



Description of Community Needs For Information on Prevention and Treatment of Dengue Hemorrhagic Fever (Dhf) at Sepauk Health Center

Romantha Fieolla Crissten Eprilesko^{1*}, Titan Ligita², Suhaimi Fauzan³

^{1,2,3}Program Studi S1 Keperawatan, Universitas Tanjungpura, Kalimantan Barat, Indonesia

¹i1031211041@student.untan.ac.id*; ²titan.ligita@ners.untan.ac.id; ³suhaimi.fauzan@ners.untan.ac.id

ABSTRACT

Dengue hemorrhagic fever (DHF) is an infectious disease caused by dengue virus and transmitted through the bite of female Aedes aegypti mosquitoes. The disease is endemic in tropical and some subtropical regions, becoming a serious health problem especially in developing countries, including Indonesia. DHF can trigger Extraordinary Events (KLB) and cause death. Information seeking is a community effort to gain knowledge about diseases, treatments, and health hazards, which helps them make informed health decisions. This study aimed to describe the community's need for information about the prevention and treatment of dengue hemorrhagic fever (DHF) at the Sepauk Health Center. This study was a quantitative study that used descriptive research methods. The sampling technique in this study was accidental sampling. The number of respondents was 89 people using a questionnaire research instrument for information needs related to dengue hemorrhagic fever (DHF). The results showed that the majority of respondents were aged 15-24 years (36.0%), female (64.0%), high school graduates (48.3%), housewives (33.7%), and had no history of DHF (71.9%). A total of 97.8% of respondents needed information about DHF, especially on how to prevent DHF at home. The most frequently used and desired source of information was health workers at health care facilities, while the most common barrier to obtaining information was lack of understanding of medical terms. People need information about DHF related to how to prevent DHF at home and the best approach for treatment. However, there are barriers to information due to lack of understanding of medical terms. This information is useful to support the DHF awareness campaign.

Keywords: *Dengue fever (DBD), Information barriers, Information needs, Information sources*

1. INTRODUCTION

Dengue hemorrhagic fever (DHF) is one of the endemic diseases throughout the tropics and some subtropical regions and one of the infectious diseases caused by the Dengue virus, and is transmitted from person to person through the bite of female Aedes aegypti mosquitoes (Kosasih et al., 2021). Dengue hemorrhagic fever, also known as Dengue Haemorrhagic Fever (DHF), is a health problem in the world, especially developing countries

(Nisa et al., 2024). Dengue hemorrhagic fever is also a health problem in Indonesia, because it can cause Extraordinary Events (KLB) and cause death (Kastari & Prasetyo, 2022).

Data from the World Health Organization (WHO) shows that Asia ranks first in the number of dengue patients (WHO, 2019). WHO in 2021 recorded around 390 million cases of DHF in the world every year, with 70% of the greatest risk occurring in Asia. Indonesia is ranked third in dengue cases in Asia, with 29% of the total cases. By 2022, more than 2.5

*Nama Corresponding Author.

Tel.: -

Email:author@institute@ac.id



billion people in the world are at risk of Dengue virus infection (Kemenkes RI, 2022). In Indonesia, dengue cases are increasing from year to year. In 2018, there were 65,602 cases and increased to 138,127 cases in 2019. Deaths also increased from 467 cases in 2018 to 919 cases in 2019 (MOH, 2019a). In 2020, 108,303 dengue cases were recorded in Indonesia, with 92.8% of districts/cities affected (MOH, 2020). In 2021, dengue cases in Indonesia continued to increase, reaching 138,127 cases (MOH, 2022).

In West Kalimantan, DHF cases also increased until October 2023, with 4,304 cases and 48 deaths (DHO Prov. West Kalimantan, 2023). Sintang District is one of the DHF endemic areas in West Kalimantan, with a higher case fatality rate (CFR) for DHF in Sintang District (0.60%) than the provincial average (1.49%) (West Kalimantan DHO, 2021; Kastari & Prasetyo, 2022). According to the Head of the Disease Prevention and Control Division at the Sintang District Health Office said that dengue cases until October 20, 2023 in Sintang District were 477 cases with 8 deaths. Puskesmas Sepauk is one of the Puskesmas in Sintang District that consistently experiences dengue cases every year.

