

## RESEARCH ARTICLES

### The Correlation of Family Knowledge about Hypertension with Family Support for Stroke Patients at General Hospital Haji Medan

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**Abstract:** Hypertension is called a silent killer because it does not show symptoms when high blood pressure continues for a long period so it will cause complications such as stroke. Stroke can cause disability and death so it becomes a serious problem for families and patients. Family support is an important aspect of patient treatment and can help the patient's recovery and treatment. This research aims to analyse the relationship between family knowledge about hypertension and family support in stroke patients at the General Haji Hospital Medan. This study is a descriptive study with a cross-sectional design to determine the level of knowledge about hypertension and family support in stroke patients. This study uses a bivariate test using the Spearman Rho test. The results of this research bivariate test with the Spearman Rho test showed a correlation between family knowledge of patients regarding hypertension and family support in stroke patients ( $\rho$  value  $0.001 < \alpha = 0.05$ ) with a correlation coefficient of 0.763. It can be concluded that family knowledge is significant and strongly with family support which indicates a relationship between family knowledge about hypertension and good family support in stroke patients at the General Haji Hospital Medan.

**Keywords:** Family support, level of family knowledge about hypertension, stroke

#### INTRODUCTION

Hypertension according to the Joint National Committee VII (JNC-VII) is a condition of increased systolic blood pressure of more than 140 mmHg and

diastolic of more than 90 mmHg.<sup>1</sup> Hypertension is not a contagious disease but a silent killer. Although the disease is not contagious, but a silent killer because it does not show symptoms when blood

pressure increases and continues for a long period so it will cause complications. Uncontrolled hypertension causes a high risk of complications.<sup>2</sup> Hypertension can cause various complications, one of which is "stroke".<sup>2</sup>

Stroke according to the World Health Organization (WHO) is a clinical syndrome with symptoms in the form of focal or global brain function disorders, which can cause death or permanent disability for more than 24 hours. Stroke is a non-communicable disease but can cause death and disability.<sup>3</sup>

The prevalence of stroke can vary in parts of the world. The United States has a stroke prevalence of 7 million, compared to China which has a prevalence of around 1.8% (rural) and 9.4% (urban).<sup>4</sup> The prevalence of stroke sufferers in Indonesia in 2014 was 45.3% in the age group 65-74 and >75 years % as much as 50.2%. The basic risk analysis shows that stroke is more common in urban communities as much as 12.6% compared to rural communities as much as 8.8%.<sup>5</sup>

Family support is an important aspect in the treatment of patients with patient diseases. Small involvement in treatment support can have a cure and treatment of patients. The level of knowledge and understanding of hypertension can support the success of treating a disease. Family support itself is very beneficial for patient health, namely in helping family members to get stable and good health conditions by providing continuous motivation.<sup>6</sup> Based on the results of previous research studies by Listyana Wijayanti (2017), researchers stated that good family knowledge in hypertension

sufferers can help influence the health conditions of hypertension patients.<sup>7</sup> Previous research by Anggi S. Rompi et al., (2020) showed that family support for hypertension treatment or care was 37 respondents with high family support of 74%. The study showed that family members who provide high support to family members with hypertension have an important role in controlling blood pressure fulfilment.<sup>8</sup> Research by E. Sawitri et al., (2015) also showed that high levels of knowledge can also influence family support in efforts to control hypertension.<sup>9</sup>

In this study, a questionnaire was used to collect data containing written questions that must be answered by respondents. This study used the variable of family knowledge about hypertension using a research instrument in the form of a questionnaire. The variable of family support in stroke patients also uses a research instrument in the form of a questionnaire. The questionnaire will be given directly to the patient's family and filled in according to the question.

## **METHOD**

This study is a descriptive study with a cross-sectional design to determine the level of knowledge of hypertension in families of stroke patients. This study aims to determine the relationship between family knowledge about hypertension and family support in stroke patients at RSUD Haji Medan with data collection techniques using non-probability sampling or purposive

sampling. Data collection was carried out using research samples that met the inclusion criteria and questionnaires containing questions about knowledge of hypertension and family support for patients.

The population in the study were families of stroke patients treated at RSUD Haji Medan. The sample in this study was the family of stroke patients who had a history of hypertension who were companions in care or part of the post-treatment control at RSUD Haji Medan. The study was conducted for 1 month from March 27 to April 27 in 2024. The sample recorded for this study was 154 respondents.

The data used in this study were primary data which were the results of questionnaires given directly. Then the data that had been obtained was recorded, collected, and processed (editing, coding, entry, tabulation, cleaning analysis, and saving). The collected data will be processed using a computer application with Statistica Product and Service Solution (SPSS) univariate analysis using frequency distribution and bivariate analysis using the Spearman Rho test.

## RESULT

Data presentation is divided into univariate analysis and bivariate analysis. Univariate analysis presents demographic data such as gender, age, education, occupation, relationship status with the patient, duration of hypertension, and level of knowledge and family support.

