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Self-Care Behavior and Associated Factors in the Elderly with Hypertension



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Abstract

Hypertension is one of the main risk factors for life-threatening cardiovascular disease and is often called the silent killer. The results of basic health research in 2018 suffered from hypertension were the most in the elderly aged 55 to 64 years (55.2%). Hypertension in the elderly is a chronic disease that requires disease care management including regular blood pressure control and self-care behavior programs to prevent further complications. This study aims to determine the factors related to self-care behavior in hypertensive elderly in the Integrated Health Care Center of elderly, Srikandi, Turi Sub District, Community Health Centers of Sukorejo, Sukorejo district, Blitar. The method used in this study was an analytical descriptive study with a cross-sectional approach conducted on 38 hypertensive elderly people. The study was conducted from January to February 2022. Analysis data using multiple linear regression analysis to ascertain the possible factors that influence self-care behavior. Based on this study, the Rank Spearman correlation test results, the factor that correlated with self-care behavior was level of education and time living with diagnosed hypertension with a Sig (2-tailed) value of 0.008; 0,000 with a correlation coefficient was positive, the value of 0.427; 0.605. so that the relationship between the two variables was unidirectional. This study recommends that community nurses must understand the factors that influence self-care behavior in hypertensive clients in the community so that they are able to provide appropriate nursing care.

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INTRODUCTION

An elderly person is someone who has reached the age of 60 years and above. Aging is a natural process of slowly losing the ability of body organ tissues to maintain normal body functions characterized by the emergence of several changes as a result of the aging process, including physical, mental, spiritual, and psychosocial changes (WHO, 2019) Cit (Lutfiana & Margiyati, 2021) Health problems of the elderly in Indonesia are experienced by many elderly, one of which is high blood pressure (hypertension) (Ministry of Health of the Republic of Indonesia, 2019) (Ministry of Health, 2019).

Hypertension is one of the degenerative diseases that need to be watched out for. Hypertension is often referred to as the silent killer, because it is a deadly disease, without being accompanied by its characteristic symptoms before entering a phase of complications (Manangkot & Suindrayasa, 2020). Data from Riskesdas (2018) Cit (Hidayat & Agnesia, 2021) shows the prevalence of hypertension in the population aged 18 years by 34.1%, aged 31-44 years (31.6%), aged 45-54 years (45.3%), aged 55-64 years (55.2%). From the data, it is said that the prevalence of hypertension in Indonesia is 31.7%, which means that almost 1 in 3 people aged 18 years and over suffer from hypertension. Hypertension in the elderly is a chronic disease that requires disease care management including regular blood pressure control and self-care behavior programs to prevent further complications such as stroke which is the largest cause of death for the elderly in Indonesia around 1.6% (Mulyati et al., 2015). Self-care behavior in hypertensive patients is a form of positive client efforts to optimize the health of the client, control and manage the signs and symptoms that appear, prevent complications, and minimize disturbances that arise in body functions (Winata et al., 2018). Self-Care Behavior in the elderly with hypertension consists of several components, namely the use of drugs, a low-salt diet, physical activity, smoking, weight management, and coffee consumption (Salami et al., 2017). In a study conducted by (Salami et al., 2017) that the elderly with hypertension had good self-care behavior as much as 63% and 37% with poor self-care behavior. Self-care behavior of hypertensive patients who are still low due to non-compliance with self-care behavior can have a bad impact on the health experienced by people with hypertension (Manuntung, 2018).

A preliminary study conducted by researchers by interviewing village health workers in the Integrated Health Care Center for the elderly in Turi Sub Dzistrict, Sukorejo district, found that there were 38 hypertensive elderly who actively came to the Integrated Health Care Center, 11 elderly (22%) still used medicines regularly, 12 elderly (25%) who participated morning exercise 3 times a week approximately, and those who still smoked as many as 29 people (60%), 25 people (52%) were obese and nearly 30 people (62%) were still drinking coffee.

Self-care behavior plays a very important role in carrying out chronic disease management activities, coping management, and managing conditions caused by chronic disease (Lee et al., 2010). Self-care behavior that is carried out effectively is useful for increasing patient satisfaction in living life, reducing treatment costs, increasing self-confidence, patient independence, and improving patient quality of life. The factors that influence the success of self-care behavior, namely the level of education and time living with diagnosed hypertension (Bhandari and Kim, 2016; Hanieh *et al*, 2019). Long time being diagnosed with the disease raises awareness of hypertension that the elderly consider hypertension as a serious disease that must be watched out for so that it becomes an important element in the elderly's readiness to carry out good self-care.

