



The Effect Of Health Education On The Level Of Family Knowledge About First Aid For Stage 1 Hypertension Patients In The Puskesmas Working Area

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Abstract This study aims to determine whether first aid for stage 1 hypertension in the working area of the Krueng Barona Jaya District Health Center is still relatively low, so it is necessary to increase family knowledge by conducting health education about first aid for stage 1 hypertension. Objectives: To identify the effect of health education on the level of family knowledge about first aid for patients with stage 1 hypertension. Methods: The research design used the Quasi Experiment method with a pre-test and post-test non equivalent control group approach using a questionnaire measuring instrument with purposive sampling technique. The number of samples taken was 36 families with stage hypertension. Results: The results obtained that after being given health education about first aid for stage 1 hypertension, family knowledge is good. Analysis: the results obtained by the majority after being given health education family knowledge is good. A total of 32 respondents (89%) who have good knowledge, 4 respondents (11%) have sufficient knowledge and no respondents have poor knowledge. Using the Paired Sample t-test test shows a significant number between pretest and posttest scores with a significance value (2 failed) $p = 0.000 < 0.005$ so that H_0 is rejected and H_a is accepted. Discussion: Health education has a very important role in determining human quality, with health education humans gain knowledge and information. The higher a person's level of knowledge, the higher the quality of life.

Keywords: Health Education, Family Knowledge, First Aid, Stage 1 Hypertension.

INTRODUCTION

First aid in hypertension is the provision of immediate help to people with hypertension who need basic medical treatment. First aid in hypertension does not replace proper medical care because this first aid only provides temporary assistance. Hypertension is called The killer disease because it is a killer disease, where the patient does not know that he has hypertension. The World Health Organization (WHO) states that hypertension is one of the most important contributors to heart disease and stroke which is the number one cause of death and disability in the world (Susanto, Fransiska, Waru, Veronika, & Dewi, 2019). This occurs when the arterioles are contracted. Arteriole contraction makes hypertension or high blood pressure, which is an abnormal increase in blood pressure in arterial blood vessels continuously in one period, this will make it difficult for blood to flow and increase the pressure against the artery wall (Ujianti, in Supriatna, 2018).

Changes in blood pressure that lead to an increase or decrease can cause physical discomfort so that it can aggravate the patient's complaints (Marliani, in Kurniawati, 2019).

A person diagnosed with hypertension cannot be completely cured and can only be controlled by doing first aid when blood pressure rises, there are two therapies that can be done to treat hypertension, namely pharmacological therapy and non-pharmacological therapy.

Pharmacological therapy is by using antihypertensive drugs, while non-pharmacological therapy or also called lifestyle modification which includes quitting smoking, reducing excess weight, avoiding alcohol, reducing stress, exercise through lifestyle changes that lead to healthy behavior based on knowledge (Karyadi, in Wiwin & Arsi, 2019). Various factors can influence hypertension control, one of which is family knowledge about hypertension, this is because someone suffering from hypertension needs to get guidance, support and direction to treat hypertension (Mustika, 2020).

Data from the World Health Organization (WHO, 2018) shows that around 1.13 billion people in the world have hypertension, meaning that 1 in 3 people in the world is diagnosed with hypertension. The number of people with hypertension continues to increase every year, it is estimated that by 2025 there will be 1.5 billion people affected by hypertension, and it is estimated that every year 9.4 million people die from hypertension and its complications. According to data from Indonesia's Simple Registration System (SRS) in 2014, hypertension with complications (5.3%) is the number 5 (fifth) cause of death at all ages (Ministry of Health, 2019).

