Health Education Effected Public Knowledge To Prevention Of Dengue Hemorrhagic Fever (DHF)

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ABSTRACT
Problems The government's present approach to the challenges the DHF disease faces in Indonesia is insufficient. Though, in order to regulate the DHF condition, public support is essential. The fact that the general public does not participate in Mosquito Nest Eradication (PSN) initiatives shows how poorly understood and known DHF illness prevention is by the general population. Examine the impact of health education on the community's awareness of DHF prevention. Pretest-posttest design with a single group, pre-experimental investigation. The population of Village Sumberwuluh Subdistrict Dawarblondong Regency Mojokerto, which consists of 289 homes and is entirely under inquiry, was represented by one responder who was between the ages of 18 and 35 in each of the 289 households. This is a simple random sampling technique. 44 people comprise the huge sample. questionnaire-based instrument study using SAP. The results showed that 32 respondents (72.7%) had sufficient knowledge of DHF prevention before obtaining health education, and 23 respondents (52.3%), after getting health education, had sufficient knowledge of DHF prevention. Based on the Wilcoxon Signed Rank statistical test results, H1 is accepted and H0 is denied, which indicates that health education has an impact on community understanding on DHF prevention. When more data is acquired and health education is observed, a better understanding of DHF prevention is attained.

Keywords: Health education, DHF prevention, knowledge

INTRODUCTION
Dengue Hemorrhagic Fever (DHF) is a health problem that occurs in tropical areas such as Indonesia and usually occurs during the rainy and transitional seasons (Harapan, Michie, Mudatsir, Sasmono, & Imrie, 2019). The problem of DHF in Indonesia is still experiencing problems and is only the responsibility of the government, especially health workers. Even though community participation is the main support in controlling DHF disease, considering that the vector of DHF disease of the Aedes mosquito and resting places for adult mosquitoes are found around residential areas both inside and outside residential homes such as schools and other public places (TTU). The lack of community participation in Mosquito Nest Eradication (PSN) activities shows the community's knowledge and understanding of prevention DHF disease is still low. People often do not know that DHF is classified as a contagious disease. Even though
the dengue virus can be transmitted from one person to another through the bite of an Aedes mosquito (Rejeki, Nurhayati, & Aji, 2021).

According to data from the Ministry of Health of the Republic of Indonesia in 2021, DHF cases reported in 2020 were recorded as many as 108,303 cases. Amount this decrease compared to in 2019 which amounted to 138,127 cases. In line with total case, death because DHF in 2020 also experienced decline compared to in 2019, from 919 to 747 deaths. Pain and death could depicted with use indicator incidence rate (IR) per 100,000 population and case fatality rate (CFR) in form percentage (Kemenkes RI, 2015)(Kemenkes RI, 2021). Based on data from Service Health Province East Java, January 1-27 2022, DHF sufferers in East Java as many as 1,220 people, with total the deaths of 21 people (CFR = 1.7%) predominated ages 5-14 years. Amount the highest DHF sufferers in East Java as of 1-27 January 2022 are among them Regency Bojonegoro (112 people), Regency Nganjuk (82 people), Malang Regency (73 people), Regency Ponorogo (64 people), Regency Tuban (61 people). With total highest DHF mortality ie Regency Pamekasan (3 people), Regency Bojonegoro (2 people), and Regency Nganjuk (2 people) (Diskominfo Jatim, 2022). Data from Service Regency Mojokerto in the month January 2022 there were 70 cases of DHF in 2 weeks first and on increase until February 2022 (Dinkes Regency Mojokerto, 2022).

Data from Public health center Dawarbladong show that on the moon March 2022 found DHF cases were 36 cases, and 6 of them need reference to House sick with more facilities _ complete. Results of interviews with 10 residents of Geneng Hamlet show that 90% understand about cause of DHF, while 1 person did not understand cause of DHF, 5 people (50%) got it mention method prevent DHF with 3M ie closing, draining, and burying, while 5 people (50%) did not can.

Research conducted by (Rohmah, Susanti, & Haryanti, 2019) about knowledge Public about DHF prevention in Kendal which resulted that society that hasn't once suffering from partial DHF big enough as much as 47.7%, knowledge good as much as 32.3% and knowledge not enough as much as 20.1%. Research results (Dawe, Romeo, & Ndoen, 2020) at the Puskesmas Bakunase show that 51.5% of the people have knowledge not enough about prevention of DHF, and 48.5% had knowledge ok.

