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People's Knowledge on Dengue Hemorrhagic Fever

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ABSTRACT

Background: *The incidence rate of Dengue Hemorrhagic Fever (DHF) in Indonesia has increased year by year, from 0.05/100,000 in 1968 become 35-40/100,000 in 2013. It indicated that Indonesia still being an endemic country for DHF. The efforts to prevent DHF are closely related to people's knowledge of DHF.* ***Objective:*** *This research aimed to ascertain the knowledge of people in Sleman District, Yogyakarta Special Province regarding Dengue Hemorrhagic Fever (DHF).* ***Method:*** *Across sectional study was conducted to assess the knowledge of people at Mlati, Kalasan, Gamping, and Godean sub districts in Sleman District, Yogyakarta Special Province. Total respondents was 795 people. Knowledge of dengue was assessed by questionnaire.* ***Result:*** *There were no adequate knowledge of community about the DHF infection transmission (could be transmitted through blood 64.91 %;), the mosquito's life cycle (74.84%) and biting behavior (50.69%), DHF infection symptoms (similar with influenza 44.15%), and DHF infection prevention (about vaccine 54.09%) and treatment (about Paracetamol used 57.86%).* ***Conclusion:*** *The average of knowledge on dengue prevention was 78.90%, may reflect of moderate level of knowledge. The community in Sleman District still need education about DHF prevention, treatment and transmission.*
Keywords: *Incidence rate, Dengue Hemorrhagic Fever, Knowledge*

INTRODUCTION

Dengue is a disease caused by virus and transmitted by the mosquitos (mosquito-borne viral disease). The mainly mosquito's species contribute to the dengue virus transmission is Aedes aegypti and Aedes albopictus. There are 4 serotypes of virus that cause dengue (DEN-1, DEN-2, DEN-3 and DEN-4). Dengue incidence has increase dramatically over the world in recent decades (WHO, 2017). DHF still become health problem in Indonesia since 47 years ago (Ministry of Health Republic of Indonesia, 2016). The incidence rate of DHF in Indonesia has increased year by year, from 0.05/100,000 in 1968 become 35-40/100,000 in 2013 (Karyanti et al, 2014). Yogyakarta Special Province become top 5 province with the highest incidence rate in Indonesia. The upward trends of DHF incidence caused by the high level on people mobilization, urban development, climate change, and high population density. On the other hand, the community awareness and participation on PSN (Mosquito's Nest Eradication) still lacking (Ministry of Health Republic of Indonesia, 2016). The lack of community knowledge on the dengue epidemiology and vectors contribute to the upward trends of dengue (Ashok et al, 2010).

METHOD

A cross sectional study was carried out to measure the community knowledge on dengue. The research conducted at 4 sub districts in Sleman District, Yogyakarta Special Province on May-November 2015. The sub districts involved were Mlati, Kalasan, Gamping, and Godean sub districts. The sampling method was purposive sampling, we preferred sub district with high incidence rate of DHF in Sleman District. The knowledge on dengue assessed used questionnaire which have been validated through internal validation by 2 experts SS and SAK. The questionnaire adopted from Al Dubai et al (2013) and Abdullah et al (2013). The questionnaire contains of 16 question about dengue. We involved 795 respondents in our research.

RESULT AND DISCUSSION

Table 1 Socio-demographic characteristic of respondents

Socio-demographic variables	N (%)
Gender	
Male	315 (39.62)
Female	480 (60.38)
Age	
<17 years	0 (0.00)
17-25 years	56 (7.04)
26-35 years	152 (19.12)
36-45 years	219 (27.55)
46-55 years	214 (26.92)
56-65 years	110 (13.84)
>65 years	44 (5.53)
Marital Status	
Single	77 (9.69)
Married	718 (90.31)
Highest Educational Level	
No formal education	16 (2.01)
Elementary School	127 (15.97)
Junior High School	146 (18.36)
Senior High School	383 (48.18)
Diploma	47 (5.91)
Bachelor	71 (8.93)
More than Bachelor	5 (0.63)
Occupation	
Non skilled worker	130 (16.35)
Farmer	31 (3.90)
Businessman/woman	137 (17.23)
Private employee	105 (13.21)
Government employee	31 (3.90)
Retired	22 (2.77)
Housewife	268 (33.71)
Others	71 (8.93)
Monthly average income	
Below IDR 1,000,000	462 (58.11)
IDR 1,000,001 – IDR 3,000,000	258 (32.45)
IDR 3,000,001 – IDR 5,000,000	53 (6.67)
IDR 5,000,001 – IDR 7,000,000	10 (1.26)
More than IDR 7,000,000	12 (1.51)

The knowledge survey on dengue prevention in Sleman District indicated that 60.38% of respondents were female (Table 1). Mostly of respondent was adult people aged at range 36-45 years old (27.55%) and their majority marital status was married (90.31%). Near of half

respondents have a middle education level (senior high school background) and work as housewives (33.71%) which had monthly income below IDR 1,000,000 (1 USD = IDR 13,239).

The results of the research indicated that people in Sleman District aware on the Government program to eradicate DHF through PSN (Mosquito's Nest Eradication) (98.74%). They also have enough knowledge about the vector for DHF is Aedes aegypti species (98.87%) and it's breeding place (97.48%). They knew that DHF could infect everyone at any ages (98.62%) and the risk is dying (97.23%). On the other hand, they have not enough knowledge about the transmission process, mosquito's life cycle that related to the PSN effectively, treatment of DHF, and epidemiology of DHF. Therefore, from the research result recommended for conducting dengue education program focused on the transmission, treatment and prevention.

Table 2 Percentage of Knowledge Related to Dengue in Sleman District

No	Knowledge Related to Dengue	Percentage
1	DHF infection similar with influenza	44.15
2	Aedes Aegypty bites during dusk and down	50.69
3	There is no vaccine to prevent DHF infection	54.09
4	DHF outbreaks could be happenned in the rainy season	55.85
5	Paracetamol used in DHF infection just for antipyretic	57.86
6	DHF infection could be transmitted through blood	64.91
7	The mosquito's life cycle is one week	74.84
8	DHF tranmission cycle	83.65
9	Temephos kill the Aedes aygypti larvae	92.96
10	DHF sign and symptoms, such as fever, head ache, muscle joint pain	96.1
11	DHF prevention through prevent mosquitos spreading and breeding	96.35
12	DHF infection at risk of dying	97.23
13	The mosquito's breed in the water	97.48
14	DHF could infect at any ages	98.62
15	Aware about governance mosquitos nest eradication	98.74
16	Dengue is caused (transmitted) by Aedes Aegypti mosquitos	98.87

CONCLUSION

The results of study indicated that the level of knowledge on dengue prevention in Sleman District was at moderate level (78.90%). In order to improve the community knowledge, the knowledge based education campaign should be conducted especially focus on dengue transmission, prevention, and treatment.

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