The estimated number of people with hypertension aged ≥ 15 years in East Java Province is around 11,952,694 residents, with a proportion of 48% men and 52% women. Of this number, those who received health services for hypertension were 40.1% or 4,792,862 residents (RISKESDAS, 2018). In 2020 month 1 in Aceh Besar Regency, the percentage of people with hypertension (24.66%) out of a total of 48,000 families (Head of Family), 11,916 families with healthy values. In the KECAMATAN KRUENG BARONA JAYA PUSKESMAS working area in 2022 during January - December, data on the number of people who were sick reached 20.7% of the total population of 62,587 people spread across 12 villages. Which consists of 28,507 men and 34,080 women. Patients with hypertension alone reached 14.7% or the equivalent of 8,762 people.

If the family's knowledge about hypertension is not optimal, it will have an impact on the family's ignorance about first aid for someone in the family who suffers from hypertension. The patient must understand the disease he is suffering from and the family supports the patient's healing process, because the family is an individual who is close to the patient (Prabaadzmajah, 2021). If there is no family knowledge, hypertensive patients will be disobedient in the healing process, resulting in uncontrolled hypertension and complications occurring. Knowledge is the result of the process of finding out, from not knowing to knowing, from not being able to becoming able for the process of healing hypertension patients. In this process of finding out, it includes several methods and concepts, both through the educational

process and through experience (Notoatmodjo, in Wijayanti, 2017).

The results of preliminary interviews with people with family members suffering from hypertension show that there is still low knowledge about first aid for hypertension sufferers so that families do not do anything to overcome the problem of hypertension suffered by their family members. This data shows the low level of public awareness in treating hypertension, so health education efforts are needed in the community, especially within the smallest social group, namely the family. Healthy behavior of a person or society can be influenced by several factors, both internal and external, one of which is influenced by the level of knowledge. If the family's knowledge about hypertension is not optimal, it will have an impact on the family's ignorance about first aid for a family member who suffers from hypertension (Marliani, in Kurniawati, 2019).

The strategy that can be used to reduce the incidence of hypertension is health education. According to Notoatmodjo (2007) Health Education is effectively used to change the behavior of individuals, groups or communities. Health education has various methods when viewed from the number of participants, some use lecture methods, role play, group discussion forums, seminars, audio visuals and others (Christiani, 2018). In this research, the method used was lectures. Strategies used to increase family knowledge about first aid for hypertension sufferers include health professional support, social support, healthy behavior, providing information. Therefore, as a researcher, I intend to conduct research on the influence of health education on the level of family knowledge regarding first aid for stage 1 hypertension sufferers in the work area of the Krueng Barona Jaya District Health Center, Aceh Besar Regency.

MATERIAL AND METHODS

Univariate Analysis

Univariate analysis aims to explain or describe the characteristics of each variable. Univariate analysis in this study includes the age of respondents, respondents' education, and respondents' occupations.

Bivariate Analysis

The analysis used in this study used a parametric test, namely the paired sample t-test. Paired sample t-Test is a different test of two paired samples. Paired samples are the same subject, but experience different treatments. This t-test model is used to analyze the research model before and after. In the calculation process assisted by SPSS at a significant 0.05 so that the conclusion is drawn:

- If p value > 0.05 then H0 is accepted and Ha is rejected which means there is no effect.
- If the p value <0.05 then H0 is rejected and Ha is accepted which means there is an effect.

Data Normality Test

The data normality test used Shapiro-wilk because the study sample was <50. The data normality test was carried out first to determine the distribution of data from the value of the results before and after health education on first aid in stage 1 hypertension.

Research Ethics

This research has been approved. This is as indicated by the fulfillment of the indicators of each standard. In research, many things must be considered, not only methods, design, and other aspects, but there are very important and serious things that must be considered by researchers, namely "Ethical Principles". This is indeed a consideration and an absolute thing that must be obeyed by researchers in any field, including the fields of health, nursing, midwifery, medicine, and others.

RESULTS

Number of Villages

There are 12 villages in Krueng Barona Jaya Sub-district, namely Meunasah Papeun, Meunasah Baktrieng, Lueng Ie, Meunasah Intan, Meunasah Baet, Gla Meunasah Baro, Meunasah Manyang, Rumpet, Lamgapang, Miruk, Gla Deyah, and Lampermai.