A person's knowledge is influenced by several factors, including: type of work, education, age, experience, culture and information (Sundari & Masnilawati, 2018). Knowledge rising society _ urgent in control total DHF vector at home individually, however if knowledge Public not enough raises enhancement DHF (Rohmah et al., 2019). Knowledge role urgent to effort DHF prevention carried out by respondents. The more good knowledge respondent so prevention of DHF is also increasing well, and so otherwise. Behavior based on knowledge and awareness _ more lasting than behavior that is n't based on knowledge and awareness. The lack of public knowledge regarding clean and healthy living behavior and the lack of knowledge of residents about preventing DHF are factors that cause DHF in the community (Lindawati, Murtisiwi, Rahmania, Damayanti, & Widyasari, 2021).

DHF prevention measures is through giving health education. Health education is a bridging process gap Among information and behavior in demand health. Health education _ motivating somebody for accept information health and action in
accordance with information that for them becomes more know and more healthy (Suryaningtyas, 2019). Based on the background above, the researcher is interested in researching the effect of providing health education on the level of public knowledge about DHF prevention.

METHODS

The research design used an experimental research design with a pre-experimental type approach with a one group pretest-post test design approach (Halcomb & Hickman, 2015). In this study, the population used by the researcher was the entire community in Geneng Hamlet, Sumberwuluh Village, Dawarblangdong District, Mojokerto Regency, totaling 289 households where 1 household was represented by 1 respondent aged > 18-35 years. Sampling in this study was cluster random sampling. Then the size of the sample studied is 44 people. The independent variable in this research is health education. The dependent variable in this study is the community's knowledge of DHF prevention. Measurement knowledge use questionnaire so that obtained criteria knowledge that is Good: 76-100%, Fair: 56-75%, and Poor: < 56% (Kleinedlerová & Kleinedler, 2022). Questionnaire to measure the level of public knowledge about DHF prevention. The questionnaire used in study this adopted from study (Rusda, 2018). Data analysis used the Wilcoxon Signed Rank Test which was processed with the SPSS for windows software program.
RESULTS

This chapter describes the results and analysis of research data that was given on 13-20 June 2022 in Dusun Geneng Desa Sumberwuluh Subdistrict Dawarbladong Regency Mojokerto.

General data

Table 1 Distribution Frequency Age Respondents in Geneng Hamlet Village Sumberwuluh Subdistrict Dawarbladong Regency Mojokerto in the month June 2022

<table>
<thead>
<tr>
<th>Age Criteria</th>
<th>f</th>
<th>%</th>
</tr>
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<tbody>
<tr>
<td>18-25 years</td>
<td>22</td>
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</tr>
<tr>
<td>26-35 years</td>
<td>22</td>
<td>50.0</td>
</tr>
<tr>
<td>Amount</td>
<td>44</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type Sex</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>5</td>
<td>11.4</td>
</tr>
<tr>
<td>Woman</td>
<td>39</td>
<td>88.6</td>
</tr>
<tr>
<td>Amount</td>
<td>44</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SD</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>JUNIOR HIGH SCHOOL</td>
<td>11</td>
<td>25.0</td>
</tr>
<tr>
<td>SENIOR HIGH SCHOOL</td>
<td>29</td>
<td>65.9</td>
</tr>
<tr>
<td>College</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>Amount</td>
<td>44</td>
<td>100</td>
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<table>
<thead>
<tr>
<th>Profession</th>
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<tr>
<td>IRT/Not working</td>
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<td>34.1</td>
</tr>
<tr>
<td>Private</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Self-employed</td>
<td>13</td>
<td>29.5</td>
</tr>
<tr>
<td>ASN</td>
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<td>0</td>
</tr>
<tr>
<td>Farmer</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Etc</td>
<td>16</td>
<td>36.4</td>
</tr>
<tr>
<td>Amount</td>
<td>44</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>27</td>
<td>61.4</td>
</tr>
<tr>
<td>Health Workers</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other people are non-Nakes</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mass media</td>
<td>17</td>
<td>38.6</td>
</tr>
<tr>
<td>Amount</td>
<td>44</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on table 1 it can be seen that 50% of the respondents are aged 18-25 years and 50% are aged 26-35 years, respectively 22 respondents, almost all of the respondents were women, namely 39 respondents (88.6%), some big respondent high school education, namely 29 respondents (65.9%), almost half of the respondents worked other things, namely 16 respondents (36.4%), most of the respondents had not once get information about prevention of DHF, namely as many as 27 respondents (61.4%).
Based on table 2, it can be seen that most of the respondents had sufficient knowledge about DHF prevention before being given health education, namely 32 respondents (72.7%), and the majority big Respondents had sufficient knowledge about DHF prevention after being given health education, namely 23 respondents (52.3%).