Dengue hemorrhagic fever (DHF) is an acute disease with clinical manifestations of fever, muscle or joint pain accompanied by leukopenia, rash, lymphadenopathy, thrombocytopenia, bleeding that can cause shock to lead to death (Musaddad et al., 2023). Several factors influence the incidence of dengue hemorrhagic fever, namely nutritional status, age, vector presence, domicile, environment, breeding place (water reservoirs that have the potential to breed aedes aegypti mosquitoes, resting place which is a medium in the maturation of aedes aegypti eggs), habit of hanging clothes, temperature, use of mosquito repellent, occupation, knowledge and attitudes, and 3M practices (Podung et al., 2021).

The government's current efforts to prevent dengue fever are the eradication of mosquito nests (PSN) by 3M-Plus, namely draining, closing water reservoirs and recycling used goods, sprinkling abate powder in water reservoirs, using mosquito repellents and mosquito bite prevention creams, installing wire mesh in windows or vents to reduce

mosquito access into the house, avoiding hanging clothes in the house, installing mosquito nets in beds and keeping mosquito larvae-eating cupang fish (Kemenkes RI, 2019b).

Good knowledge on various aspects of dengue can have a significant effect on dengue prevention and control. Conversely, low levels of knowledge can be a contributing factor to the spread of dengue causing vectors and viruses that generate new dengue epidemic areas (Musaddad et al., 2023). Health information seeking is generally viewed as an approach that people use to obtain information about disease, treatment, prevention, and health hazards. It is usually described as an active search for health-related information that plays an important role in helping patients understand their illness and enabling them to make informed health decisions (Ahmad et al., 2023).

Some previous studies on dengue hemorrhagic fever (DHF) (Fahdi et al., 2019; Zamri et al., 2020; Kosasih et al., 2021; Marleni et al., 2022; Kastari & Prasetyo, 2022; Musaddad et al., 2023) All of these studies focused on knowledge, attitudes and behaviors or practices of prevention and handling of DHF, but did not examine the extent of information needed by the community. Research in Indonesia has focused more on the KAP (knowledge, attitude, practice) aspect because it is considered more directly related to disease control. However, the importance of community information needs is part of the disease prevention strategy. There is research that examines information needs but it is on a different continent, namely the research of Ahmad et al. (2023) so I am very interested in the same method, which is quantitative, whether the results are consistent with what was found by these researchers. I am interested in conducting this research in Indonesia which is one of the countries that also has a high prevalence of DHF incidence.

Preliminary studies that have been conducted at the Sepuk Puskesmas through interviews with officers who manage programs related to DHF at the Sepauk Puskesmas found that epidemiological investigations have been carried out, especially for DHF cases in the Sepauk Health Center working area, usually by

examining the environment around the homes of residents affected by DHF up to a radius of 100 meters then given counseling to maintain environmental hygiene and not forget to carry out 3M Plus activities and if there are still abate stocks available then while giving lavarsida powder to residents' water reservoirs and if within 2 weeks after an epidemiological investigation is carried out then cases continue to increase then fogging will be carried out focus in the area. The Sepauk Health Center has a large working area with 40 villages, while there is only one disease prevention and control program officer for DHF, so usually for areas that are far from the reach of officers, they are entrusted to Pustu and Polindes field officers to sprinkle lavarsida powder as well as counseling and have coordinated with the village to do community service at least once a week, especially during weather changes that can invite mosquito breeding. Counseling is never scheduled, usually done at the same time as other activities, for example during the mother's class, the counseling is directly related to DHF and it is estimated that in a year 3 times the counseling related to DHF is carried out. Furthermore, the results of interviews with several local communities on average said that there was still little information about DHF both in prevention and handling of DHF. Data on the number of DHF patients at the Sepauk Health Center in the last 3 months inpatient 215 people and outpatient 650 people.

In the case of viral diseases such as dengue fever, information is very important to take action to prevent and treat dengue hemorrhagic fever (Ahmad et al., 2023). Therefore, it is important to know the information needs related to the prevention and treatment of dengue hemorrhagic fever. Based on the above statement, the study aims to determine the description of the community's need for information regarding the prevention and treatment of dengue hemorrhagic fever (DBD) at the Sepauk Health Center.

