

The Relationship Between Family Support and the Stage of Hypertension in the Elderly

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Abstract

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Background: The elderly experience role changes related to physiological and psychosocial changes. The increase in the elderly population will certainly be followed by an increased risk of suffering from chronic diseases, including hypertension. People with a chronic disease, such as hypertension, need support from the surrounding, especially family. Family is people who are always with and follow the life process of an individual.

Objective: This study aimed to examine the relationship between family support and the stage of hypertension in the elderly.

Methods: This study employed an analytical research design with a cross-sectional design. The population in this study was 60 people, with a total sample of 60 samples. The sampling technique used total sampling.

Results: The majority of respondents had less family support, which accounted for 46 (76.7%) respondents. Most respondents suffered from stage 2 hypertension, which accounted for 34 (56.6%) respondents. The majority of elderly respondents who had good family support suffered from stage 1 hypertension, which accounted for 7 (11.6%) respondents. The Chi-Square test showed a p-value of 0.041. This indicated that there was a significant relationship between family support and the stage of hypertension in the elderly.

Conclusion: There is a statistically significant association between family support and the stage of hypertension.

Keywords: elderly; family support; hypertension stage

Introduction

The elderly is a group of people aged ≥ 60 years. The population of ≥ 65 years worldwide was 617 million people, which is equivalent to 8.5 percent of the total population globally. However, by 2050, the number of elderly people is predicted to increase to 1.6 billion people, equivalent to nearly 17% of the global population (NIA, 2016). Indonesia is the 4th country with the largest elderly population globally. Based on the 2020 population census, there was an increase in the percentage of the elderly population (≥ 65 years) to 9.78 percent in 2020 from 7.59 percent in 2010. Seniors aged 60-64 years are the highest at 10.3 million population. Meanwhile, the population aged 75+ years is 5 million, more than the population aged 70-74 years (BPS, 2020).

The increase in the elderly population will certainly be followed by an increased risk of suffering from chronic diseases, including hypertension (Suardiman and Prastyo, 2019). Hypertension occurs when the systolic pressure exceeds 140 mmHg and the diastolic pressure is above 90 mmHg. The prevalence of people with hypertension in Indonesia in 2018 is 34.1% which has increased from 2013 at 25.8% (Risksedas, 2018). In Maluku Province, the prevalence of elderly with hypertension was 34.11%. This prevalence increases with age (Risksedas, 2018).

Hypertension is caused by several factors, including modifiable behavioral and environmental factors (Purwono, et al., 2020). People with a chronic disease, such as hypertension, need support from the surrounding, especially family. Family is people who are always with and follow the life process of an individual. In addition to family, community support is also required to support people with hypertension (Senja and Prasetyo, 2019).

From the initial data at Waplau Health Center, the cases of hypertensive patients has increased from the last 2 years. In 2019, there were 86 elderly visits for hypertension treatment and in 2020, there were 91 elderly visits for hypertension treatment. In 2021, starting from January there were 10 elderly hypertensive patients, 15 in February, 19 in March and 20 in April and the average age of patients visiting with hypertension was from the age of ≥ 60 years. Moreover, according to the interview with the elderly, they often feel lonely, anxious, meaningless, and lack of attention from their family. Meanwhile, family assumed that the diseases the elderly experiences was natural as older people. The elderly also reported that they did not get support from their family, such as not being cared for when sick, family did not have time to take the elderly to health center, did not listen to complaints from the elderly, especially about the disease they experienced, and never reminded the elderly to take medicine (Preliminary Data of the Waplau Health Center 2021).

According to the phenomenon above, the authors were interested in examining the relationship between family support and the stage of hypertension in the elderly.

Methods

Study Design

This study employed an analytical research design with a cross-sectional approach to examine relationships between family support and stage of hypertension.

Samples/Participants

The population in this study was patients with hypertension and their family in the working area of Waplau health center, which accounted for 60 people. The sampling technique utilized total sampling, which included 60 participants.

Instruments

This study utilized family support questionnaire adapted from Engeline (2017) which has been tested for validity and reliability. Family support questionnaire used the Likert scale with 20 statements. The answer consisted of 5 answer choices, including Always scored 5, Agree scored 4, Doubt scored 3, Rare scored 2, and Never scored 1. The measurement result was: 1) Good, if the total score=76-100%; 2) Enough, if the total score=56-75%; 3) Less, if the total score= 0-55%. For the stage of hypertension, the instrument only used three answer choices, which were assessed using blood pressure measurement results: 1) Pre-hypertension if the blood pressure was 120/80 mmHg-139/89 mmHg; 2) Stage 1 hypertension if the blood pressure was 140/90 mmHg-159/99 mmHg; and 3) Stage 2 hypertension if the blood pressure was 160/100 mmHg.

