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Family characteristics, Basic Sanitation trought Health promotion moderating in prevention Dengue in Dom Alexo, Dili 2024

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Abstract

Timor-Leste is one of the countries with a high incidence of dengue fever (DHF), especially during the rainy season. Until now, there is no specific effective treatment for dengue virus, so prevention is an important step in reducing the spread of this disease. This study aims to determine the relationship between family characteristics and basic sanitation with DHF prevention through the moderating variable of health promotion in Dom-Aleixo Administrative Postu, Dili Municipality, in 2024. The research method used was descriptive quantitative with a cross-sectional approach. The study population included all heads of households in Dom-Aleixo Administrative Postu, with a total of 122,699 households, and the sample taken was 100 households. The data analysis technique used Pearson Product Moment, and took into account research ethics. The results showed that there was a moderate relationship between family characteristics and DHF incidence (r = 0.413). When moderated by health promotion, this relationship became stronger (r = 0.548). In addition, basic sanitation showed a very strong association with DHF incidence (r = 0.686), and this association remained very strong when moderated by health promotion (r = 0.545). Overall, the combination of family characteristics and basic sanitation moderated by health promotion had a very strong association with DHF incidence (r = 0.693). This study implies that health promotion plays an important role in strengthening the relationship between family characteristics and basic sanitation with DHF prevention, and that improving health promotion can be an effective strategy in reducing DHF cases in Timor-Leste.

Keywords: Family Characteristics, Sanitation, Health Promotion, Dengue.

INTRODUCTION

Timor-Leste is also one of the countries that has an epidemic of Dengue, because every year the number of cases always increases, especially during the rainy season. "Dengue is a contagious disease caused by the dengue virus which is transmitted to humans through the bites of Aedes aegypti mosquitoes" (Antoro & Nova Nurwindasari, 2021). Until today, there is no specific treatment to combat the dengue virus, which means that if someone is attacked by the dengue virus, there is no fertiliser or pesticide that can kill the virus.

Basic sanitation is defined as access to adequate sanitation facilities including one septic tank for large households, hand washing facilities, proper waste disposal with insurance, and drainage to eliminate standing water (Novitry & Agustin, 2017). Rural and also urban areas in Timor-Leste experience high levels of contamination from human waste, surface water, and uncontrolled solid waste. Coverage for basic sanitation remains low with only 39% of Timorese using proper sanitation facilities, including 25% in rural areas and 81% in urban areas. Many households still use pit latrines and the private sector

is limited in their ability to remove and treat waste with only one sewer system in Dili (Policy-MS, 2012).

The Annual Report of the Ministry of Health of Timor-Leste reports cases of morbidity and mortality in patients caused by the Dengue virus every year. In 2019, the Ministry of Health registered a 19.17% incidence of Dengue and a 14.28% mortality rate. In 2020, the incidence of Dengue increased to 28.48% while the mortality rate also increased to 28.57%. In 2021, the Ministry of Health registered a 28.50% incidence of Dengue and a 35.71% mortality rate. In 2022, the Ministry of Health registered a decreased incidence of Dengue at 23.83%, and a mortality rate of 21.42% (Report, 2023).

The Annual Health Service Report of Dili Municipality reported cases of morbidity and mortality caused by Dengue virus each year. In 2019, Dili Municipality Health Service recorded a 28.20% incidence of dengue cases and 10.0% mortality. In 2020, the incidence of dengue cases increased to 46.07%, with a mortality rate of 40.0%. In 2021, there was a decrease in dengue cases to 15.14%, while mortality remained at 35.0%. In 2022, Dili Municipality Health Service recorded 10.57% dengue cases and 15.0% mortality.

Understanding Family

Every society has the smallest social system, namely the family. In family life, father, mother and children have different rights and obligations. Fathers and mothers have a very important role in children's growth and development, both from physical and psychological aspects as harmony in interacting with the environment.