Data on the number of health workers

Table 1. Distribution of the Number of Health Workers in the Krueng Barona Jaya Health Center Area, Aceh Besar District

Number	Type of Health Worker	Total	PNS (civil servants)	Non PNS (civil servants)
1	General Practitioner	2	1	1
2	Dentist	2	1	1
3	Nurse	10	8	1
4	Midwives	46	44	2
5	Lab Staff	2	2	0
6	Nutrition Worker	2	2	1
7	Community Health Worker	16	15	1
8	Pharmacy	2	2	0
9	Others	8	4	4
	Total	90	79	11

Source: Krueng Barona Jaya Health Center (2021)

From table 1. it is known that the largest number of health workers are midwives as many as 46 people, public health as many as 16 people.

Socio-Culture and Environment

The average education level of the population aged 10 years and over in Krueng Barona Jaya Sub-district of Aceh Besar District is high (11,671), this can be due to the location of Krueng Barona Jaya Sub-district directly adjacent to Banda Aceh Municipality and very close to the capital of Aceh Province. Where the average educational facilities are more widely available so it is very easy to reach. Based on data on the population who graduated from primary school 1,603 people, graduated from high school 2,020 people, high school 2,319 people, while those who reached college level AD / Diploma 497 people and university 404 people.

Customized Data

This section will present data on family knowledge before and after health education on first aid in stage 1 hypertension.

Family Knowledge about First Aid for Stage 1 Hypertension Patients Before Health Education.

Table 2. Knowledge before health education

Numbers	Knowledge	Frequency (f)	presentation (%)
1	Good	3	8
2	Fair	13	36
3	Less	20	56
	Total	36	100

Based on table 2, it shows that before Health Education was carried out on the level of family knowledge regarding first aid for stage 1 hypertension sufferers in the working area of the PUSKESMAS KRUENG BARONA JAYA DISTRICT, Aceh Besar district, the majority of respondents, namely 20 respondents (56.0%) had insufficient knowledge.

Family Knowledge After Health Education

Table 3. Family Knowledge After Health Education

Numbers	Knowledge	Frequency (f)	Persentage (%)
1	Good	32	89
2	Fair	4	11
3	Less	0	0
	Total	36	100

Based on table 3, it shows that after carrying out Health Education, the majority of respondents, namely 32 respondents (89.0%) had good knowledge.

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Stage 1 Hypertension Sufferers at the Yosowilangun Community Health Center

Table 4. Statistical Test Results Paired Sample t-test

		<u>Descriptive statistics</u>	Paired t-test		
Test	N				
		<i>M (Std. D)</i>	<i>T</i>	<i>df</i>	Sig. (2-tailed)
Pre-test	Post-	53.06 (14.70)			
test		85.28 (8.77)	-14.739	35	0

Based on table 4, it is found that the Paired Sample t-test results show a significant number between the pretest and posttest values with a significance value of p value of 0.000 (p value < 0.005) so it can be concluded that there is a significant influence between health education on the level of family knowledge.

DISCUSSION

Level of Family Knowledge about First Aid Before Health Education

The results of research conducted on 36 respondents in the work area of the PUSKESMAS KRUENG BARONA JAYA DISTRICT, Aceh Besar Regency, based on table 5.7, it can be seen that the majority of respondents, namely 20 respondents, before the Health Education was carried out had insufficient knowledge. This is because many respondents still do not understand what first aid means for stage 1 hypertension. Before being given the intervention, many respondents answered incorrectly on the question item regarding first aid for stage 1 hypertension sufferers. A total of 28 respondents answered incorrectly on the question item regarding first aid. This is because the questions are theoretical in nature, respondents do not yet know what first aid means, so respondents find it difficult to answer the question items.

