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## Factors Affecting Family Knowledge About Pre-Hospital Handling of Patients Stroke

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### ABSTRACT

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Stroke is still a priority health problem because it is the second (second) cause of disease in the world. Pre-hospital stroke management is a service to patients when they are first found and during the transportation process until the patient is in a health service. Quick and appropriate treatment is one of the important keys in reducing death and minimizing brain damage caused by stroke. The purpose of this study was to identify the factors that influence family knowledge about pre-hospital treatment of stroke patients at Mataram City Hospital. This type of research is a descriptive study that tries to describe or describe the factors that influence family knowledge about pre-hospital treatment of stroke patients. The number of samples in this study were 33 people taken by consecutive sampling technique, the instrument used for data collection was a questionnaire. The results of this study show the factors that influence family knowledge about pre-hospital treatment of stroke patients at Mataram City Hospital: first, there were 12 people aged 26-35 (36.7%). Second, there are 14 people with high school education (42.4%). Third, non-health jobs as many as 16 people (48.5%). Fourth, there is no experience treating stroke patients as many as 16 people (48.5%). And finally, there was no information related to pre-hospital treatment in 15 stroke patients (45.5). Lack of family knowledge should be a concern of the health team, related to the factors above, the health team must provide interventions to increase knowledge by providing information to families or the community, with the hope that families and communities can provide appropriate treatment to patients when they

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experience a stroke before they are taken to hospital.

## INTRODUCTION

Stroke is brain damage due to blood supply disorders which can result in a person having difficulty walking, speaking, understanding as well as paralysis and numbness in the limbs, stroke is one of the main health problems and is the third leading cause of death in the world after coronary heart disease and cancer (America Heart Association, 2015).

Stroke is still a priority health problem because it is the second (second) cause of disease in the world. World Health Organization (WHO) data for 2016 shows that a stroke kills one person every six seconds in the world. With an estimate that every year 15 million people suffer a stroke, of which five million sufferers die and another five million stroke sufferers experience disability (World Health Organization, 2018).

Data from Basic Health Research (Riskesmas) in 2018 found a stroke prevalence in Indonesia of 10.9 per 1,000 population. Stroke is more common in patients aged over 75 years 50.2 per 1000 population, in male sex 11.0 per 1000 population, residents of urban areas 12.6 per 1000 population, never/never attended school 21.2 per 1,000 residents and not working 21.8 per 1,000 residents (Ministry of Health of the Republic of Indonesia, 2018).

One of the reasons for the increased prevalence of stroke is unresponsive behavior or ignoring the early signs of stroke, so that patients experience delays in getting treatment (Asmaria & Yuderna, 2020).

The large number of incidents, deaths and disabilities due to stroke significantly increases the burden of disease and increases the burden on families. About 83.9% of the problems that occur in stroke patients are caused by delays and errors in pre-hospital treatment (Fassbender et al., 2013).

Pre-hospital stroke management is a service to patients when they are first found and during the transportation process until the patient is in a health service. Quick and appropriate treatment is one of the important keys in reducing death and minimizing brain damage caused by stroke (Widi, 2013).

Research by Rachmawati, Andarini and Ningsih (2017) states that some families of stroke patients have insufficient knowledge about the risks and warning signs of stroke which can cause families not to immediately take the patient to the hospital or emergency room. If the family has good knowledge about the risk factors and warning signs of stroke, the family will use this knowledge as a basis for forming action by immediately taking the patient to the hospital (Rachmawati, Andarini, & Ningsih, 2017).

Research conducted by Rahmina states that someone who has less knowledge about risk factors, warning symptoms of stroke and does not understand the concept of "time is brain" will be late in responding to stroke as an emergency condition that must require immediate treatment so that it further slows down arrivals to the hospital. Seeking health assistance (Rahmina, & Wahid, 2017).

A study on the relationship between initial treatment and neurological damage to stroke patients showed that the patient's time to get to the hospital was > 3 hours with a percentage of 56.7%, the average stroke patient's neurological damage was 70% with a p value of 0.042, indicating that prehospital treatment important to minimize the neurological damage that occurs (Batubara & Tat, 2015). There is a relationship between family knowledge and family behavior in the early management of stroke events. (Rosmary & Handayani, 2020).

The success of treating pre-hospital conditions in families of patients with stroke is influenced by the level of family knowledge in detecting stroke, the family can identify risk factors for stroke, the location of events that are far from health services, family assistance as a support system, previous stroke history, stroke comorbidities related to stroke severity, and economic factors in financing treatment (Setianingsih, Darwati, & Prasetya, 2019).

## RESULTS AND DISCUSSION

### 1) Description of Respondents' Knowledge

The results of this study indicate that most of the respondents have a low level of knowledge, namely as many as 16 people or 48.5%.

When a stroke occurs, the initiator, namely the family, plays an important role in decision making in the care and health care of stroke patients (Tamilyn & Lenora, 2004). The family has an important role when one of the family members faces health problems so that the health status of each family member is the responsibility of another family (Herawati, 2016).

