

## The Effect of Education on Self-Care Management in Hypertensive Elderly in the Bandung Health Center Area, Bandung District, Tulungagung Regency

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### ABSTRACT

The elderly are an economically unstable population when compared to those who are young, and it turns out that the more vulnerable are the elderly. Hypertension is a non-communicable disease, and this degenerative disease is widespread, has a very high mortality rate and affects the quality of life and productivity of a person. Self-care management is the ability of a person to participate in self-esteem activities to save one's life, improve, maintain one's health and well-being. The design of this study uses *an experimental* design with a *pre-experimental* approach. This study was conducted on 39 respondents using the *simple random sampling* method which was conducted in May 2022. Statistical test results using the *wilcoxon test* to analyze the effect of education on self-care management in hypertensive elderly obtained a significant value of  $p$  value (0.003) with  $\alpha$  (0.05) because  $p < \alpha$  there is an educational influence on self-care management in hypertensive elderly. Based on the results of this study shows the influence of education on self-care management in hypertensive elderly, and this education can be an effort by the elderly to find out and prevent hypertension with self-care management in hypertensive elderly.

**Keywords :** Elderly, Hypertension, Self-Care Management.

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### INTRODUCTION

The elderly are an economically unstable population when compared to those who are young. And it turns out that the more vulnerable are the elderly. (Tamher, 2019). Hypertension is a non-communicable disease, and this degenerative disease is widespread, has a very high mortality rate, and affects the quality of life and productivity of a person. High blood pressure is often referred to as *the Silent Killer* because this disease is a hidden killer. (Hasnawati, 2021)

It is estimated that 4,444 cases of hypertension in the world make up 22% of the total world population. About 2/3 of the people with hypertension come from lower middle class countries. (Ministry of Health RI, 2019). In 2015 it was estimated that 1 in 4 men and 1 in 5 women suffer from hypertension. (WHO, 2019). The prevalence of hypertension in Indonesia is 55.2% in the age group of 55-64 years, 63.2% in the age group of 65-74 years, and 69.5% in the age group of 75 years and over. Based on the results of Riskesdas 2018, the prevalence of patients with hypertension in East Java Province is 36.3%. The prevalence increases with age. Compared to Riskesdas 2013 (26.4%), the prevalence of hypertension increased significantly. At the age of  $\geq 18$  years, it is estimated that the number of sufferers in East Java Province is around 11,008,334 with men as much as 48.83% and women 51.17%. Of that number, 35.60% or 3,919,489 residents with hypertension received medical treatment

In Tulungagung, the number of people with hypertension is 17.05% of the total population aged >18 and above. (Dinkes Jatim, 2018). Research in Ethiopia on the self-care management of hypertension sufferers in 309 patients showed that the average hypertensive patient had poor self-care management. (Ademe et al., 2019). Meanwhile, research in Indonesia in the East Java Tulungagung region found that the self-care management of the elderly was lacking which showed that 85 elderly (77.3%) rarely had blood pressure checks, there were 41 elderly (37.3%) with blood pressure above the normal limit (>140-90 mmHg), there were 69 elderly (62.7%) rarely consuming antihypertensive drugs and still consuming salt. (Suciati & Rustiana, 2021). In the puskesmas area, most of the elderly experience hypertension, from the results of the survey conducted by the study, it was found that there was a lack of knowledge about self-care management such as self-integration, self-regulation, interaction with health workers, blood pressure monitoring and compliance with the recommended rules. (Amila et al., 2018)

The majority of people with hypertension feel uncomfortable depending on the signs and symptoms they feel at that time, without caring about more intensive and appropriate treatment. This condition can be caused by high blood pressure and a lack of general knowledge about proper and regular management. This high blood pressure causes serious health complications so that it can lead to an increased risk of heart disease, cerebrovascular disease and death. Blood pressure is the force exerted by the bloodstream against the walls of the arteries of the body that are the main blood vessels in the body. This pressure depends on the resistance of blood vessels and the functioning of the heart. The more blood is pumped, the narrower the heart and arteries. blood pressure will rise. (Alqornie et al., 2020)

