the ground. By closing tighly the container can make mosquitoes cannot come inside the water container to lay theirs eggs (Wanti, Yudhastuti, et al., 2019), and this was also shown in previous studies that in endemic areas more water containers were found that were open than non-endemic areas, and in non-endemic areas, materials were not found that were tightly closed. (Wanti & Darman, 2014). Based on this, it is recommended that the TPA be cleaned regularly less than once a week or tightly closed so that it does not become a breeding ground for Aedes sp.

This study found that only 18% of respondents spread larvae-eating fish in water containers. This data is lower than in Palembang City, where 61.3% of people who have ever spread larvae-eating fish in water containers (Taviv, Saikhu, & Sitorus, 2010). DHF eradication can be done physically, biologically and chemically, where the use of larvae-eating fish is included in a biological method that is safe and not harmful to humans (Kemenkes RI, 2020). In addition to spreading larvae-eating fish in water containers, planting mosquito repellent plants such as geranium, lavender, lemongrass and others is also recommended in eradicating dengue. In this study, it was found that only 36% of the people in Liliba Village grew lemongrass in their yard. Serai mempunyai bau yang harum sehingga penerimaan masyarakat terhadap pemakaian serai tanaman pengusir nyamuk cukup baik (Pratiwi, 2012). Based on the Lethal Concentration value, the lemongrass plant was found to contain an LC50 concentration <50ppm, where the essential oil compounds in lemongrass have an LC50 against Aedes aegypti larvae of 38.30ppm. (Astriani & Widawati, 2017). Based on this research, more intensive counseling is needed to the community regarding the use of larvae-eating fish and also the cultivation of mosquito repellent plants on their yard.

CONCLUSION

This research find knowledge about DHF is in sufficient category, and knowledge about house jumantik is in the lack category. There are still some DHF control measures that are still lacking, namely the use of mosquito nets during naps, installation of wire netting in home ventilation, reuse of used goods, planting mosquito repellent plants, cleaning the yard at least once a week and spreading larvae-eating fish in water containers. For this reason, there is still a need for health promotion related to DHF and its control, including when mosquitoes suck blood, as well as ways that can be done in eradicating and controlling DHF in Liliba Village, Kupang City.

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