2. RESEARCH METHODOLOGY

This research uses a quantitative research design. The type of research used is descriptive research. This study will describe the description of the community's need for

information about the prevention and treatment of dengue hemorrhagic fever (DBD) at the Sepauk Health Center. The population of this study were people who visited the Sepauk Health Center in February 2024, namely 646 people. The sampling technique in this study was accidental sampling. One potential bias that may arise is response bias where individuals who are willing to participate can have different characteristics compared to those who are not willing so it is necessary to control by creating a comfortable and non-intimidating environment to encourage participation from various individuals. This research was conducted at the Sepauk Community Health Center located at Jl. Tanjung Ria, Sepauk District, Sintang Regency, Pontianak City, West Kalimantan Province. Respondents in this study were people who visited the Sepauk Health Center during the study, respondents were selected based on inclusion criteria. This study had a total of 89 respondents. Data collection was carried out on July 15-19, 2024.

This research has passed the ethical review of the Faculty of Medicine, Tanjungpura University with number 7573/UN22.9/PG/2024 on June 27, 2024. In this study using measuring instruments, namely a modified questionnaire from the research of Ahmad et al. (2023) *Dengue-Related Information Needs and Information-Seeking Behavior in Pakistan*. Data collection for the validity test began on July 9, 2024 and completed the validity test on July 12, 2024. This questionnaire was tested on 30 community respondents who visited the Sepauk Health Center. The validity test results show that 27 statement items about the types of information needed, sources of information used and desired and obstacles in obtaining information have validity between 0.37035-0.78266. The test results show that the statement items have a value of $r_{count} > r_{table} (0.05) = 3.61$. Thus, all statements contained in the questionnaire are declared valid. The reliability of this questionnaire was tested using the Cronbach's Alpha technique, and a questionnaire is said to be reliable if the Cronbach's Alpha value is greater than 0.6. Thus, a high Cronbach's Alpha value indicates that the instrument is reliable for measuring the desired variable. The reliability test was conducted on July 12, 2024. The Cronbach's

alpha value which shows an alpha value of 0.864 so that the questionnaire that has been tested is declared reliable. This study uses data analysis, namely univariate analysis. Univariate data analysis in this study used frequency distribution by analyzing each variable, namely from the characteristics of respondents (age, gender, education level, employment status, and DHF history) and variable characteristics (information needs, types of information needs, information sources and information barriers).

3. RESULTS AND DISCUSSION

Table 1. Distribution of Respondents' Age Characteristics (f=89)

Age	f	(%)
15-24 Years	32	36,0
25-34 Years	17	19,1
35-44 Years	22	24,7
45-54 Years	5	5,6
55-64 Years	13	14,6
Total	89	100,0

Based on the results of this study, it shows that the age of respondents is mostly in the age group of 15-24 years. This research is in line with research conducted by Ahmad (2023) showing the age distribution of the majority of respondents came from the age group 25 years and under. In the opinion of the researcher, at the age of 15-24 years is the age of someone who is interested in many things because they have high curiosity. This is supported by Chu's research (2021) that older adults become less curious than their younger counterparts because curiosity is no longer a priority for them because they consider their time relatively limited.

Table 2. Distribution of Gender Characteristics of Respondents (f=89)

Gender	f	(%)
Male	32	36,0
Female	57	64,0
Total	89	100,0

Based on the results of this study, most of the respondents were female as many as 57 respondents (64.0%). This is in line with research conducted at the same research location by Agus Samsudrajat (2024) where most of the visitors to the Sepauk Health Center were women. Researchers argue that women

are more sensitive and concerned about health. In addition, women are more vulnerable to many conditions than men. This is evidenced by Maulany's research (2021) that gender affects access to health services where women access health services more often than men.

Table 3. Distribution of Respondents' Education Level Characteristics (f=89)

Education Level	f	(%)
Elementary school graduate/equivalent	10	11,2
Junior high school graduate/equivalent	21	23,6
High school graduate/equivalent	43	48,3
College Graduation	15	16,9
Total	89	100,0

Based on the results of this study, almost half of the respondents had the latest education at high school / equivalent. Researchers argue that the level of education affects the need for health information because it affects a person's ability to catch up. The higher a person's education, the faster his or her power of capture. This is in line with Muntaza's research (2020) which explains that education level is related to the ability to absorb information and recognize the symptoms of a disease so that a person has the desire to use health services and play an active role in overcoming his health problems. The higher the education, the more information is entered and knowledge is obtained, including knowledge about health.