This self-care management is used by people voluntarily by carrying out daily activities in order to maintain health and meet the needs of daily life. (Alligood, 2017). Hypertension self-care management is expected to increase knowledge about hypertension in the elderly and improve the attitude and compliance of the elderly to the treatment of hypertension. All can be applied by educating hypertensive patients with the aim of lowering blood pressure and risk factors for hypertension. (Fernalia, 2021). This self-care management of the elderly can be done by taking medication regularly, taking regular blood pressure measurements, increasing physical activity such as walking, reducing excessive salt consumption, and arranging dietary care for the elderly by consuming calcium and magnesium, and avoiding stress. This self-care management is the most dominant factor in the treatment of hypertension besides that it can also increase the knowledge of the elderly with hypertension to prevent stroke complications. (Suprayitno, 2020)

This study aims to determine the effect of education on self-care management in hypertensive elderly in the Bandung Health Center Area, Bandung District, Tulungagung Regency.

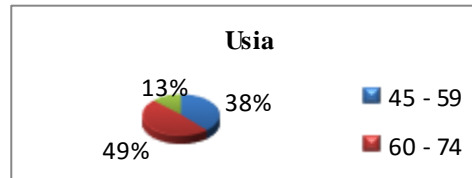
## METHOD

Experimental research design with a *pre-experimental approach*. The population in the study was 43 respondents. The sample size was 39 respondents. By using a *simple random sampling* technique. It was then tested using the *Wilcoxon Test*  $\alpha = 0.05$ . An independent variable in this research is the influence of education on self-care management. Meanwhile, the dependent variable is self-care management in hypertensive elderly people. The measuring instrument in this study used a questionnaire.

## RESULTS

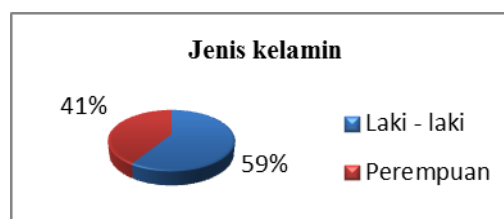
### Characteristics of Respondents

1. Diagram 4.1 Characteristics of respondents based on age in hypertensive elderly in the Bandung Puskesmas Area, Bandung District, Tulungagung Regency.



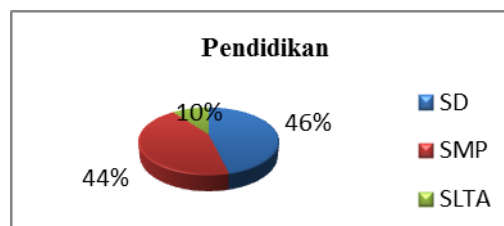
Source : Research questionnaire in 2022

2. Diagram 4.2 Characteristics of respondents based on gender in hypertensive elderly in the Bandung Puskesmas Area, Bandung District, Tulungagung Regency.



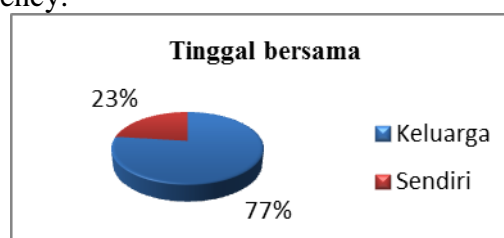
Source : Research questionnaire in 2022

3. Diagram 4.3 Characteristics of respondents based on education in hypertensive elderly in the Bandung Puskesmas Area, Bandung District, Tulungagung Regency.



Source : Research questionnaire in 2022

4. Diagram 4.4 Characteristics of respondents based on living together in hypertensive elderly in the Bandung Health Center Area, Bandung District, Tulungagung Regency.