The results of the Wilcoxon Signed Rank statistical test obtained $\rho$ value = 0.000 and $\alpha$ = 0.05, so the $\rho$ value $< \alpha$ with a Z value of 3.000 or more from 1.96 to $H_0$ rejected and $H_1$ accepted means there is influence health education to knowledge about prevention of DHF in the community in Geneng Hamlet Village Sumberwuluh Subdistrict Dawarbladong Regency Mojokerto.

DISCUSSION

Knowledge About Prevention of DHF in the Community Before Given Health Education in the Community in Geneng Village Hamlet Sumberwuluh Subdistrict Dawarbladong Regency Mojokerto

Based on table 2, it can be seen that most of the respondents had sufficient knowledge about DHF prevention before being given health education, namely 32 respondents (72.7%).

A person's knowledge is influenced by several factors, including: type of work, education, age, experience, culture and information (Sundari & Masnilawati, 2018). Knowledge rising society _ urgent in control total DHF vector at home individually,
however if knowledge Public not enough raises enhancement DHF (Rohmah et al., 2019). Knowledge role urgent to effort DHF prevention carried out by respondents. The more good knowledge respondent so prevention of DHF is also increasing well, and so otherwise. Behavior based on knowledge and awareness more lasting than behavior that is n’t based on knowledge and awareness. The lack of public knowledge regarding clean and healthy living behavior and the lack of knowledge of residents about preventing DHF are factors that cause DHF in the community (Lindawati et al., 2021)

Condition environment in Geneng Hamlet Village Sumberwuluh many clogged drains because clogged with trash so no water can causative flow puddle so made nest mosquito. Not yet there is counseling about DHF before so that inhabitant still not yet there is awareness for do prevention of DHF due still knowledge not yet ok. The results of this study indicate that the majority of people's knowledge about DHF prevention enough, because still many have n't knowing about fogging so that still many justify that fogging or smoked more effective cope DHF disease compared with method PSN, even though PSN is most effective way for prevent DHF. Society still is many have n't understand that gutters is one nest mosquito so that must often cleaned at least 1 month once, no only when experience leak. Society also thinks that m golden wire gauze/mosquito net no help prevent disease DHF because mosquito still can enter, because though mosquito still can enter, however could reduce intensity so that help reduce DHF transmission. Look after fish in tub bathe still considered no including activity PSN because make tub water the more dirty, though look after fish could help reduce development of mosquito larvae aedes aegypti so could prevent DHF, even still many society that hasn't understand about 3M plus ie drain, close, bury, plus get rid of or cycle repeat goods used.

Based on table 1 it can be seen that half of the respondents are aged 26-35 years and half are aged 18-25 years, namely 22 respondents (50%). The more mature, the level of maturity and one's strength is more mature in thinking and working. Someone who is more mature is trusted than someone who is not yet mature enough. This is a form of experience and maturity of his soul (Wawan & Dewi, 2018).

Respondent’s age should already have development good cognition so that could sort correct information about DHF, but in fact, with the same age, respondent could have different knowledge.

