

The Determinant of the Public Empowerment Toward the Prevention of Danguge Fever (DBD) in Uteun Geulinggang Village of North Aceh District

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Abstract

Dengue hemorrhagic fever is a disease caused by dengue virus transmitted to humans by the bite of aedes aegypti mosquito. The province of Aceh has 21 regencies/ cities. Based on data from The Basic Health Research (Riskesdas) 2013 in Aceh province, down to date, DHF is a vector borne disease that is a priority in the program of controlling infectious diseases, both in Indonesia and in the world. In the past 12 months, clinical DHF can be detected in almost all districts/ cities in the province of Aceh (range of prevalence from 0.0 to 4.5%) (Riskesdas, 2013). This study aimed to determine the effect of community empowerment determinants on the prevention of dengue fever in the village of Uteun Geulinggang, North Aceh District to prevent the dengue fever. This study is an analytical study using Cross Sectional Analytical design with 57 heads of the family used as samples and the object of this study. The data was analyzed by using Bivariate and Univariate analysis. The results showed that there was no influence of public knowledge ( $p = 0.223$ ), there was an influence of community attitudes ( $p = 0.003$ ), there was an influence of information access ( $p = 0.000$ ). It is recommended that health education can always guide the citizens and conduct health promotion to provide information about health to encourage people to live a healthier life and free from Aedes aegypti mosquitoes invasion so that there will be no more dengue hemorrhagic fever.

Keywords: Influence, Knowledge, Attitude, Access to Health Information, DHF

e-ISSN: 2656-1123 (media online)

url: <http://prociding.sari-mutiara.ac.id/index.php/samicoh>

article submit: Augustus 2018

article revise: September 2018

article publish: November 2018

## Introduction

*Dengue hemorrhagic fever* which a disease is caused by dengue virus that infect to human through *aedes aegypti* bites. Indonesia is a country that surround of endemic areas. The symptoms are the sudden fever, the headache, the back pain of the eyeball, the nausea and the bleeding manifestation such as the nosebleed incident or the bleeding gums incident and the sign of redness on the surface of patients' body (Kemenkes RI, 2017).

Today, *Dangue fever* still becomes a healthiness problem of public and it will bring a social and economic impacts. The social injury of this disease is the panic situation in the family, the death of family members and the lack of age expectation in the family and the public. The direct economic impact of this disease is the expensive cost of treatment, whereas the indirect impact of this disease is losing work time and the costs other than medical expenses such as the transportation cost and the accommodation cost during the treatment (Kemenkes RI, 2017).

Indonesia has a big risk to contract the disease because of *Dengue* virus through *Aedes aegypti* mosquitos which is in rural and urban areas. Even we are in the houses or the public places except the area with the highness more than 1.000 meters of the sea. The tropical climate also supports the progress of this disease. The physical environment (the rainfall) is the factor of the highness of humidity, which is the potential condition that supports the progress of this disease. (Journal of The Healthiness Environment, 2014).

In Indonesia, the *Dangue fever* cases had a significant increment started from (2008-2010), the cases were 137,469 cases (IR 59,02) as many as 1.187 people were death in 2008, (CFR 0,86) then it increased as many as 154.855 cases (IR 66,48), and 1.384 cases were the death case in 2009 (CFR 0,89), the cases were 155.777 cases (IR 65,57), the total of death was 1.358 people in 2010 (CFR 0,87) (Depkes, RI 2011).

Based on the result of Riskesdas survey in 2013, the researcher gets several data of the healthiness of environment condition that is the healthiness of house environment and the condition of physical environment. In west java, we can see the condition of physical environment of the people like as many as 31,14% of household have 4 members of family. A good density of residence is a density ratio which is more than 10m<sup>2</sup>/person. The researcher found 72,2% respondents who had a good density. The utilizing of the rooms is good such as the rooms are separate each other, the environment conditions are clean, the lighting are sufficient, but the windows and ventilations are poor (Riskesdas, 2013).

Aceh has 21 districts/cities. Based on Riskesdas data of Aceh 2013 until now, *Dangue fever* is an infectious vector disease which is be a priority in an infectious disease control program even in Indonesia and the world. In a year, *Dangue fever* can be detected in every districts/cities of Aceh (the prevalence range is 0,0-4,5%) (Riskesdas, 2013).

