

The Association between Community Knowledge Level and Behavior on Dengue Hemorrhagic Fever Prevention in Tourism Area Celuk-Benoa, South Kuta Regency

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Abstract Dengue Hemorrhagic Fever (DHF) is still endemic in Bali, including in the Banjar Celuk tourist area, Benoa Village, South Kuta. Mosquito control plays an important role in reducing DHF cases due to the absence of vaccines and drugs to date. Therefore this study was to determine the level of knowledge-behavior and their relationship of the community towards DHF prevention in Benoa. The study carried out in February-July 2019 with a cross sectional design. The relationship of community knowledge and behavior in the prevention of DHF was examined using the Chi-Square test. This study was followed by 68 subjects through simple random sampling technique. Result of the study were the most respondents aged 36-45 years in 23 (33.9%) subjects, education level senior high school in 35 (51.5%) subjects, and work as housewives in 22 (32.4%) subjects. The level of knowledge and behavior both were included in the category sufficient in 45 (66.2%) subjects and 40 (58.8%) subjects respectively. The chi-square analysis obtained that there was a relationship between the level of knowledge with behavior in the prevention of DHF (p value = 0.002) where the better of the knowledge would followed by better behavior. The conclusion: there was association between level of knowledge and subject's behavior in preventing DHF. The community knowledge and behavior still need to be improved through various health promotion programs to support tourism industry in Banjar Celuk, Benoa Village, South Kuta.

Index Terms— Preventive Behavior, DHF, Level of Knowledge

I. INTRODUCTION

Dengue Hemorrhagic Fever (DHF) is a disease caused by dengue virus which is transmitted through the bites of *Aedes aegypti* and *Ae. Albopictus* mosquitoes. DHF is still endemic in Indonesia and infecting all ages throughout the year[1]. According to the Bali Provincial Health Office 2018, the number of DHF cases in Bali in 2017 was reported 4,487 cases with Incidence Rate 105.9 per-1000 population and case fatality rate 0.267%[2].

The highest DHF cases occurred in Badung Regency with 941 cases with an incidence rate 146.2 per 100,000 population and case fatality rate 0.11%. The highest number of cases in Badung occurred in South Kuta with 201 cases (121) cases for men, 80 cases for women[2].

The dengue cases must be taken seriously, considering that this disease can be transmitted to tourists visiting Bali[3]. In 2015-2017 a study was carried out on the causes of fever than patients treated at one of the private hospitals in Bali. The results showed that of 201 fever patients, 115 (57.2%) were diagnosed with dengue and 18 (8.9%) DHF[4].

Mosquito control plays an important role in reducing DHF cases due to the absence of vaccines and drugs to date. The community must know how to prevent DHF which includes knowledge of the causes, symptoms, and ways of controlling vectors. People with good knowledge will also create good behavior. Community participation in preventing DHF is the main effective effort in reducing DHF cases⁵. The area of South Kuta is a tourist area in Bali which is endemic to DHF as well as other regions in Bali.

Therefore a study was conducted to assess the association between the community knowledge and behavior on DHF prevention in the Banjar Celuk, Benoa Village, South Kuta.

II. METHOD

This research performed cross sectional analytic study involving housewives as subjects from Banjar Celuk, Benoa Village, South Kuta in period February-July 2019. Totally as many as 68 subjects were recruited based on simple random sampling among 212 families. Data collection was carried out using a knowledge questionnaire of 10 questions and a behavior observation questionnaire of 10 questions. The questionnaire was categorized as good if the respondent's answer score is 76% -100% (score > 15), the category is sufficient if the score is 56% -75% (score 8-15) and the category is lacking if the score <55% (value <8). Chi-Square test was conducted for analysis with a confidence level of 90% ($p \leq 0.05$).

III. DATA COLLECTION AND ANALYSIS PROCEDURE

The data collection of this research began with measuring the level of knowledge and behavior of the community in preventing dengue on 27 May - 26 June 2019. The researcher was assisted by ten research assistants. After obtaining a research permit, the researcher collected data on housewives who were willing to become respondents. Based on the results of the research on the knowledge level questionnaire and the previous behavior observation questionnaire, respondents with a good knowledge level had a value > 15, while good behavior had a value of 12-16.