According to (Tseng & Hsu, 2018) the family is a social environment that is formed closely because a group of people live together, interact in forming thought patterns, culture, and mediate the child's relationship with the environment. Furthermore, Latipun said that a complete and functional family can improve the mental health and emotional stability of its family members.

According to (Musyarofah, 2021), a family is a household that is related by blood or marriage or provides the basic instrumental functions and expressive functions of the family for its members who are in a network. Coleman and Cressey (in Muadz et al, 2010) added that a family is a group of people connected by marriage, descent or adoption who live together in a household.

Based on the concepts stated above, it can be concluded that a family is a group of people who live in one house, on the basis of a legal marriage bond and they are related to each other and continue to interact in establishing household harmony.

Family Structur

Revealed that the family structure is a collection of two or more individuals who are bound by marriage, because of blood relations or adoption, living in one household, interacting with each other in their role of creating and maintaining culture (Yatmini, 2011).

According to (Kerr, 2019), family structure is a series of invisible functional demands, which organize the ways family members interact. A family is a system that interacts with each other by forming patterns of how, when, and with whom to relate. According to his view, there are two structures in the family.

Harmonious Family

Referring to the family structure that was stated in the previous section, there are families that are categorized as harmonious families and there are also families that are categorized as broken home families (not harmonious). Harmony between parents (father and mother) in a family is very necessary in helping children to have and develop the basics of self-discipline. Children who receive direction and guidance from both parents will help the child in the process of psychological development.

According to (Jesica, 2015) a harmonious family is a complete and happy family, in which there is a familial bond and provides a sense of security and peace for each member. He further explained that a family is said to be harmonious if it is characterized by a good form of communication between parents and children, children are also free to express opinions. Communication is established because of an open, honest attitude, mutual attention, love, and the attitude of parents who protect their children.

According to (Lindblom, 2017), a harmonious family is a family where both parents are able to shape the values, thought patterns, mental health of the family, and are able to create a climate that can develop homeostatic conditions. Latipun further explained that a harmonious family also affects the mental health of its family members. Good social interaction in the family can also cause harmony or not in a family, such as communicating intensively, expressing.

Sanitation

Sanitation is an effort of disease prevention that arises from all activities from both environmental and human health. According to WHO, environmental sanitation is an effort to stop all factors that come from human physical activities that can create aspects that harm physical development, health, and human immunity.

Basic sanitation facilities are one of the requirements for environmental health, which each family must know when sanitation is a minimum necessity to provide a healthy environment according to the requirements of health and filmed for supervision of various environmental factors that affect the degree of community health. Basic sanitation facilities include clean water installation, availability of toilets, wastewater disposal facilities and facility management. Sanitation is an important element to support public health. Poor sanitary conditions will have a negative impact on the beginning of life from the environment of the community with poor quality, contaminated water sources, the number of incidences of diarrhea and other illnesses.

Epidemiological triad

Epidemiological triad represents a model for disease causation. The triad consists of an agent, a host and an environment. There needs to be an interaction between these three factors for disease causation. In the epidemiological triad of dengue, agent is a virus (DENV), the host includes human beings of all age groups and both sex are susceptible, and the environment includes multiple factors that influence breeding sites and climatic factors. The interaction between three factors is through vector and this is a classic example of the Aedes mosquito causing infection. The mosquito ingests DENV from an infected host and it is harmless to the mosquito. The extrinsic incubation period (EIP) of dengue is 8–12 days and begins with a mosquito taking up an infective blood meal from a viraemic human host and becomes infectious once DENV reaches the salivary glands and has completed the EIP.

The dengue viruses belong to the genus Flavivirus and family Flaviviridae. This is a small virus and contains single-strand RNA as genome. DENV is composed of three structural protein genes, i.e., core protein (C) a membrane-associated protein (M), an envelope protein (E), and seven nonstructural protein (NS) genes (Fig. 1). Among non-structural proteins, glycoprotein NS1 is of diagnostic importance.