**Table 1. Frequency Distribution of Respondent**

Characteristics	Category	(f)	(%)
Gender	Men	60	39
	Women	94	61

	Total	154	100
Age	<41 years	28	18,2
	41-50 years	39	25,3
	51-60 years	51	33,1
	61-70 years	28	18,2
	>70 years	8	5,2
	<b>Total</b>	<b>154</b>	<b>100</b>
Family Status	Childs	30	19,5
	Parents	3	1,9
	Husband/wife	111	72,1
	Brothers/ sisters	10	6,5
	<b>Total</b>	<b>154</b>	<b>100</b>
Education	Bachelor/Diploma	54	35,1
	Senior High School	77	50
	Junior High School	19	12,3
	Elementary school	4	2,6
	<b>Total</b>	<b>154</b>	<b>100</b>
	Work	Retiring	37
Civil Servant/ Teachers		10	6,5
Employee		29	18,8
Self-Employed		16	10,4
Housewife		61	39,6
College		1	0,6
	<b>Total</b>	<b>154</b>	<b>100</b>
Duration of suffering from hypertension	1-2 years	79	51,3
	3-4 years	21	13,6
	>5 years	54	35,1
	<b>Total</b>	<b>154</b>	<b>100</b>

Based on Table 1. it can be seen that the majority of genders participating in the study, namely 94 respondents (61%) were female. Meanwhile, the other 60 respondents (39%) were male. Age categorization can be seen that the age range of respondents <41 years was 28 respondents (18.2%). Aged 41-50 years were 39 respondents (25.3%), age 51-60 years were 51 respondents (33.1%), age 61-70 were 28 respondents (18.2%) and age > 70 years were 8 respondents (11.7%).

In terms of education, it was recorded that the majority of respondents, namely 77 people (50%) took their last education at the high school level. As

many as 54 respondents (35.1%) took their last education at undergraduate or diploma level. As many as 19 respondents (12.3%) took their final education at the junior high school level. Meanwhile, 4 other respondents (2.6%) took their final education at the elementary school level. The families who participated in the research showed that the majority of respondents, 111 people (72.1%) were husband/wife. As many as 30 respondents (19.5%) were children, 10 respondents (6.5%) were siblings living in the same house, and 3 respondents (1.9%) were parents.

Occupation also affects family support for patients. The majority of respondents, 61 people (39.6%) were housewives. As many as 37 respondents (24%) had retired from their jobs, 29 respondents (18.8%) were employees, 16 respondents (10.4%) were self-employed, 10 respondents (6.5%) were civil servants or teachers. Meanwhile, 1 other respondent (0.6%) was still studying at university. The majority of hypertension patients who had suffered for 1-2 years were 79 respondents (51.3%). Meanwhile, as many as 54 respondents (35.1%) suffered from hypertension for  $\geq 5$  years and 21 respondents (13.6%) suffered from hypertension for 3-4 years.

**Table 2. Frequency Distribution of Hypertension Knowledge and Family Support**

Characteristics	Category	(f)	(%)
Hypertension knowledge	Good	121	78,6
	Enough	21	13,6
	Less	12	7,8
	<b>Total</b>	<b>154</b>	<b>100</b>
Family support	Good	113	73,4
	Enough	27	17,5
	Less	14	9,1
	<b>Total</b>	<b>154</b>	<b>100</b>

Based on Table 2. it can be seen that the majority who have good knowledge regarding hypertension are 121 respondents (78.6%). Meanwhile, 21 respondents (13.6%) have sufficient knowledge and 12 other respondents (7.8%) have insufficient knowledge regarding hypertension. Family support for patients also shows that the majority of families who are 113 respondents (73.4%) provide good support. Meanwhile, 27 respondents (17.5%) provided sufficient support and 14 respondents (9.1%) provided insufficient support.

Based on the variables measured in the bivariate analysis are the level of family knowledge regarding hypertension and family support for stroke patients at the Haji Medan General Hospital. Bivariate analysis uses the Spearman Rank correlation test or the Spearman Rho test with SPSS (Statistical Package for the Social Sciences).

**Table 3. Spearman Rho Bivariate Analysis**

		Family support	
<i>Spearman's rho</i>	Hypertension knowledge	Correlation coefficient	.763**
		Sig. (2-tailed)	0.001
		N	154

The results of the bivariate test using the Spearman test obtained a Sig. ( $\rho$  value) of  $0.001 < \alpha = 0.05$  and a correlation coefficient of 0.763, it can be concluded that family knowledge is significantly and strongly correlated with family support. It can be concluded that family knowledge has a strong and significant positive correlation with family support.