Data Collection

This study was conducted in 2021. Before collecting data, the researchers took preliminary data in the working area of Waplau health center. All data were collected by researchers.

Data Analysis

Univariate analysis was carried out for the characteristics of respondents, family support, and the stage of hypertension in the elderly. Bivariate analysis was conducted to identify the correlation between family support and hypertension. The data obtained then analyzed using Chi-square test with a confidence level of 95% ($\alpha=0.05$). This study employed the Chi-square test to analyze the relationship between family support and the stage of hypertension in the elderly. The study was considered meaningful relationship if the p-value was 0.05 and there was no meaningful relationship between two variables if p-value was >0.05 .

Ethical Considerations

This research has been approved by the ethical committee of Sekolah Tinggi Ilmu Kesehatan Maluku.

Results

Table 1 showed that the majority of respondents were female, accounting for 36 (60%) respondents, aged 60-70 years, accounting for 32 (53.3%) respondents, and had a role as a mother in the family, accounting for 24 (40%) respondents. Meanwhile, Table 2 depicted that most respondents' family were female accounting for 39 (65%) respondents, aged 19-29 years accounting for 24 (40%), had education level of junior high school accounting for 29 (48.3%) respondents, had a relationship as a child with elderly respondents.

Table 1. Characteristics of respondents

Characteristics of elderly	n	%
Gender		
Male	24	40.0
Female	36	60.0
Age		
60-70 years	32	53.3
71-80 years	20	33.3
81-90 years	8	13.4
Role in family		
Father	18	30.0
Mother	24	40.0
Grandfather	6	10.0
Grandmother	12	20.0
Total	60	100

Source: Primary Data, 2021

Table 2. Characteristics of respondents' family

Characteristics of respondents' family	n	%
Gender		
Male	21	35.0
Female	39	65.0
Age		
19-29 years	24	40.0
30-39 years	19	31.7
40-49 years	17	28.3
Education level		
Elementary school	11	18.3
Junior high school	29	48.3
Senior high school	17	28.3
Bachelor	3	5.1
Family relationship		
Child	42	70.0
Grandchild	18	30.0
Total	60	100.0

Source: Primary Data, 2021

Table 3 showed that the majority of respondents had family support with less category, which accounted for 46 (76.7%) respondents. Table 4 depicted that most respondents suffered from stage 2 hypertension, which accounted for 34 (56.6%) respondents. Table 5 showed that the majority of elderly respondents who had good family support suffered from stage 1 hypertension, which accounted for 7 (11.6%) respondents, while those who had less family support were dominated by respondents with stage 2 hypertension, which accounted for 30 (50%) respondents. The Chi-Square test showed a p-value of 0.041. This indicated that there

was a significant relationship between family support and the stage of hypertension in the elderly.

Table 3. Family support on patients with hypertension

Family support	n	Percentage (%)
Good	14	23.3
Less	46	76.7
Total	60	100.0

Source: Primary Data, 2021

Table 4. The stage of hypertension in the elderly

Stage of hypertension	n	Percentage (%)
Pra hypertension	7	11.7
Stage 1 hypertension	19	31.7
Stage 2 hypertension	34	56.6
Total	60	100.0

Source: Primary Data, 2021

Table 5. The relationship between family support and the stage of hypertension in the elderly

Family support	The stage of hypertension in the elderly								p-value
	Pra hypertension		Stage 1 hypertension		Stage 2 hypertension		Total		
	n	%	n	%	n	%	N	%	
Positive	3	5.0	7	11.6	4	6.7	14	23.3	0.041
Negative	4	6.7	12	20.0	30	50.0	46	76.7	
Total	7	11.7	19	31.6	34	56.7	60	100.0	

Source: Primary Data, 2021

Discussion

This study showed that majority of respondents had less family support. The elderly who experienced a lack of support felt less cared for by their family. This is because the children or grandchildren who live with them primarily work as farmers, so there is little free time with the elderly. In addition, families rarely take the elderly to health workers to control their blood pressure because of the limited costs owned by the family.

The family support can be time, cost, and equipment, which can ease the burden on the elderly. This is in line with research conducted by Fitriah, et al (2017) which reported that respondents can fulfill real instrumental support such as in the form of money, equipment, time, facilities and fulfillment of daily activities so as to ease the burden on the elderly. Family respondents as the closest people to the elderly who experience independence disorders can help elderly in fulfilling daily activities such as eating, drinking, toileting, bathing, walking up and down stairs, wearing clothes, and controlling defecation and urination. In addition, based on the results of the study, most respondents work as housewives where respondents have a lot of free time and most activities are at home, so this makes it easier for respondents to provide support. While respondents who provide instrumental support are lacking, in the opinion of researchers it is possible because some respondents work outside the home so that it cannot entirely help facilitate the needs of the elderly.