Based on table 3 it can be seen that some big respondent high school educated, namely 29 respondents (65.9%). Education means guidance that is given to someone for the development of others towards certain ideals that determine humans to act and fill life to achieve safety and happiness. Education is needed to obtain information such as things that support health (Budiman & Riyanto, 2013). High school education is classified as secondary education where formally high school level education already have sufficient ability for receive, absorb, and study the information obtained especially about health, however acquired knowledge no in a manner thorough, so answer respondent tend based on experience no information obtained health from formal education, because of the respondents with Higher Education though no ensure have knowledge good about prevention of DHF, because material about health like DHF does always given to all formal education curriculum.
Based on table 4 it can be seen that almost half of the respondents work other things, namely 16 respondents (36.4%). The cross-tabulation results showed that 87.5% of the respondents who worked in other jobs had sufficient knowledge before being given health education. Profession is not a source of pleasure, but rather a way making a living that is boring, repetitive and a lot of challenges. Meanwhile, work is generally an activity that confiscates time. The environment of someone who works is different from that of people who don’t work. The environment is all the conditions that exist around humans and the influence that can affect the development and behavior of people or groups (Arrasyid, Siregar, & Dasopang, 2020). Someone who works will have a more diverse environment compared to those who don’t work, because in a working environment it will be easier for people to interact with other people who are not in the same environment in everyday life so that it will be easier to exchange information that will make their knowledge sufficient because not all people know about DHF prevention, especially if there are no health workers in that environment.

Based on table 5 it can be seen that most of the respondents have not once get information about prevention of DHF, namely as many as 27 respondents (61.4%). Information obtained from both formal and non-formal education can provide short-term knowledge (immediate impact), resulting in changes and increased knowledge (Fitriani, 2015). Information obtained by previous respondents came from the mass media where is the mass media is the place everyone pours out thought, no care writer the competent in their field or no, so many information that is not Correct about the added DHF with justification from the people who are around, then news or misinformation tends to be justified.

Knowledge About Prevention of DHF in the After Community Given Health education in the Community in Geneng Hamlet Village Sumberwuluh Subdistrict Dawarblandong Regency Mojokerto

The results of the research show that some big Respondents had sufficient knowledge about DHF prevention after being given health education, namely 23 respondents (52.3%).

DHF prevention measures is through giving health education. Health education is a bridging process gap Among information and behavior in demand health. health education motivating somebody for accept information health and action in accordance with information that for them Becomes more know and more healthy (Suryaningtyas, 2019).

Respondents have knowledge good after given health education, change biggest happened in the statement fogging or smoked more effective cope DHF disease compared with method PSN, community already knowing that most effective way for prevent DHF is with PSN, no fogging. Society has too understand that gutters is one _ nest mosquito so that must often cleaned at least 1 month once, no only when experience leak. Society has too knowing that m golden wire gauze/mosquito net could help prevent DHF disease, as well knowing that cycle repeat goods bekar including in one _ PSN form. Already no there is again respondents who have knowledge not enough because already given information and can answer question with right.
Based on table 1 it can be seen that 50% of respondents aged 18-25 years, and 50% aged 26-35 years. Cross tabulation results show that 50% of respondents aged 18-25 years and 45.5% of respondents aged 26-35 years have good knowledge after being given health education. Age affects one's comprehension and mindset. Getting older the more developed the mindset and comprehension of a person so that the level of knowledge obtained will more and more (Fitriani, 2015). The age of the respondents is classified as early adulthood who have a good mindset and good comprehension in receiving information after being given health education so that their knowledge increases.

Based on table 2, it can be seen that almost all of the respondents had high school education, namely 29 people (65.9%). Cross-tabulation results show that 48.3% of respondents have high school education and 100% of respondents educated tall have good knowledge after being given health education. Education affects the learning process, the higher a person's education, the easier it is for that person to receive information. One's higher education will information from other people and the mass media. The more information that comes in, the more the level of knowledge gained about health. Increasing the level of knowledge is not absolutely obtained in formal education, however, it can be obtained in non-formal education (Fitriani, 2015). Secondary and tertiary education makes it easier for respondents to absorb information about DHF prevention so that they gain new knowledge but not all of the information can be remembered by respondents because it depends on the intelligence of each individual.

Influence Health education To Knowledge About Prevention of DHF in the Community in Geneng Hamlet Village Sumberwuluh Subdistrict Dawarblanpong Regency Mojokerto

Based on table 2 it is known that some big respondent experience enhancement knowledge regarding DHF prevention, namely 16 respondents, while 23 respondents no experience change consisting knowledge from 8 respondents permanent have knowledge good and 20 respondents permanent have knowledge enough. The results of the Wilcoxon Signed Rank statistical test obtained \( \rho \) value = 0.000 and \( \alpha = 0.05 \), so the \( \rho \) value <\( \alpha \) so that H1 is accepted, meaning there is an influence health education to knowledge about prevention of DHF in the community in Geneng Hamlet Village Sumberwuluh Subdistrict Dawarblanpong Regency Mojokerto.