There are four serotypes of DENV, designated as DENV-1, DENV-2, DENV-3 and DENV-4. Infection with any one serotype confers lifelong immunity to that virus serotype. However, cross-immunity to the other serotypes after recovery is only partial, and temporary. Genetic variation also occurs within each serotype in the form of "sub-types" or "genotypes". Currently, three sub-types have been identified for DENV-1, six for DENV-2, four for DENV-3 and four for DENV-4. Any change in serotype of DENV is associated with severe form of disease and may lead to high mortality. The four serotypes

of dengue can co-circulate in endemic areas. Secondary infection with another serotype leads to severe form of dengue. Primary and secondary dengue infection can be distinguished on the basis of their antibody response.

Dengue viruses have adopted to humans in an evolutionary process. Any age of the population can be infected with DENV. There are no infection rate differences among gender. The viraemia among humans builds up high titres two days before the onset of fever and lasts 5–7 days after the onset of fever. During these periods vector species gets infected and the humans become dead-ends for transmission. The susceptibility of humans depends upon their immune status. DENV-2 is more likely to result in severe disease as compared with other serotypes. Immunity to each of the four serotypes may vary over time due to natural population growth. Past exposure to other serotypes may lead to outbreak situation, even though vector density may be low. Travel to dengue endemic areas is an important risk factor. Travel of a patient in viraemic stage to nonendemic area may introduce infection in that area. High-risk hosts include extremes of age, pregnancy, patients prone for blood loss, e.g., peptic ulcers, anaemia, patients on steroids/NSAIDs, chronic comorbid illnesses like diabetes, hypertension, and coronary artery and kidney diseases.

Environment

Dengue is disease of tropical and sub-tropical countries. Environmental factors have been associated with resurgence of dengue infection in these regions. Initially dengue was limited to urban areas, but now peri-urban and rural settings have reported infections. Transportation and migration of human host and vector have led to spread of the disease to newer geographical locations. Manmade factors such as excessive use of non-biodegradable plastics and improper solid waste management have added to breeding habitat of vector leading to multiple breeding sites. Areas that lack 24 x 7 water supply and containers, which may not have proper lids are ideal sites for mosquito breeding. Increased urbanization with lack of civic amenities has been linked to the resurgence of dengue. Life cycle of Aedes is influenced by climatic factor. Ideal temperature for survival of Aedes is 16 °C to 30 °C and relative humidity is 60–80%. Climate change also may affect transmission, as dengue mosquitoes reproduce more quickly and bite more frequently at higher temperature climatic conditions.

Vectors of dengue

Aedes (Stegomyia) aegypti(Ae. aegypti) and Aedes (Stegomyia) albopictus(Ae. albopictus) are the two important vectors of dengue. The infection is transmitted by the bite of infected female mosquito. The female lays eggs on surface above water line. Under ambient conditions, the adult emerges from egg in 7–10 days. The eggs can withstand desiccation even up to one year and larvae may emerge when eggs will come in contact with water.

Aedes aegypti

Aedes aegypti mosquito originates from Africa, but now got adapted to the peri-domestic environment by breeding in water-storage containers. During17th to 19th centuries it got introduced to the "New World" and South-East Asia. Increased transport, human contact, urbanization, water storage habits, etc., have helped in its extension from urban to rural areas. Vector has strong affinity for human blood, and it has developed high vectorial capacity for transmission of dengue. It is a day biter and habitat includes man-made containers/water storage sites in domestic and peri-domestic areas, i.e., water storage tanks and small containers, desert coolers, ornamental fountains, animal drinking bowls/bird water pots, potted plants/flower vases, discarded tires, bottles, pots and pans, broken appliances, solid waste collecting rain water, etc. Average survival for Aedes aegypti is approximately 30 days.

Intervention and health promotion for Dengue disease

According to (Susilowati & Susilowati, 2016), the definition formula of health promotion is any combination of health education and interventions related to the economy, politics, and organizations created to bring about effective changes in behaviors and an environment conducive to health. The objective of health promotion is to create a condition that is conducive to healthy behavior and environment.