Source : Research questionnaire in 2022

1. Table 4.5 Pre-education on self-care management in hypertensive elderly

No.	Pre-education	Sum	Percentage (%)
1	Less (<56 %)	18	46%
2	Enough ( 56% - 75%)	12	31%
3	Good (76% - 100%)	9	23%
	Total	39	100%

Source : Research questionnaire in 2022

Based on table 4.5, it shows that of the 39 respondents studied, most of the elderly knowledge before self-care management education was carried out, there were less than 18 respondents (46%).

2. Table 4.6 Post on self-care management education in hypertensive elderly

No.	Educational posts	Sum	Percentage (%)
1	Less (<56 %)	6	16%
2	Enough ( 56% - 75%)	13	33%
3	Good (76% - 100%)	20	51%
	Total	39	100%

Source : Research questionnaire in 2022

Based on table 4.6, it shows that of the 39 respondents studied, most of the elderly knowledge after self-care management education was carried out, there were 20 respondents (51%).

### Cross-Tabulation Between Variables

1. Table 4.7 Self-Care Management Education In Hypertensive Elderly

No.	Pre-education	Educational posts							
		Good		Enough		Less		Total	
		F	%	F	%	F	%	F	%
1	Good	20	51	0	0	0	0	20	51
2	Enough	0	0	13	33	0	0	13	33
3	Less	0	0	0	0	6	16	6	16
	Sum								100

Source : Research questionnaire in 2022

Based on table 4.7, the results of cross-tabulation of self-care management after being given education showed that half of the 39 respondents had high self-care management of 20 respondents (51%).

### Statistical Test Results

Table 4.8 Results of statistical tests using *Wilcoxon*

Statistical Test	P	A
<i>Kolmogorov Smirnov test</i>	.001	0,05
<i>Wilcoxon Test</i>	.003	

Based on table 4.8, a  $p$  value (0.003) with a  $\alpha$  (0.05), because  $p < \alpha$ ,  $H_1$  was accepted so that there was an influence of self-care management education on hypertensive elderly in the Bandung Health Center Area, Bandung District, Tulungagung Regency

## DISCUSSION

### A. Self-care for the elderly with hypertension before education is carried out in the Bandung Work Area, Bandung District, Tulungagung Regency

The results showed that self-care before being given self-care management education for hypertensive elderly people showed that almost all respondents had a level of self-care that was less than 18 people (46%) out of 39 respondents. Factors that can cause low self-care in respondents, namely education factors, showed that almost half of them had an elementary school education of 18 respondents (46%).

There are several factors that can affect self-care management, namely age, gender, ethnicity, marital status, occupation and education. This education is an important prerequisite for the self-care management of chronic diseases, where the level of education indicates the frequency of self-management. (Kurnia, 2020)

Based on the facts and theories above, researchers concluded that a person with low education has less broad insights which causes the person to tend to find it difficult to receive information related to treatment compliance, causing the person to tend to have a less favorable attitude towards self-care in self-care management in hypertensive elderly.

From the results of the study obtained before being given self-care management education in hypertensive elderly, namely self-integration, self-regulation, interaction with health workers, blood pressure monitoring and compliance with the recommended rules showed the category of less (<56%) as many as 18 people (46%), enough (56% - 75%) as many as 12 people (31%) and good (70% - 100%) as many as 9 people (23%)

Based on the theory, there are 5 behavioral factors of self-care management, namely self-integration, which refers to the ability to maintain the health of patients on a daily basis by applying healthy living principles such as regulating portions and food choices when eating, regulation, namely reflecting on behavior by observing the signs and symptoms felt by their body such as recognizing the signs and symptoms of low and high blood pressure, interactions with health workers, blood pressure monitoring such as controlling blood pressure when feeling sick and compliance with the recommended rules, namely patients routinely take antihypertensive drugs and go to the clinic every 1 – 3 months. (Kurnia, 2020)

Based on the facts and theories above, researchers concluded that before self-care management education was carried out in hypertensive elderly, most of the respondents could not avoid the habit of consuming food with food because they were used to consuming saturated fats, there were still many who consumed salt and knowledge related to the signs and symptoms of hypertension that they felt and the importance of interacting with health workers to control hypertension.