METHOD

This research was a correlation study with a cross-sectional approach where the dependent and independent variables observe at one time. The dependent variable in this study was self-care behavior. At the same time, the independent variables were level of education, Body Mass Index (BMI), and time living with diagnosed hypertension. The components of hypertension's self-care behavior measured were drug use, physical activity and physical exercise, low-salt diet, weight management, smoking habits, and coffee consumption. The study was conducted in the Integrated Health Care Center of the elderly, Srikandi, Turi Sub District, and Community Health Centers of Sukorejo, the working area from January to February 2022. The sample was hypertension sufferers who met the inclusion and exclusion criteria that had been calculated and obtained by as many as 38 respondents. This study used purposive sampling technique to determine the sample. The inclusion criteria were respondents who 60 years

old and over, could read and write, and elderly who were had good cognitive. The instrument used in this study was a H-SCALE questionnaire

modification. The collected data will be analyzed using Spearman Rank correlation analysis with a significance value of 0.05.

RESULT

Table 1: Distribution of Respondent Characteristic

No	Characteristic	Frequency (f)	Precentage (%)
1.	Gender		
	Male	18	47.4
	Female	20	52.6
	Total	38	100
2.	Level of Education		
	Primary Education	18	47.4
	Secondary and Further Education	20	52.6
	Total	38	100
3.	Body Mass Index (BMI)		
	Normal (18,5-24,9)	21	55.3
	Obesity (>24,9)	17	44.7
	Total	38	100
4.	Time living with diagnosed Hypertension		
	Short Duration (1 to 5 years)	20	52.6
	Intermediate Duration (6 to 10 years)	9	23.7
	Long Duration (more than 10 years)	9	23.7
	Total	38	100
5.	Self-care behavior		
	High	3	7.9
	Moderate	17	44.7
	Low	18	47.4
	Total	38	100

Table 1 shows that most of the respondents are female (52.6%), most of the respondents have secondary and further education (52.6%), almost all respondents have normal BMI (55.3%), 52.6% of respondents have a short duration (1 to 5 years) of time living with diagnosed hypertension, and most of the respondents have low self-care behavior (47.4%).

Table 2: Relationship between Level of Education and Self-Care Behaviour

Level of Education	Self-Care Behavior						Total	P-Value
	High		Moderate		Low			
	n	%	n	%	n	%	n	%
Primary Education	0	0.00	1	2.6	17	44.7	18	47.4
Secondary and Further Education	3	7.9	16	42.1	1	2.6	20	52.6
Total	3	7.9	17	44.7	18	47.4	38	100

Based on Table 2, the results show a correlation between the level of education and the self-care behavior of respondents (p-value: 0.008). The strength of the correlation between these two variables is low (r: 0.427).

Table 3: Relationship between Body Mass Index (BMI) and Self-Care Behaviour

Body Mass Index (BMI)	Self-Care Behavior						Total	P-Value	
	High		Moderate		Low				
	n	%	n	%	n	%			
Normal	1	2.6	10	26.3	10	26.3	21	53.3	0.810
Obesity	2	5.3	7	18.4	8	21.1	17	44.7	
Total	3	7.9	17	44.7	18	47.4	38	100	

Table 3 explained that there is no correlation between body mass index (BMI) and self-care behavior ($p > \alpha$).

Table 4: Relationship between Time living with diagnosed Hypertension and Self-Care Behaviour

Time living with diagnosed Hypertension	Self-Care Behavior						Total	P-Value	
	High		Moderate		Low				
	n	%	n	%	n	%			
Short Duration	0	0.00	6	15.8	14	36.8	20	52.6	0.000
Intermediate Duration	0	0.00	5	13.2	4	10.5	9	23.7	
Long Duration	3	7.9	6	15.8	0	0.00	9	23.7	
Total	3	7.9	17	44.7	18	47.4	38	100	

Table 4 shows $\alpha = 5\% = 0.05$, $p < \alpha$ which means H_0 is rejected, meaning that there is a correlation between time living with diagnosed hypertension and self-care behavior is shown with (p -value = 0.000) $p < 0.05$ and correlation coefficient $r = 0.605$ which means there is a moderate level of correlation.

DISCUSSION

Self-care behaviour is a treatment that uses a combination intervention of biological, psychological and social techniques to maximize the functioning of the self-care regulatory process used as a preventive strategy so that self-management is interpreted as daily individual tasks that must be taken to control or reduce the impact of disease on physical health status with the collaboration and guidance of doctors and other health care service providers (Manuntung, 2015). Based on table 1, it shows that most of the elderly are male, 20 (52.6%) respondents. Researchers argue that women are prone to hypertension due to the role of the hormone estrogen. Women at the age of more than 50 years begin to enter menopause, so there will be a sharp decrease in the hormone estrogen. This can cause arterial blood vessels to stiffen, as well as damage the cell layer of the vascular wall (endotyl), so that it can trigger plaque formation and activate body systems that can increase blood pressure. The same opinion was conveyed by R. Lima, M. Wofford, and J. F. Reckelhoff (2012) Cit (Astuti et al., 2021) who said that when women are over 60 years old, the risk of hypertension also increases. This is related to the condition of the esterogen hormone post-menopause.