Based on the above background, it is considered necessary to conduct research on the factors that influence family knowledge about pre-hospital treatment of stroke patients.

## METHOD

This type of research is descriptive research, namely a research design that tries to describe the factors that influence family knowledge about pre-hospital treatment of stroke patients. The number of samples in this study were 33 people taken by consecutive sampling technique, the instrument used for data collection was a questionnaire.

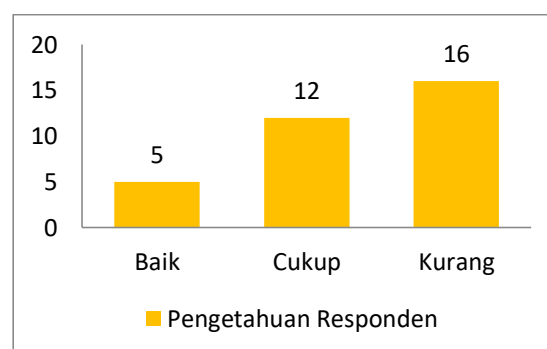


Figure 1 Respondent Knowledge

### 2) Factors Affecting Respondents' Knowledge

#### a. Age factor

The results of this study indicate the age factor, the majority of respondents aged 26-35 years as many as 12 people or 36.4%.

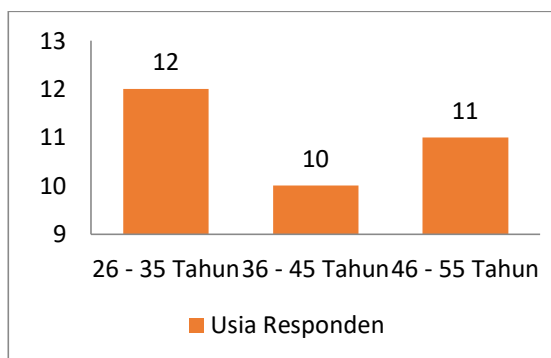


Figure 2 respondent's age

**b. Educational Factors**

The results of this study indicate that in terms of education, most of the respondents had high school education, namely 14 people or 42.4%.

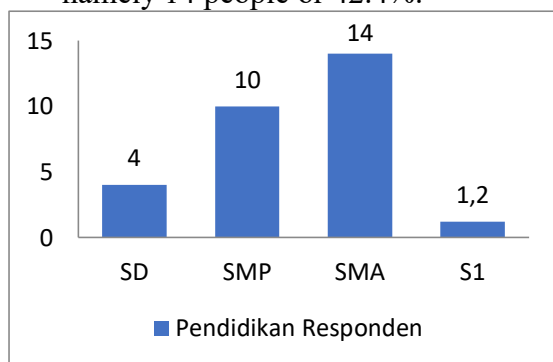


Figure 3 respondent's education

**c. Occupational Factors**

The results of this study indicate that on the occupational factor, most of the respondents did not work in the health sector, namely 32 people or 97%.

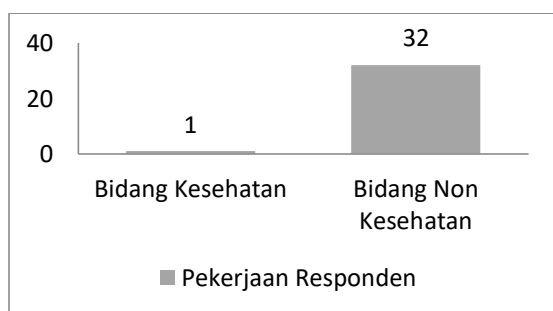


Figure 4 respondent's work

**d. Experience Factor**

The results of this study indicate that on the experience factor, most of the respondents had no experience in treating stroke patients, namely as many as 25 people or 75.8%.

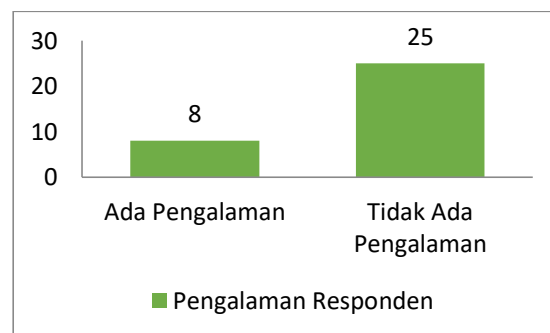


Figure 5 respondent's experience

**e. Information Factor**

The results of this study indicate that on the information factor, most of the respondents had not received information about stroke, namely as many as 24 people or 72.8%.