Based on *Dangue fever* cases, Aceh donated 2.436 cases in 2008 (IR 54,76) the researcher found the death cases as many as 32 people (CFR 1,31), the case was 1.573 cases in 2009 (IR 36,36) and the death patient was 20 patients (CFR 1,27), it increased as many as 2.573 cases in 2010, (IR 60,70), the total of the death patient was 15 cases (CFR 0,92) (Profile of Dinkes Aceh Province 2011).

The researcher uses the formulation of this research like *is there any effect of the determinant of public empowerment toward prevention of Dangue Fever in Uteun Geulinggang village of North Aceh district?*

To analyzes the determinant of public empowerment toward prevention of Dangue Fever (DBD).

### **The methode of the research**

This research which is analytic research uses cross sectional research that is to determine the descriptive problem, to do the analytic study and to learn the dynamics correlation between the factors and the effects. This research uses the observation or collecting the data directly at the same time (*point time approach*), therefore it is not only all of the subject of the research should observe at the same time (Notoatmodjo, 2016), (Sudigdo, dkk, 2016).

The population in this research was the patriarchs who live in Uteun Geulinggang Village of North Aceh District. Total of the population is 1085 of the patriarchs of the citizen who live in Uteun Geulinggang Village of North Aceh District.

The sample on this research was the patriarchs from the total population who live at Uteun Geulinggang Village of North Aceh. Total of the sample was 57 respondents. Technique of collecting the sample is random sampling that was the sample which took based on geography unit, organization unit, etc. after that the researcher took the sample from the group (Notoatmodjo, 2010).

The data collection is taken by primary data which took from the result of interview and the questioner included the public knowledge data, the public attitude, and the

healthiness information access the secondary data included the general description of village which obtained from the village documents as the research location.

## THE RESULT AND THE DISCUSSION

**Table 1. The distribution of respondent characteristics**

<b>Age</b>	<b>Total ( n )</b>	<b>Percentage (%)</b>
35-50	33	57,9
51-80	24	42,1
Total	57	100
<b>Gender</b>	<b>Total ( n )</b>	<b>Percentage (%)</b>
Male	48	84,2
Female	9	15,8
Total	57	100
<b>The Public Knowledge</b>	<b>Total ( n )</b>	<b>Percentage (%)</b>
Good	31	55
Medium	23	40
Less	3	5
Total	57	100
<b>The Public Attitude</b>	<b>Total ( n )</b>	<b>Percentage (%)</b>
Good	33	58
Medium	20	35
Kurang	4	7
Total	57	100
<b>The Healthiness Information Access</b>	<b>Total ( n )</b>	<b>Percentage (%)</b>
Information	49	86
No Information	8	14
Total	57	100
<b>The Prevention of <i>Dangue Fever</i></b>	<b>Total ( n )</b>	<b>Percentage (%)</b>
Done	47	82,5
Not Done	10	17,5
Total	38	100

Based on the table above, we know that the age of the respondent which is the patriachs are 35-50 years old as many as 35 people (57,9%) and the patriachs who are in age 51-80 years old as many as 24 people (42,1%) at the Uteun Geulinggang village. The gender of the respondent who are the patriachs of the family is male as many as 48 people (84,8%),

and the female gender is as many as 9 people (15,8%), the knowledge of the public shows us 31 people of Uteun Geulinggang village know about *Dangue Fever*, The public attitude shows us 33 people of Uteun Geulinggang village behave or thinks well in preventing the *dangue fever*. The healthiness information access shows us 49 people of Uteun Geulinggang village get the information about *dangue fever* and the prevention about *dangue fever*. This cases show us 47 people of Uteun Geulinggang have prevented the *dangue fever* in their village.