## DISCUSSION

The results of the study prove that there is a relationship between family knowledge about hypertension and family support in stroke patients at the Haji Medan General Hospital. This study is in line with other studies that also show the same results regarding the correlation between the level of knowledge and family support by Listyana Wijayanti (2017) which shows the results of the analysis using the Somers' D test obtained a  $\rho$  value of  $0.000 < \alpha = 0.05$ , these results have a strong correlation between the relationship between knowledge about hypertension and family support in the process of healing hypertension in the elderly at the Health Center Banjarejo in Madiun City.<sup>7</sup>

Other studies also show results that are in line with researchers regarding the results of the correlation between the level of knowledge and family support conducted by Nahla Firdaus (2021) using statistical analysis of multiple correlation tests obtained with significant value results  $\rho = 0.000 < 0.05$  which indicates a relationship between the level of knowledge and family support with blood pressure in hypertensive patients in Malang Regency.<sup>10</sup>

In Table 2. it can be seen that the majority who have good knowledge regarding hypertension are 121 respondents (78.6%). This study has results that are in line with the study conducted by Listyana Wijayanti (2017) entitled "The Relationship between Knowledge About Hypertension and Family Support in the Process of Healing Hypertension in the Elderly at the Banjarejo Health Center Madiun City as many as 36 respondents have 22 respondents (61.11%) have a good knowledge category.<sup>7</sup> Research by Sherly et al. (2023), also has results that are in line with the majority of good knowledge levels of 262 respondents (92%) from 284 total samples.<sup>11</sup> The level of good knowledge about a disease is influenced by the information received by a person. Information that can be received well by respondents, the better the respondent's knowledge in understanding hypertension.<sup>12</sup>

Respondents who have families who have hypertension will have a lot of experience and knowledge about hypertension so it can affect the respondent's level of knowledge about hypertension.<sup>12</sup> According to Notoatmodjo (2014) knowledge is influenced by many factors such as education level. The higher a person's education level, the better the knowledge they have. Based on table 4.1. it can be seen that the majority of respondents, namely 77 people (50%) completed their last education at the high school level. As many as 54 respondents (35.1%)



completed their last education at bachelor's or diploma level. The study shows that the level of knowledge about hypertension is mostly highly educated. However, it does not cover that the level of education does not guarantee influencing a person's knowledge. Knowledge is not only obtained from formal education but can be obtained in many ways through one's initiative or encouragement from others.<sup>13</sup>

The duration of hypertension is shown in Table 1. It can be seen that the majority of respondents, as many as 79 people (51.3%) have suffered from hypertension for 1-2 years. Meanwhile, as many as 54 respondents (35.1%) have suffered from hypertension for > 5 years. For 1-2 years, patients who suffer from strokes only find out that they have a history of hypertension. However, individuals who suffer from hypertension for > 5 years are not as many as those who suffer from 1-2 years. According to Merli (2022) shows that an unhealthy lifestyle can cause an increase in cases of non-communicable diseases such as hypertension. Individuals who suffer from hypertension for > 5 years have a high risk of suffering from stroke. Many factors cause chronic hypertension sufferers to suffer strokes, such as an unhealthy lifestyle, non-compliance with taking medication and also lower hypertension control because they tend to feel bored with undergoing treatment and taking medication.<sup>14</sup>

Based on table 1. shows that the age of 51 to 60 has the largest majority of respondents, 51 people (33.1%). According to Rizqiani (2023), increasing age increases a person's capacity through experience

regarding a problem. Age can affect knowledge about a disease such as hypertension.<sup>15</sup> Someone who has lived longer has certainly experienced many problems and obtained various information. The older a person is the more maturity and absorption of information.<sup>16</sup>

Table 2. shows that family support for patients also provides good support, as many as 113 respondents (73.4%). Research shows that family support influences people with hypertension. This result is in line with the research of Christine & Yunita (2018) entitled "The Relationship between Family Support and Hypertension Control in Ledu-Ledu Village, Wasuponda District" which showed that as many as 29 respondents (72.5%) had good family support obtained from 40 samples.<sup>17</sup> Research by Irawati et al. (2018), also showed results that were in line with the majority of family support of 35 respondents (41.2%) from 85 total samples.<sup>18</sup> Family support has an important influence on health and treatment. The majority of good family support is due to having a family who faithfully accompanies and always motivates carrying out treatment therapy to help patients achieve stable and good health conditions.<sup>19</sup>

Table. 1 shows that the status of family relationships with patients is most often found in their life partners (husband/wife) as many as 111 respondents (72.1%). According to Daziah et al., (2020), close family support will have a positive impact on

increasing patient confidence in facing the process of treating the disease and controlling blood pressure. The higher the family support, the higher the patient's influence in controlling blood pressure is always normal.<sup>15</sup>

Family support and good knowledge will have an impact on hypertension sufferers. Continuous support is very beneficial for the health and treatment of patients. Likewise, good family knowledge about hypertension can also affect family support in efforts to control hypertension. The researcher assumes that the lack of knowledge and support from respondents' families towards stroke patients at the Haji Medan General Hospital is influenced by several factors. Some of them are education, occupation, age, duration of hypertension and family relationships themselves. Lack of family support for stroke patients can affect their health and mental health.<sup>20</sup>

## CONCLUSION

This study shows that the results of the bivariate test with the Spearman Rank correlation test or test 2 show a correlation between family knowledge of patients regarding hypertension and family support for stroke patients ( $p$  value  $0.001 < \alpha = 0.05$ ) correlation coefficient of 0.763 so it can be concluded that family knowledge is significantly and strongly correlated with family support. The results of the study show a relationship between family knowledge about hypertension and good family support for stroke patients at the Haji Medan General Hospital.

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