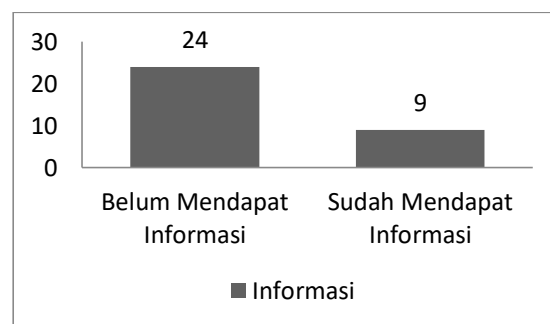


Figure 6 information

**3) Cross-tabulation between the factors that influence knowledge and the level of knowledge of the respondents**

After conducting the research, the results were obtained:

Table 1 Knowledge Category based on Factors Influencing Knowledge

Factors Influencing Knowledge	Knowledge category			Total
	Good	Enough	Not enough	
<b>Age</b>				
26 – 35 year old	5	4	3	12
36 – 45 year old	0	4	6	10
46 – 55 year old	0	4	7	11
<b>Education</b>				
SD	0	0	4	4
SMP	0	2	8	10
SMA	3	8	3	14
S1	2	2	1	5
<b>Work</b>				
Health Field	1	0	0	1
Non-Health Field	4	12	16	32
<b>Experience</b>				
There is Experience	4	4	0	8
no Experience	1	8	16	25

Information				
Got Information	5	3	1	9
Not Received Information	0	9	15	24

Based on the table above, it can be seen that there are 5 factors associated with family knowledge about pre-hospital treatment of stroke patients at Mataram City Hospital, namely age, education, work, experience and information. When viewed from the age factor, the respondents in this study had the most age at 25-35 years, namely 12 people with a distribution of 5 people having good knowledge, 4 people having sufficient knowledge and 3 people having less knowledge.

Regarding the education factor, the majority of respondents with high school education were 14 people, with a distribution of 3 people with good knowledge, 8 people with sufficient knowledge and the remaining 3 people with less knowledge.

In the occupational factor, most of the respondents worked in the non-health sector as many as 32 people, with a distribution of 4 people with good knowledge, 12 people with sufficient knowledge and 16 people with less knowledge.

On the experience factor, most of the respondents had no experience treating stroke patients of 25 people, with a distribution of 1 person with good knowledge, 8 people with sufficient knowledge and 16 people with less knowledge.

Finally, the information factor, most of the respondents had not received information about stroke, namely as many as 24 people, with a distribution of 9 people with sufficient knowledge and 15 people with less knowledge.

Based on the results of the study, it can be described that most of the family's

knowledge about pre-hospital treatment of stroke patients is in the less category (48%).

If it is described in 48% of respondents who have less knowledge based on the factors studied, it is found first on the age factor, respondents who have less knowledge are mostly found at the age of 46-55 years, namely 7 people. According to the Ministry of Health, ages 46-55 are the ages that fall into the early elderly category, this is a transitional period into old age which is followed by a decrease in organ function and the amount of hormones in the body (Hakim, 2020). Age is related to knowledge (Irawan, 2018), age can be related to understanding and logical acceptance of information (Liu, Shi, Willis, Wu, & Johnson, 2017). Based on the sources above, it can be concluded that the older people are, the ability to analyze and absorb information will decrease due to decreased organ function.

In the second factor of education, most of the respondents who had less knowledge had junior high school education, namely 8 people. Education is related to a person's ability to receive and develop knowledge and technology (Notoatmodjo, 2014). However, education has no effect on specific knowledge (Khoirini & Esmianti, 2020) such as knowledge about handling pre-hospital stroke patients because this material is not general material in school learning.

The third factor is work, the most respondents who have less knowledge are respondents who do not work in the health sector, namely 16 people. Work is related to the level of knowledge about something that is appropriate to the field of work (Khoirini & Esmianti, 2020). Someone who does not work in the health sector, of course, will not be familiar with matters related to health problems, such as pre-hospital care for stroke patients.

The fourth factor is experience, most of the respondents who have less knowledge are



respondents who do not have experience treating stroke patients, namely 16 people. There is a relationship between experience and one's knowledge, by having done an activity, someone will have memories of what and how the activity was carried out (Khoirini & Esmianti, 2020).

The fifth factor is information, respondents who have less knowledge are mostly respondents who have not received information of 15 people. A person's knowledge relates to exposure to information that has been obtained. The results of Sirait's research (2013) in the group that was given information, the average knowledge before giving information and after giving information showed a significant difference, besides that exposure to information, both through print and electronic media, can increase one's knowledge (Khoirini & Esmianti, 2020)

## CONCLUSIONS AND RECOMMENDATIONS

From the results of the study, it can be described that most of the respondents have less knowledge, namely as much as 48%. If it is described based on the factors that influence the knowledge of the respondents, it can be seen, at the most age is 26-35 years, from the education factor the most is high school, the most on the job factor is non-health, the most experience factor is no experience and finally from the information factor is that the majority of respondents have not received information.

Lack of family knowledge should be a concern of the health team, related to the factors above, the health team must provide interventions to increase knowledge by providing information to families or the community, with the hope that families and communities can provide appropriate treatment to patients when they experience a stroke before they are taken to hospital.

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