Promotion of health is a process, not an effort, to develop the community in order to achieve conservation and improve the health conditions themselves. In order to achieve a healthy condition, each person or group must have the capacity to identify and be aware of their aspirations, be able to fulfill needs and move or control the environment. Health Promotion Plan Following the stages of health promotion efforts according to (Notoatmodjo, 2013), the plan is divided into three (3) groups, as follows:

Primary target

The promotion effort for primary school is carried out with a community development strategy (Empowerment). The community is like a direct target for any effort in education and health promotion. According to this health problem, the target is distributed to groups: family heads for community health issues, breastfeeding for health problems of mother and child, school-age children and recently graduated, and others.

Secondary target

The effort of promoting secondary education is carried out through a strategy of social support. Church leaders, communities, cultural groups, and other secondary schools provide health education to these groups so that they can continue to disseminate to other groups and communities. Another aspect is the healthy behavior of community leaders, which serves as an example of health for the community they belong to.

Tertiary target

The effort of the promotion that confronts the tertiary target audience is carried out through advocacy strategy. It creates high-level decisions or evaluates decisions. The decision made by the group has an impact on the behavior of secondary level community leaders and the wider community (primary level).

Based on the above background, the purpose of this study is to determine and analyze the Relationship between Family Characteristics and Basic Sanitation through the Moderating Variable of Health Promotion for the Prevention of Dengue Fever in Dom-Aleixo Village, Dili Municipality in 2024. The benefits of this study are to provide insights and scientific evidence related to the factors that influence the prevention of Dengue Fever (DHF) in the Dom-Aleixo area, especially through the approach of family characteristics, basic sanitation, and health promotion. The results of this study are expected to serve as a reference for local governments and health institutions in designing more effective policies and intervention programs to reduce the incidence of DHF. In addition, this study can also help in developing more targeted health promotion strategies, with a focus on increasing public awareness about the importance of sanitation and dengue prevention, so that it is expected to improve the quality of life of the community and reduce the burden of health in Timor-Leste.

RESEARCH METHOD

According to (Sugiyono, 2018), research method is basically a scientific way to obtain data with specific objectives and appropriate use. To achieve the desired objective, a relevant method is necessary. The method used in this research is quantitative descriptive research with a Cross-Sectional approach. The population comprised 122,699 heads of households in the Dom-Aleixo Administrative Post, Dili Municipality, and a sample of 100 households was selected using a purposive sampling technique. Data was collected through structured questionnaires distributed to the selected households. The study was conducted in 2024 at Dom-Aleixo, Dili Municipality. For data analysis, the study employed Pearson Product Moment correlation to assess the relationships between variables, and the analysis was supported by Smart PLS software for structural equation modeling..

RESULT AND DISCUSSION

Coreelation Variable

Application description Smart PLS

Descriptive analysis is a descriptive analysis of the information available to give a picture / question about an event (where, when, where, how, how much, how much) collected in the research. These data come from the answers given by the answers to the questions in the questionnaire. The study will then be concluded and explained.

Structur Data Analysis Method Smart PLS

This research used data analysis using Smart PLS software, which was conducted on Computer. PLS (Partial Least Square 4) is a variance-based structural equation analysis that can be performed at the same time as the Structural model. That type of impact is used to test validity and recapitalization. But the structural model is used to test the properties. PLS (Partial Least Square) is a quality analysis for a fat model because it is not suspected that the data must have some scale increments, which means that the number of samples can be smaller (from 100 samples). The technique used to make a sample is a technique used as part of the number and characteristics of the population (Amin et al., 2023).