Instrumental support is support that focuses on the family as a source of practical and concrete help in the form of direct assistance from people relied on such as materials, energy, and means. Real support, where this support is in the form of direct assistance. This dimension shows support from the family in a tangible form for the dependence of family members. This instrumental dimension includes providing means to facilitate or help others, including providing

time opportunities (Friedman, Bowden, & Jones, 2010). The lack of attention to the elderly at the Waplau health center makes the elderly unable to get what they need.

Through the description above, researchers assume that the lack of family support for the elderly is caused by the lack of free time owned by the family and economic factors. Family as the closest person to the elderly can help in fulfilling daily activities so that the needs of the elderly can be met.

Based on the degree of hypertension in the elderly, the results of this study show that more elderly experience stage 2 hypertension. The risk factors for increased blood pressure in the elderly include age, diet, and physical activity. From the results of interviews with elderly family, many mentioned that the elderly are happy with dishes that have a high enough salt intake and fatty foods. Besides that many elderly family do not understand the recommended amount of salt use for people with hypertension.

Hypertension that occurs in the elderly can be caused by a decrease in body structure and function due to the aging process. The older a person is, the more at risk of developing hypertension. This is in line with research conducted by Aristo (2018) which found that the increased risk related to age factors largely explains isolated systolic hypertension and is associated with an increase in peripbrealar vascular resistance (obstruction of blood flow in peripheral blood vessels) in the arteries. This is due to arterial pressure that increases with age, the occurrence of aortic regurgitation, as well as the presence of degenerative peruses, which are more frequent in elderly. In addition to age, risk factors for hypertension are diet in the elderly. Some risky food eating behaviors include often eating salty and fatty foods. This is in line with research conducted by Pratiwi and Wibisana (2018) which revealed that the diet of the elderly is dominated by poor diet. Excessive salt consumption will increase the amount of sodium in the cells which can disrupt the fluid balance of the blood. High salt content in the body can interfere with the work of the kidneys. Salt must be removed from the body by the kidneys, but because sodium binds a lot of fluid in the body, the higher the salt makes the blood volume increase.

In addition to age and diet, one other factor that can increase blood pressure is physical activity. Damanik and Sitompul (2020) in their study reported that there is a relationship between physical activity and hypertension in the elderly. Lack of physical activity tends to have high cardiac output. The higher the cardiac output, the greater the oxygen needed by the body's cells. Lack of physical activity causes less burning of energy by the body so that excess energy in the body will be stored as fat, which in turn cause hypertension. Through the description above, the authors assume that risk factors for hypertension in the elderly at the Waplau health center include age, diet, and physical activity. A poor diet causes uncontrolled blood pressure so that it will increase.

This study showed that less family support is related to the stage of hypertension in the elderly at the Waplau Health Center. Respondents who had less categorical family support were more likely to develop stage hypertension. Elderly who lack family support feel less cared for by their families such as less attention when sick, families do not have time to take the elderly to the health center, do not listen to complaints from the elderly, especially about the disease they experience, and never remind the elderly to take medicine.

Moreover, this study showed that respondents who have less family support tend to have a high stage of hypertension. Conversely, respondents who have good family support are more likely to have a low stage of hypertension. This is in line with research conducted by Lolo (2018) that family support is related to the incidence of hypertension. In addition, the results of his research showed that family support, including hope support, real support, information support, and emotional support had a significant effect on the implementation of a hypertensive diet. So it can be concluded that family support plays an important role in the ability to achieve successful blood pressure control in people with hypertension. This study is also in line with research conducted by Bisnu, et al (2017) that there is a statistically significant relationship between family support and the degree of hypertension. The existence of this relationship is because the family becomes a support system for patients with hypertension, so that the conditions experienced do not worsen and avoid complications due to hypertension. Family support is needed by patients who need treatment for a long time and continuously.

Low family support will affect the behavior of the elderly in preventing hypertension and will have an impact on decreasing the health and quality of life. Besides that if the elderly with hypertension get enough support from the family, the elderly will be motivated to change behavior in order to live a healthy lifestyle. The authors assume that lack of good family support is one of the factors causing the large number of elderly who experience stage 2 hypertension at the Waplau health center. Family who cares about their family members with hypertension can pay attention to provide healthy food, encourage to exercise, and accompany and remind the elderly to routinely check blood pressure. The support provided by family members shows family attention and concern so that patients with hypertension will be motivated to undergo treatment properly.

Conclusion

This study found that the majority of the elderly at the Waplau health center have less family support. Most respondents suffer from stage 2 hypertension. There is a significant relationship between family support and the stage of hypertension in the elderly at the Waplau health center.

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