IV. RESULT

A total 68 subjects were enrolled in this study with characteristic mostly aged 35-46 years as many as 23 (33.9%) subjects, senior high school 35 (51.5%) subjects, and does not have a job 22 (32.4%).

Based on educational level on DHF prevention, we categorized subjects as 16(23.5%) good, 45(66.2%) sufficient, and 7 (10.3%) bad. Meanwhile based on their behavior on DHF prevention categorized 17 (25%) good, 40 (58.82%) sufficient, and 11(16.17%) bad.

The association between level of education and behavior was analysed and revealed that that there was an association between the level of knowledge and community behavior in the prevention of DHF in the Banjar Celuk Tourism Area, Benoa Village, South Kuta (p value = 0.002 ($p \leq 0.05$)).

V. DISCUSSION

The level of knowledge of the majority of subject was still in category sufficient. Subjects may be able to understand about the meaning and causes of DHF, but they are less aware of DHF symptoms such as fever, red spots on the skin, and nosebleeds. There were several factors that might

influenced knowledge in this study like subject's education, age, and occupation.

Subject's education is one of the determining factors. Most of the subjects were senior high school graduates. The level of education affects the ability of subjects to receive and understand information such as information about how to prevent DHF. Sholihah [6], the higher the level of education the better the ability to filter the information obtained. A person with higher education tends to pay more attention to the information⁶. Notoatmodjo [7] revealed that the higher a person's education, it would be easy to accept new information and easily adapt to it. With higher education access to get information becomes easier[7].

The age factor plays a role in receiving information to increase knowledge. In this study the age of most subjects was 36-35 years old. This is supported by the opinion of Notoatmodjo who revealed that the more you age, the more your comprehension and mindset will develop, so that the knowledge you get is getting better[7].

Another factor that affects the level of knowledge was occupation. Most subjects in this study worked as housewives. Herminingrum and Maliya explain that work affects the level of knowledge a person has. Someone who works in an environment that is supported by access to information will gain more knowledge compared to people who work in places that are closed from access to information. The interaction between housewives and their environment determines the amount of information obtained [8].

The DHF prevention behavior of the subjects in this study was still categorized sufficient, same as the results of the categorization of knowledge in this study. The results of observations on the subject's behavior were they not immediately wash their clothes after use and only hang them. This will attract mosquitoes because attracted to the smell of sweat on clothes that have not been washed. Subjects also did not give temephos powder to water reservoirs that were not routinely cleaned. Subjects did not know the use of temephos. Temephos is larvicide sprinkled on water reservoirs that are rarely drained. It also found that the garbage left for a long time before being disposed of at the final shelter. Garbage can be a breeding site for mosquitoes when there is water that stagnates. According to a study conducted by Dewi, prevention behavior depends on personal hygiene habits, this is related to the habit of not maintaining a clean and healthy environment, especially related to the prevention of DHF. By having knowledge about DHF, the mother will always pay attention to the condition of her house to stay clean and healthy [9].

There was significant association between level of subject knowledge and their behavior in DHF prevention. There have been several studies examining the existence of a relationship between knowledge and behavior in the prevention of DHF [9][10][11][12][13]. Knowledge about DHF is important to be known by the community to the family level. Low knowledge is certainly in line with the emergence of risk of DHF. If knowledge is possessed,

confidence will arise and make efforts to prevent dengue[14].

Dengue di Kota Kediri. Jurnal Kedokteran Brawijaya. 2014; 28(2):126-131.

VI. CONCLUSION

There was association between level of knowledge and subject's behavior in preventing DHF. The community knowledge and behavior still need to be improved through various health promotion programs to support tourism industry in Banjar Celuk, Benoa Village, South Kuta. Maintaining a healthy lifestyle, increasing regular eradication of mosquito breeding activities is an effective way to control DHF vectors to help reduce dhf cases. Future research is expected to conduct similar research by linking factors that influence the level of knowledge such as cultural, socio-economic factors, and involving a larger subject. With the decline in the incidence of dengue, the tourist will feel safe visiting Bali.

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