Table 4. Distribution of Characteristics of Respondents' Employment Status (f=89)

Employment Status	f	(%)
Not Working	2	2,3
Student	27	30,3
CIVIL SERVANT	4	4,5
Private Employee	8	9,0
Self-employed	8	9,0
Farmer	10	11,2
Housewife	30	33,7
Total	89	100,0

Based on the results of this study, it shows that the most occupational status is housewife. In the researcher's opinion, employment status affects a person's information needs. Work is a

means of increasing knowledge and experience. Someone who works is usually always required to make changes according to the needs of their job. In order to meet these needs, complete and fast information is also needed. So that someone who works tends to have better access to various information. Mothers are considered the main source of information.

This is because mothers are considered the closest people so they are more open in disclosing things or exchanging information in the family (Muntaza, 2020). The role of mothers in taking care of family health is very large. Of course it is very dangerous if mothers do not recognize which health information is valid and which is not, then carelessly apply it to family members (Silalahi, 2019). So housewives need accurate health information.

Table 5. Distribution of DHF History Characteristics of Respondents (f=89)

DHF History	f	(%)
Yes	25	28,1
No	64	71,9
Total	89	100,0

Based on the results of this study, it shows that most respondents do not have a history of DHF. However, this study is not in line with previous research conducted by Ahmad (2023) showing the distribution of DHF history, the majority of respondents had a history of DHF. This questionnaire was also targeted at people who visited the Sepauk Health Center whether they had a history of DHF or did not have a history of DHF.

According to the researchers, regardless of the status of having a history of DHF or not having a history of DHF, both need information about DHF. This is supported by research conducted by Mahardika (2023) that accurate health information is important for understanding the risk, prevention and control of dengue hemorrhagic fever (DHF).

Table 4.6 Distribution of Community Needs for Information on Dengue Fever (DHF) Respondents (f=89)

Information needs	f	(%)
Yes	87	97,8
No	2	2,2
Total	89	100,0

Based on the results of the study, it was found that almost all respondents needed information about dengue hemorrhagic fever (DHF), namely 87 respondents (97.8%). This research is in line with previous research conducted by Ahmad (2023). According to researchers, it is very important to know the information needs of the community to implement health awareness programs regarding dengue hemorrhagic fever (DHF) that will be right on target and have a real impact on efforts to prevent and treat dengue hemorrhagic fever (DHF).

This is supported by Samsudin's research (2024) that human behavior is very complex because it is influenced by several factors, namely norms, attitudes and social, therefore it is very important to understand the beliefs and information needs of the community about dengue fever so that appropriate and sustainable disease control interventions can be developed and implemented properly.

Table 7. Distribution of types of information needs regarding dengue hemorrhagic fever (DBD) at Sepauk Health Center (f=89)

Types of Information	Mean
How to prevent dengue at home	4,61
The best approach to dengue treatment	4,56
DHF disease	4,49
Good nutrition or food intake for DHF patients	4,46
Specific medicine information for DHF disease	4,44
Causes of DHF	4,43
Symptoms of DHF	4,38
Tests for DHF disease	4,26
Complications of DHF	4,21
Transmission process of DHF	4,10
Side effects after dengue treatment	4,08
How to treat outpatient dengue	4,02
Stages of dengue disease	4,00
Place of DHF treatment	3,90
How to treat inpatient dengue	3,89
Forums, blogs and websites about DHF	3,82
Psychological care for DHF patients	3,79

The results showed that the majority of respondents needed knowledge about how to prevent dengue hemorrhagic fever (DHF) at home and knowledge about the best approach to dengue hemorrhagic fever (DHF) treatment. Poor household behavior has implications for increasing vector populations and dengue hemorrhagic fever (DHF) infections (Kastari, 2022). Being uninformed about the best approach to dengue hemorrhagic fever treatment often leads to people assuming they can self-care at home without adequate understanding of the correct treatment (Le, 2024).

Table 8. Distribution of Information Sources that have been used by Respondents (f=89)

Source of Information	f	(%)
Health workers in health care facilities	43	48,3
Internet and Social Media (Facebook, Instagram, Whatsapp, Youtube)	23	25,8
Family and Friends	13	14,6
Electronic Media (television and radio)	8	9,0
Print Media (newspaper, leaflet, poster, magazine)	2	2,2
Total	89	100,0

Table 9. Distribution of Information Sources desired by Respondents (f=89)

Source of Information	f	(%)
Health workers in health care facilities	45	50,6
Internet and Social Media (Facebook, Instagram, Whatsapp, Youtube)	41	46,1
Print Media (newspaper, leaflet, poster, magazine)	3	3,4
Total	89	100,0

Based on the results of the study, it was found that information about dengue hemorrhagic fever (DHF) had been obtained from health workers at health care facilities and the most preferred source of information to be given information about dengue hemorrhagic fever (DHF) was health workers at health care facilities and followed by internet information sources and social media. This study is in line with previous research by Majid (2019) on

information needs related to dengue fever and information seeking behavior of the general public.