### B. Self-care for hypertensive elderly after education in Bandung Work Area, Bandung District, Tulungagung Regency

From the results of the study obtained after being given self-care management education for hypertensive elderly, namely self-integration, self-regulation, interaction with health workers, blood pressure monitoring and compliance with the recommended rules

showed the categories of less (<56%) as many as 6 people (16%), enough (56% - 75%) as many as 13 people (33%) and good (70% - 100%) as many as 20 people (51%)

There are 5 behavioral factors of self-care management, namely self-integration, which refers to the ability to maintain the health of patients on a daily basis by applying the principles of healthy living, regulation, namely contemplating behavior by observing the signs and symptoms felt by their body, interaction with health workers, monitoring blood pressure and obeying the recommended rules, namely patients routinely take antihypertensive drugs and go to the clinic every 1 – 3 months. (Kurnia, 2020)

Based on the facts and theories above, the researcher concluded that after conducting self-care management education on hypertension, respondents had often made regular visits to posyandu, consumed antihypertensive drugs and began to understand the importance of self-care management in hypertensive elderly such as reducing the consumption of saturated fats, avoiding alcohol drinks, regulating portions of food and consuming more vegetables and fruits. This is influenced by health information and education about self-care management behaviors so that respondents can change their habits.

### **C. The effect of education on self-care in the elderly hypertension education in the Bandung Work Area, Bandung District, Tulungagung Regency**

The results of cross-tabulation of self-care management in hypertensive elderly after being given education showed that half of the respondents had high self-care management of 20 respondents (51%). *Wilcoxon* statistical test results based on table 4.8 obtained  $p$  value (0.003) with  $\alpha$  (0.05), because  $p$  value <  $\alpha$  then  $H_1$  was accepted so that there was an influence of self-care management education on hypertensive elderly.

Self-care management is a personal activity designed to control symptoms, treatment management of lifestyle changes that are appropriate to physical and mental conditions and diseases to maintain life, health and well-being. The main goal of self-care is to enable the client to effectively manage his or her health on an ongoing basis. Managing self-care as a systematic intervention in chronic diseases means self-control and decision-making when planning treatment. (Kurnia, 2020)

Self-care management there are 5 behaviors, namely self-integration, self-regulation, interaction with health workers and others, blood pressure monitoring and compliance with recommended rules (Kurnia, 2020)

Based on the facts and theories above, the researcher concluded that, there were changes before self-care management education was carried out and after self-care management education was carried out where before education most of the respondents could not avoid the habit of consuming food with rice because they were used to consuming those that contain saturated fat, there were still many who consumed salt and knowledge related to the signs and symptoms of hypertension that they felt and the importance of interacting with health workers to control hypertension. And after being carried out, respondents have often made regular visits to posyandu, consumed antihypertensive drugs and began to understand the importance of self-care management in hypertensive elderly such as reducing the consumption of saturated fats, avoiding alcohol drinks, regulating portions of meals and consuming more vegetables and fruits. This is influenced by health information and education about self-care management behaviors so that respondents can change their habits.

## **CONCLUSIONS**

Self-care before being educated to hypertensive elderly in the Bandung Puskesmas Area, Bandung District, Tulungagung Regency showed that almost all respondents had a lack of level of self-care management.

Self-care after being educated to hypertensive elderly in the Bandung Puskesmas Area, Bandung District, Tulungagung Regency showed that some respondents had a high level of self-care management.



There is an influence of education on self-care management in the hypertensive elderly in the Bandung Puskesmas Area, Bandung District, Tulungagung Regency.

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