**Table 2. The Bivariate Analysis**

The Public Knowledge	The Prevention of <i>Dangue Fever</i>				Total	<i>p value</i>
	Not Done		Done			
	N	%	N	%		
Less	1	10	2	4,3	3	5,3
Medium	6	60	17	36,2	23	40,4
Good	3	30	28	59,6	31	54,4
<b>Total</b>	<b>10</b>	<b>100</b>	<b>47</b>	<b>100</b>	<b>57</b>	<b>100,0</b>

The Public Knowledge	The Prevention of <i>Dangue Fever</i>				Total	<i>p value</i>
	Not Done		Done			
	N	%	N	%		
Less	2	20	2	4,3	4	7,0
Medium	7	70	13	27,7	20	35,1
Good	1	10	32	68,1	33	57,9
<b>Total</b>	<b>10</b>	<b>100</b>	<b>47</b>	<b>100</b>	<b>57</b>	<b>100,0</b>

The Public Knowledge	The Prevention of <i>Dangue Fever</i>				Total	<i>p value</i>
	Not Done		Done			
	N	%	N	%		
No Information	6	60	2	4,3	8	14
Informasi	4	40	45	95,7	49	86
<b>Total</b>	<b>10</b>	<b>100</b>	<b>47</b>	<b>100</b>	<b>57</b>	<b>100,0</b>

No	Category	Total	%
1	Good	53	59,6
2	Medium	35	39,3
3	Less	1	1,1
	<b>Total</b>	<b>89</b>	<b>100</b>



Based on the table above, the analysis of bivariate of the public knowledge toward the prevention of *Dangue Fever* shows us that the respondent who have low knowledge toward the prevention of *dangue fever* are 3 people (5,3%), the people who are in the medium knowledge are 23 people (40,4%) the people who are in the good knowledge are 31 people (54,4%). The score of p-value shows  $p = 0,223$  or  $p > 0,05$ , it means that there is no effect of the public knowledge toward the prevention of *dangue fever* in Uteun Geulinggang village.

The public attitude toward the prevention of *dangue fever* shows us the respondent who lack of prevention attitude of *dangue fever* are 4 people (7,0%), the respondent who are in the medium of prevention attitude of *dangue fever* are 20 people (35,1%) and the respondent who are good prevention attitude of *dangue fever* are 33 people (57,9%). The score of p-value shows  $p = 0,003$  or  $p > 0,05$ , it means that the effect of the public knowledge toward the prevention of *dangue fever* influenced the people in Uteun Geulinggang village.

The healthiness information access toward the *dangue fever* shows us the respondents who do not get the information about *dangue fever* are 8 people (14%), whereas the respondents who get the information are 49 people (86%). The score of p-value shows  $p = 0,000$  or  $p > 0,05$ , it means that the effect of the health information access toward the prevention of *dangue fever* influenced the people in Uteun Geulinggang village.

## Conclusion and Suggestion

### The Conclusion

In conclusion, the researcher concludes that there were three variables which tested on this research such as the public knowledge, the public attitude, and the healthiness information access. It is only the public knowledge which is no effect toward the *dangue fever*. The citizen still lacks in prevention of *dangue fever* because they only know about the *dangue fever* but the knowledge is not applied to prevent the *dangue fever* by the citizen. The public empowerment to prevent the *dangue fever* which should been done is clean up the environment together with the hamlet chief, the patriarchs, and the religious figures. The central and the region government should monitor the larva directly so that the public health office will implement it.

### The Suggestion

#### 1. The Suggestion to the Hamlet Chief

The researcher suggests the hamlet chief to pay attention to the citizen and the hamlet chief should advise the citizen to keep clean up the environment together if the threaten health event happens again. The hamlet chief should give the announcement to the citizen so that the citizens want to do the health empowerment at their homes and they want to clean up the environment together to get the healthy life and prosperous life.

## **2. The Suggestion to the Citizen**

The researcher suggests the citizen especially the citizen of Uteun Geulinggang village to take care their healthiness from various diseases such as the *dangue fever* disease. The researcher hopes the citizen always prevent the *dangue fever disease* by doing 3M (*menutup, menguras dan mengubur*) to avoid the *dangue fever* disease. The citizen should install the mosquito net to avoid the *aedes aegypti* mosquitos as effectively.

## **3. The Suggestion to the Health Education**

The researcher suggests the health education to do the investigation related to the *dangue fever* disease. Then, the education should invite the public to prevent the disease such as if the people suspected to feel the *dangue fever* disease, please go immediately to the hospital. Therefore, the education should invite the citizen to get a healthy life which influences the people behavior as individually or in groups. The education should convey the messages about the *aedes aegypt* mosquitos which are easy to understand by the citizen of Uteun Geulinggang village.

## **4. The Suggestion to the next Researcher**

The researcher suggests the next researcher to do the next research to find more correlation between the determinant effects of public empowerment toward the invention of the *dangue fever*.

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