From the above figure the researcher used to analyze the research results by testing moderator variables. Therefore, the researcher used smart PLS version 4. The results of the analysis are as follows;

Discussion of Research Results

Discussion results family characteristic (X_1) for prevention Dengue (Y)

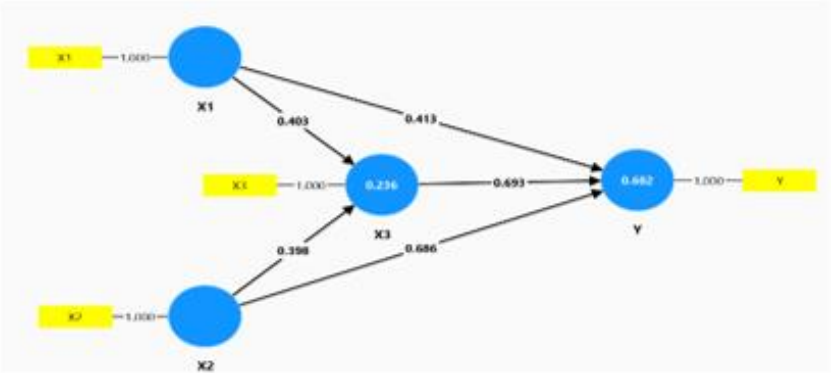

Figure 1. Structural Equation Model (SEM)

Research results analysis between family characteristics variable (X_1) for the prevention of Dengue (Y) in Dom-Aleixo Administrative Post, Dili Municipality, showed a significant relationship with sufficient correlation of statistical value r=0.413. And the result of the calculation = 4,929 compared to the table = 1,660. Family characteristics in Dom-Aleixo Administrative Post as a contributing factor to the high prevalence of dengue cases causing the number of morbidity and mortality described above.

Search results titled Pocket Book Model and Report Card for Mosquito Larvae Monitoring in Improving Mosquito Nest Eradication Behavior. conducted by the researcher (Farasari & Azinar, 2018) in RW 04 Mangunjiwan Village, Demak, before absorbing educational means booklets and notes as follows, counted by 70 respondents before absorbing educational means almost 43 respondents with 60.6%, good knowledge about dengue mosquito eradication almost 27 respondents with 38.8% and average value 6.09. To recognize that respondents have a negative attitude towards eliminating dengue mosquitoes almost 15 to 75%. Good attitude towards eliminating dengue mosquitoes almost 5 with 25% and average value 24.30. Before absorbing education media almost 47 respondents with 66.2%, good practice on eliminating dengue mosquitoes almost 23 with 32.4% and average value 4.61.

Comparison of the results of this research with the authenticity or research through the journal quoted above that, the research results that the researcher found in significance and use health promotion measures as a moderator for the prevention of Dengue in the Administrative Post of Dom-Aleixo Municipality No. Statistical results showed a correlation coefficient value of r=0.413 which shows the significant contribution of family characteristics to the occurrence of Dengue Haemorrhagic Feve disease compared to other variables.

The definition of family can be seen from the dimension of blood relationship and social relationship. Family in the dimension of blood relationship is a social unit linked by blood relationship to each other. Based on this dimension of blood relationships, families can be divided into: Family and extended nuclear family. Meanwhile, in the dimension of social relationships, Family is a social unit that is linked to each existence Relationship or interaction and influence each other, even if there is no blood relationship between them (Akhyadi & Mulyono, 2018).

Characteristics (X_1) through moderating health promotion (X_3) for prevention of Dengue (Y)

Research results between family characteristics (X1) through moderating health promotion (X_3) for prevention of Dengue (Y) in Dom-Aleixo Administrative Post, Dili Municipality, showed a significant relationship with sufficient correlation of statistical value r=0.548. And the result of the calculation=7,752 compared to the table=1,660. Health Promotion helps to raise society's awareness to improve family characteristics in Dom-Aleixo Administrative Post as a contributing factor to the high prevalence of dengue cases causing the number of morbidity and mortality described above.

Research results conducted by the researcher (Dewi et al., 2022) titled "Legal Related to the knowledge and attitude towards the case of suspects in the communities in the district BULELENG". The results showed that based on the research results, community knowledge about dengue prevention in Pangi Anom Village, Sukasada District, Buleleng Regency is divided into three categories, such as good, fair and poor. Of the 95 respondents, it was found that 13 respondents (13.7%) had good knowledge, 53

respondents (55.8%) had sufficient knowledge, and 29 respondents (30.5%) had poor knowledge. Most people have sufficient knowledge, as 53 (55.8%) respondents. Most of the respondents' knowledge is sufficient category, supported by the characteristics of the respondents, such as education level and age, where most of the respondents graduated from high school, as 36 (73.9%) of the respondents and most of the respondents have age between 20-30 years, 24 (25.3%) respondents. Education strongly influences a person, including people's behavior towards life, especially to motivate people's behavior for development.