Various factors can influence knowledge, including age, education and employment. The older a person gets, the more mature and better their mental development processes become, but at a certain age the increase in mental development processes is not as fast as when they were in their teens. The average age of respondents is those who are still in non-productive age, namely 35-44 years. This is in accordance with research conducted by Pangesti (2012), that non-productive age is an age that plays less of a role and does not have busy activities and lacks good cognitive abilities. So, this age has an influence on the level of knowledge. As a person's age increases, the knowledge gained can increase, but at certain ages the ability to accept or remember knowledge will decrease. If the family's knowledge about hypertension is

not optimal, it will have an impact on the family's ignorance about first aid for someone in the family who suffers from hypertension. The patient must understand the disease he is suffering from and the family supports the patient's healing process, because the family is an individual who is close to the patient (Prabaadzmajah, 2021). According to the characteristics of the most recent education, the majority of respondents were junior high school. According to Sitepu (2012), even though a person's educational background is junior high school, it does not rule out the possibility that they have insufficient knowledge regarding first aid for stage 1 hypertension. According to Sab'ngatun (2019), education is guidance given by someone for the development of others, the more The higher a person's education, the more likely that person is to receive and receive information more easily both from other people and from the mass media. Higher education makes it easier for someone to receive information. Apart from that, work can also influence a person's level of knowledge. Farmers are the most common type of work in the Yosowilangun health center work area, this is in accordance with the location of the area where there are many rice fields. Apart from farmers, the respondents' occupations are traders, and some are self-employed and do not work.

Research conducted by Pangesti (2012) explains that a person's work will influence a person's knowledge and experience. The explanation why work has an effect on a person is when the work uses the brain more often than the muscles. The performance and ability of a person's brain to store (memory) increases or increases when it is frequently used, this is directly proportional to when a person's work uses more brain than muscle. Another supporting explanation is that a person's brain or cognitive abilities will increase when they are often used for activities and doing things in the form of puzzles or reasoning.

The results of this study show that family knowledge before being given Health Education was at a deficient level, this was due to a lack of information about first aid for stage 1 hypertension. The above behavior could be influenced by a lack of socialization about first aid procedures from the surrounding health environment. This is considered not very effective because not all hypertension sufferers and their families visit the Community Health Center. Apart from that, people who have hypertension are not reached by health education.

Level of Family Knowledge about First Aid After Health Education

Respondents who had received Health Education intervention mostly showed a good level of knowledge with 32 respondents out of a total of 36 respondents. These results indicate that the respondents have received good health education. After carrying out health education regarding first aid for hypertension, many respondents experienced very drastic changes in their scores. In this way, respondents can change habits, which is a way of changing thinking,

behaving and acting with the aim of helping with treatment, rehabilitation, disease prevention and promotion of healthy living. so that this experience can influence a better level of knowledge

Based on the characteristics of the respondents, the majority of respondents were women, 33 respondents. Gender differences may form different perceptions, thereby influencing different attitudes and knowledge between men and women. It is indeed a matter of debate whether men and women differ in how they make ethical and cognitive decisions. The social approach to gender and literature from Gilligan (1982) in Carter (2011), men and women evaluate ethical dilemmas differently. Based on this approach, men are more likely to engage in less ethical behavior because they will focus on competitive success and tend to ignore rules for the sake of success. This is not directly proportional to a person's cognitive abilities. Meanwhile, women are more task-oriented and less competitive. There is also no literature that explains that men or women have different levels of knowledge or cognitive abilities. The reality is that women are indeed more diligent, diligent and thorough when given assignments or doing something, but this does not explain and show that with this attitude women have a better level of knowledge or cognitive abilities.