The majority of people in Sepauk consider that the information provided by health workers at health care facilities is accurate information. According to the researcher, health workers at health care facilities are very effective as a source of information because questions and answers can be directly asked and spontaneous responses from health workers so that they can better understand the health information that has been provided. This is supported by Guad's research (2021) that the perception of trust in health information, the highest source of information is from health workers.

Internet and social media information sources are also sources of information used and desired by the community. According to researchers, although internet and social media information sources are considered not fully trusted, the internet and social media are easily accessible to all groups in society. This is supported by Majid's research (2019) that most people use internet and social media information sources to find information related to dengue hemorrhagic fever (DHF), but they also realize that the information is not entirely accurate.

Table 10. Distribution of barriers to obtaining information about dengue hemorrhagic fever (DBD) at Sepauk Health Center (f=89)

Information Barriers	Mean
Lack of understanding of medical terms	4,28
Lack of awareness of the importance of knowing dengue hemorrhagic fever (DHF) disease	3,99
Lack of time to seek information on dengue fever prevention and treatment	3,99
Lack of effective awareness campaigns by the Government to educate the public on prevention and treatment measures for dengue hemorrhagic fever.	3,44

Information Barriers	Mean
Lack of health facilities in providing information on prevention and treatment of dengue hemorrhagic fever (DHF)	3,12
Location of existing health facilities far from the reach of the community	2,84
Uncooperative behavior of health workers in providing information to the community	2,72
Lack of skills in using technology	2.47

Based on the results of the study, it was found that the highest barrier in obtaining information about dengue hemorrhagic fever (DHF) was due to a lack of understanding of medical terms. This study is not in line with previous research conducted by Ahmad (2023) that the main obstacle often faced is the lack of facilities from health agencies. However, the majority of people who visit the Sepauk Health Center consider obstacles in obtaining information due to a lack of understanding of medical terms.

According to the researcher, medical terms are complex which can cause confusion among the general public and a lack of understanding of medical terms can result in difficulties in understanding the information provided. Therefore, information needs to be conveyed in an appropriate manner and media (Fauzan, 2021), using language that is easy to understand, simple words, and in accordance with the intent and purpose of the message so that it is easily understood by the recipient of the information (Rosari, 2023).

RESEARCH LIMITATIONS

This study has several limitations, including this study using data collection methods with questionnaires and has quite a lot of questions. During direct data collection, there were several respondents who could not fill out the questionnaire independently, one of the influencing factors was the respondent's inability to read clearly because they did not bring glasses. So that in the process of filling

out the questionnaire assisted by researchers. Some people who have become respondents ask directly to researchers so that researchers provide information about the prevention and treatment of dengue hemorrhagic fever (DBD). This allows information that has been received by respondents to be known by people who will become the next respondents so that it can affect the respondents' answers.

CONCLUSIONS

The majority of respondents were aged 15-24 years old, female, with the last education of senior high school/equivalent, the highest employment status as housewives, and most did not have a history of DHF. Almost all respondents needed information about DHF, especially related to prevention at home and the best treatment. The main source of information was health workers at health care facilities, followed by the internet and social media. The biggest barrier in obtaining information was the lack of understanding of medical terms. The results of this study can be used as planning and evaluation material in making efforts to convey information about dengue hemorrhagic fever (DHF) to the community in accordance with the information needs that have been conveyed, the type of information needed, the desired information source and the appropriate information delivery method.

SUGGESTIONS

For Research Land

It is expected for health workers to conduct massive promotion and education to the community both directly and indirectly, using appropriate methods and media using easy-to-understand language, simple words that are focused on the most desired types of information needs, namely how to prevent and the best approach to dengue hemorrhagic fever (DHF) treatment.

For Researchers

It is hoped that future researchers can evaluate and examine the knowledge, attitudes and actions of the community regarding the prevention and treatment of dengue hemorrhagic fever (DHF).

For Respondents

It is expected that the community will actively participate in efforts to prevent and treat dengue hemorrhagic fever (DHF), especially in efforts to eradicate mosquito nests through 3M-Plus.

For Research

This research is expected to be a literature and source of additional information and evaluation for other studies, as well as a consideration for conducting further research.

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