Comparison of research results that the researcher compared with the journal quoted above that, the results are different from the authenticity or research more than the research results that the researcher found in significance and use health promotion measures as a moderator for the prevention of Dengue Haemorrhagic Fever in Posto Administrative Dom-Aleixo Municipality of Dili. Statistical results showed a correlation coefficient value of r=0.548 which shows the strong contribution of family characteristics to the occurrence of Dengue Haemorrhagic Feve disease compared to other variables. Follow (Kelen et al., 2017), the higher one's education, the easier it is to receive information and the older they are, the more mature one will think and serve.

Basic sanitation (X_2) for prevention of Dengue (Y)

The results of the research between the Basic Sanitation (X_2) for the prevention of Dengue (Y) in the Administrative Post of Dom-Aleixo, Dili Municipality, showed a significant relationship with a strong correlation of statistical value r=0.686. And the result of the calculation=12,827 compared to the table=1,660. basic sanitation at home, contributes greatly to the survival of vectors, especially Aedes Aegypti mosquitoes thus causing family members and society to result in high morbidity in Dom-Aleixo Administrative Post as a contributing factor to the high prevalence of dengue cases to cause morbidity and occurs mortality described in the background.

Research results conducted by the researcher (Sutriyawan et al., 2022) title "Factor mosquito eradication advice (PSN) Through 3M plus in Efforts to Prevent Dengue Hemorrhagic Fever". result shows This research shows that 52.7% of the respondents have held 3M stock as well as stock. This strongly influences the presence of Aedes aegypti mosquito larvae. There is also the possibility of wearing a mosquito net while sleeping and planting mosquito repellent plants).

Action is a tangible form of knowledge and attitude that becomes a person's action from some stimulus. That sounds like someone who does 3M plus stock. To encourage these stimuli, supportive factors are needed, such as good knowledge about dengue and PSN as well as a positive attitude in order to carry out the expected actions well .

This research found significant results between age and PSN behavior through 3M plus actions. These results are consistent with other research that age is significantly related to consistency in performing PSN. 10 This is also in line with studies in Manado that state that age is an influential factor in preventing Aedes aegepty mosquitoes from donkeys. A person's age will be a factor in taking action. More mature people will tend to pay more attention to their environment and will play a greater role in preventing dengue.

The observation results showed that people who were >45 years old or older were more likely to complete the PSN. Thus it can be said that as a person grows older, their awareness of better actions such as doing 3M increases, and there is another version. Age is a factor that can influence people to take preventive action. It is, among other things,

based on the human ability to think, which will move a person to take more positive actions towards the environment around him.

Sanitation is a disease prevention effort that focuses primarily on disease Activities in human environmental health efforts. According to (WHO, 2014), Sanitation is defined as the monitoring of factors in the physical environment. People who can have a bad impact on physical development also means efforts to reduce the number of human diseases in order to achieve a better level of health.

Basic sanitation (X_2) through moderating health promotion (X_3) for prevention of Dengue (Y)

The results of the research between the basic sanitation (X_2) through the moderating health promotion (X_3) for the prevention of Dengue (Y) in the Administrative Post of Dom-Aleixo Municipality of Dili, showed a significant relationship with a very strong correlation of statistical value r=0.545. And the result of the calculation=12,827 compared to the table=1,660. Health Promotion helps to increase society's awareness to improve family characteristics in Dom-Aleixo Administrative Post as a contributing factor to the high prevalence of dengue cases causing the number of morbidity and mortality described above.