Health education aims for people to take positive steps in preventing illness, preventing the development of severe illness and preventing infectious diseases, cultivating clean and healthy living behaviors for individuals, families and the general public so that they can have a significant impact on public health status, and Improving understanding of the prevention and treatment of various diseases caused by changes in lifestyle and healthy behavior so that the morbidity rate for these diseases is reduced (Suliha, 2012).

Respondents who experienced an increase in knowledge were because respondents had received the right information about how to prevent DHF transmission so that respondents knew what was previously unknown and was not considered important to know that it is important to do this in preventing DHF transmission.
There are still respondents who do not experience a change in their level of knowledge after being given health education especially fixed respondent _ have knowledge enough (20 people), this does not mean that health education has no effect on the respondents at all, however, the increase in the respondent's value is not significant so that it does not change the category of knowledge level even though there has been an increase in the respondent's value. Technically it can be explained that there is no change in the level of knowledge in the community because the community is less active in participating in health education, pays less attention to the researchers' explanations when delivering the material, and it can also be caused because the community is unable to analyze which information is correct so that the community has its own conclusions. from the information conveyed, or it could also be due to the poor ability to remember the respondents.

Respondents who didn't experience change level knowledge next is 8 people with knowledge ok. this _ caused because criteria highest knowledge _ is good so that no there is enhancement again on top well, will but in a manner numeric total answer Correct respondent increase, percentage answer true also increases, which means there is enhancement knowledge though in a manner categorical permanent same that is ok.

Based on table 5 it can be seen that most of the respondents have not once get information about prevention of DHF, namely as many as 27 respondents (61.4%). Tabulation results cross show that 100% ever respondent _ get information have knowledge good after given HE, while those who have not once get information previously only 14.8% have knowledge good after given HE. Information obtained from both formal and non-formal education can provide short-term knowledge (immediate impact), resulting in changes and increased knowledge (Fitriani, 2015). Respondents who have once get information though from the mass media, will experience enhancement knowledge more good compared to those who haven't once get information same very about prevention of DHF, because giving HE conducted by researchers is counseling and information first one got about DHF prevention.

CONCLUSION

Part Most of the people in Geneng Hamlet Village Sumberwuluh Subdistrict Dawarblondong Regency Mojokerto has sufficient knowledge about DHF prevention before being given health education, namely 32 respondents (72.7%). Part big community in Geneng Hamlet Village Sumberwuluh Subdistrict Dawarblondong Regency Mojokerto has sufficient knowledge about DHF prevention after being given health education, namely 23 respondents (52.3%). There is influence health education to knowledge about prevention of DHF in the community in Geneng Hamlet Village Sumberwuluh Subdistrict Dawarblondong Regency Mojokerto.

SUGGESTION

From the result of the research, it is hoped that the community will increase their knowledge about DHF prevention by seeking as much information as possible from reliable sources, so that the community can carry out DHF prevention appropriately. Expected for the provider service health to provide information on prevention of DHF
to the community through promote and preventive programs by conducting counseling or simulations on how to prevent DHF. Expected educational institutions for provide literature latest for help student in arrange Duty end and work same with the service agency community, cadres, and health center for give counseling health about DHF prevention. It is hoped that further researchers will carry out research development in connection with efforts to increase knowledge to change people's behavior for the better, examine the effectiveness of other health education methods in increasing public knowledge about health, especially about nursing using a control group.

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**CONFLICTS OF INTEREST**

The process of the study were assisted by a research assistant to avoid conflicts of interest between researchers and study participants so that researchers do not have direct contact with study participants when collecting anxiety level data. Before starting the researcher's activities, they also consolidated with the location of the study, the interest in the topic and the existing phenomenon prompted the researcher to raise the study according to that title. So it can be concluded that every party involved in the study already knows and agrees with this study activity. Most financial sources are issued by researchers, while for publication, they receive assistance based on a research publication grant program organized by the Head Bachelor Nursing Study Program, Faculty of Health Sciences, Universitas Bina Sehat PPNI Mojokerto.

**REFERENCES**