In this study, it was found that the self-care behavior of hypertensive elderly was on average in the less category, namely 18 respondents (47.4%), in the sufficient category as many as 17 respondents (44.7%), and in the good category as many as 3 respondents (7.9%). This shows that there are still many hypertensive elderly who are lacking in self-care independently. Five of the six components of self-care behavior that are still lacking in hypertensive elderly include components of drug use, physical exercise, smoking, weight management, and consuming coffee. In the components of drug use, 28 respondents (73.7%) were found who did not take high blood pressure medications, did not take medication at the same time, and did not take medications according to the prescribed amount. Meanwhile, 10 respondents (26.3%) had taken high blood pressure medication, taken medication at the same time, and took medication according to the amount prescribed. This is due to the lack of information about adherence to the regular taking of the drug. Most respondents only take medicine if there are complaints of dizziness, or stiff nape so they take the medicine not every day. In the low-salt diet component, the average respondent has done well, namely, only 4 respondents (7.9%) have not done a low-salt diet properly. Most of the respondents still

like to eat cassava chips and processed products, eat instant food and add salt to food. Meanwhile, as many as 35 respondents (92.1%) have been on a low-salt diet such as limiting eating chips, eating vegetables and fruits, not eating preserved foods, and not adding salt when eating. In this section, the average respondent considered that a low-salt diet was only limited to the use of salt consumption, and preservatives containing sodium were considered not to affect the respondent's blood pressure.

This is in line with a study in China that states that the elderly with hypertension who are less able to carry out self-care behavior tend to experience an increase in blood pressure and causing complications and death. Lack of attention to self-care behavior in the elderly with hypertension is the main cause of failure to improve their quality of life (Romadhon, Haryanto, et al., 2020). Untreated hypertension can damage organs such as the heart, brain, kidneys, and eyes, and can cause premature death, causing lifelong inability to carry out activities (WHO, 2005). The management of hypertension is necessary to prevent the continuity and damage to the target organs for a long time so as to reduce pain and death.

Based on this study, the Spearman Rank correlation test showed that the factors related to self-care behavior were the level of education and time living with diagnosed Hypertension with a Sig (2-tailed) value of 0.008; 0.000 and the value of the correlation coefficient (Ro calculate) of 0.427; 0.605. Self-care behavior in hypertensive clients is influenced by several factors, namely family support, self-efficacy, personal factors, and spirituality. Personal factors that influence self-care behavior are socioeconomic status, education, knowledge, age increase, and perception of disease (Romadhon, Aridamayanti, et al., 2020).

From this study, it was found that time living with diagnosed hypertension has an effect on self-care behavior in the elderly with hypertension. time living with diagnosed hypertension was significantly associated with self-management behavior. time living with diagnosed hypertension is able to initiate and maintain healthy behavior changes while overcoming obstacles. Barriers perceived by the patient need to be considered when designing interventions based on the duration of diagnosis.

The most important prerequisite for behavior change is time living with diagnosed hypertension. Time living with diagnosed hypertension refers to a

person's confidence in carrying out certain activities, including the confidence to carry out activities when obstacles arise (Jung & Lee, 2017). Time living with diagnosed hypertension describes a belief in one's own abilities or is a person's belief that he or she can master a situation and produce a positive outcome. The longer the patient is diagnosed with hypertension, the easier it will be for individuals to solve problems in difficult circumstances. Patients who believe that they are capable of performing certain behaviors when they have been diagnosed with certain diseases for a long time are already accustomed to performing self-care behaviors. Meanwhile, newly diagnosed patients tend not to perform these behaviors or avoid them (Hu et al., 2015).

According to the opinion of the researcher, the duration of being diagnosed with the disease becomes one of confidence to carry out certain behaviors to achieve specific goals and develop confidence in the individual's ability to perform the behavior and to overcome obstacles to achieving these goals. The desired outcome is a person's belief that they will achieve positive health outcomes resulting from specific behavior.

CONCLUSION

We found that the self-care behavior level of hypertensive patients, in general, is an inadequate level of education, and time living with diagnosed hypertension was associated with self-care behavior. Based on this study, the Rank Spearman correlation test showed the factor that correlated with self-care behavior was level of education and time living with diagnosed hypertension with a Sig (2-tailed) value of 0.008; 0,000 with a correlation coefficient value of 0.427; 0.605. The correlation coefficient in the results above is positive so the relationship between the two variables is unidirectional.

SUGGESTION

The advice that can be given to Elderly Program Holders at Community Health Centers is to increase awareness of the elderly in self-care behavior by maximizing health counseling activities using the Elderly Health Book and socialization to regional nurses that the Elderly Health Book is not only used to monitor the health of the elderly but also for education about the health of the elderly. Then, the advice that can be given to the health Office is that it is expected to

allocate a budget for the procurement of the Elderly Health Book as a means of implementing self-care behavior health education. In addition, for the elderly so that their health of the elderly can be monitored, maintained, and improved. Finally, it is hoped that further researchers can examine other factors that affect self-care behavior, such as smoking habits in hypertensive elderly.

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CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

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