Research results conducted by the researcher (Ernawati et al., 2022) title "Policy Implementation of Dengue Fever Control Program in Community Health Centers Kresek, Tangerang Regency". The results of this research show that the dengue prevention program conducted by the Kresek District Community Health Center focuses on counseling and larval monitoring activities conducted by limited Humantiku staff. The initiative to empower the community to fight dengue implemented by Movimentu Humantiku 1 has not been successful in Kresek District. The larvae-free level is the production metric of the mosquito nest eradication action that the community does with the assistance of the Jumantik staff to monitor the larvae. The general public is more aware of the importance of the PSN. This can be seen from the research results in 2021 which showed in Indonesia fluctuated between 2004 and 2019. In fact, in the early years, ABJ data can not represent the reality in Indonesia as a whole because not provinces, districts and all cities are prioritizing PSN installations to monitor larval-free homes/constructions. In 2019, the growth was huge, 79.2% to be exact, more than double the previous year's figure of 31.5%

Comparison of research results that the researcher compared with the journal quoted above that, the results are different from the authenticity or research more than the research results that the researcher found in significance and use health promotion measures as a moderator for the prevention of Dengue in Posto Administrative Dom-Aleixo Municipality of Dili. Statistical results showed a correlation coefficient value of r=0.545 which shows the strong contribution of family characteristics to the occurrence of Dengue disease compared to other variables.

Family characteristics variable (X_1) and basic sanitation (X_2) through moderating health promotion (X_3) for prevention of Dengue (Y)

Research results between family characteristics (X_1) and basic sanitation (X_2) through moderating health promotion variable (X_3) for the prevention of Dengue (Y) in Dom-Aleixo Administrative Post, Dili Municipality, showed a significant relationship with strong correlation very number statistic value r=0.693. And the result of the calculation = 13.19864 compared to the table=1.660. Health Promotion helps to increase

society's awareness to improve family characteristics and improve basic sanitation in Dom-Aleixo Administrative Post as a contributing factor to the high prevalence of dengue cases causing the number of morbidity and mortality described above.

The results of research conducted by researcher (Mawaddah et al., 2022) entitled "Analysis of the relationship between environmental sanitation conditions and family behavior and the incidence of hemorrhagic dengue. in Pontianak City". Based on the research results, it was found that 17 respondents in the case group did not meet the requirements for a good waste disposal system and in the control group there were 8. Meanwhile, there were 10 respondents who met these requirements with a good waste disposal system in the case group and 19 respondents in the control group. Based on the Chi-Square statistical test, it was found that the value of P=0.029 < 0.05, which means that there is a link between the waste disposal system and the incidence of dengue disease in Pontianak City in 2020, with an OR value of 4.03, which means that respondents who used a household garbage disposal system had a 4.03 higher risk compared to respondents who used a garbage disposal system.

Comparison of research results that the researcher compared with the journal quoted above that, the results are different from the authenticity or research more than the research results that the researcher found in significance and use health promotion measures as a moderator for the prevention of Dengue in Posto Administrative Dom-Aleixo Municipality of Dili. The statistical results showed a correlation coefficient value of r=0.693, which shows that family characteristics contribute very strongly to the occurrence of Dengue compared to other variables.

CONCLUSION

Conclusions in this study indicate a significant relationship between family characteristics and Dengue Fever (DHF) prevention in Dom-Aleixo Administrative Postu, Dili Municipality. Moreover, a particularly strong relationship was seen when family characteristics were moderated by health promotion efforts, underscoring the important role of targeted health interventions in disease prevention. Similarly, basic sanitation variables showed a strong correlation with dengue prevention, and this relationship was further strengthened when health promotion was taken into account. These results highlight the importance of a holistic approach that integrates family characteristics, sanitation practices and health promotion to effectively reduce dengue transmission. Future researchers are advised to explore the long-term impact of sustainable health promotion initiatives and investigate additional moderator variables, such as socioeconomic status and access to health services, to better understand their role in dengue prevention. In addition, expanding the scope of the study to include other regions with similar epidemiological profiles may provide more general insights, while the inclusion of qualitative research methods may provide a deeper understanding of community attitudes and behaviors related to dengue prevention.

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