This research is in accordance with research by Chandra Hadi P (2015) entitled *The Effectiveness of Health Education in Increasing Family Knowledge about Hypertension*. Chandra Hadi P concluded that after the counseling there was an increase in family knowledge about hypertension. This increase in knowledge is due to the provision of information, which includes a learning process. The learning process, according to Notoatmodjo (2010), can be interpreted as a process of increasing knowledge, understanding and skills that can be obtained through experience or conducting studies (teaching and learning process). By learning, individuals are expected to be able to explore what is hidden within themselves by encouraging them to think and develop their personality by freeing themselves from ignorance. A person can be said to learn if a change occurs within him, from not knowing to knowing, resulting in change (Notoatmodjo, 2010). According to Andita (2018), states that the level of education of each individual greatly influences their life. The higher a person's education, the greater the opportunity they have to get the latest information. This happens because the higher a person's education, the higher a person's ability to obtain information. So this will indirectly affect the amount of information obtained by each individual.

The results of this study show that after health education was carried out, the respondents' knowledge improved, respondents were able to understand what first aid means and the types of first aid for people suffering from stage 1 hypertension.

The Influence of Health Education on the Level of Family Knowledge Regarding First Aid for Stage 1 Hypertension Sufferers in the Working Area of the Krueng Barona Jaya District Health Center

Based on the results of this research, using the paired sample t-test, the statistical test results show that the value of $p = 0.000 < \alpha = 0.005$, which means that H_0 is rejected and H_a is accepted, which means that there is an influence of health education on the level of family knowledge about first aid for sufferers. stage 1 hypertension in the working area of the PUSKESMAS KRUENG BARONA JAYA DISTRICT, Aceh Besar Regency.

According to Suliha (2002), knowledge can be increased by using effective and efficient health education methods. In this research, the delivery of health education was carried out through lectures. According to Hasibuan (2009), the lecture method is a way of explaining and explaining ideas or messages orally to individuals or target groups so as to obtain information about health. According to Notoatmodjo (2010), the choice of educational method must take into account the limitations of time, costs, energy, facilities and conditions of educational participants. Group discussions have been proven to be useful as a tool to achieve a goal. A good discussion group will be able to discuss a problem seriously as a problem and be able to solve it together diligently. This is in accordance with research by Herawati (2014) which states that there are significant differences before and after being given health education using the lecture method.

This research is in accordance with research by Agus Priyanto (2021), that there is an influence of health education on the level of knowledge. Health education is the application of educational concepts in the health sector. Education is a learning process, which means that in education there is a process of change in individuals, groups or society. A person can be said to learn if a change occurs within him, from not knowing to knowing, resulting in change (Notoatmodjo, 2010). According to Andita (2018), states that the level of education of each individual greatly influences their life. The higher a person's education, the greater the opportunity they have to get the latest information. This happens because the higher a person's education, the higher a person's ability to obtain information. So this will indirectly affect the amount of information obtained by each individual.

According to researchers, increasing knowledge is not only obtained from health education methods, age is one of the factors that can influence an increase in knowledge because age can influence a person's understanding and thinking patterns. According to researchers, another factor that can influence a person's knowledge is the education level of the majority of hypertension sufferers with junior high school education. This can influence a

person's mindset and digestibility of the information received. The higher a person's level of education, the higher the information that can be absorbed and the high level of information absorbed influences family knowledge about first aid for stage 1 hypertension sufferers and vice versa. People with low education find it very difficult to receive information and do not care about health problems.

The results of this research show that health education can help increase knowledge, so according to the researchers' advice, they are expected to actively seek information with the help of various sources such as books, the internet and from health workers.

CONCLUSION

Based on the results of research on the influence of health education on the level of family knowledge regarding first aid for stage 1 hypertension sufferers in the Working Area of the PUSKESMAS KRUENG BARONA JAYA DISTRICT, Aceh Besar Regency, the following conclusions can be drawn:

- Before health education was carried out regarding first aid for stage 1 hypertension sufferers, respondents had insufficient knowledge, namely 20 respondents out of a total of 36 respondents.
- After health education was carried out, the level of family knowledge regarding first aid for stage 1 hypertension sufferers had a very good increase in knowledge, namely 32 respondents had very good knowledge.
- There is an influence of health education on the level of family knowledge about first aid for people with stage 1 hypertension

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