Research Article

The Effect Of Visual Media Education On The Level Of Knowledge Of The Elderly About The Prevention Of Hypertension

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ABSTRACT

Hypertension is high blood pressure whose systolic is more than 140 mmHg and diastolic is more than 90 mmHg. Hypertension in the elderly is mostly isolated systolic blood pressure (HST), with increased systolic blood pressure leading to an increased risk of myocardial infarction and stroke even when the diastolic is in the normal range. Prevention efforts are made by providing education about the prevention of hypertension to the elderly who have never experienced hypertension. This study aims to determine the effect of education through Visual media on the level of knowledge of the elderly about the prevention of hypertension. quantitative research using quasi experiment design, the design used is one group pre-test post-test design. Number of participants involved in this study was 55 participants and sampling in this study with Probability Sampling technique using multi stage random sampling method. Participants involved in this Reasearch were those who met the inclusion and exclusion criteria, namely the elderly who did not have a history of hypertension in the Selasari. This research was conducted in February - April 2024. The intervention was given after the participants filled in the queationer (pre test) and the measurement was carried out after the intervention was given in the form of filling out the questioner (post test). The measurement results were recorded in the observation sheet to be analyzed using SPSS Version 26 software with statistical tests. Data on participant characteristics are displayed in frequencies and percentages while the effect of the intervention is expressed in P-Value. The study states that there is an effect of education through visual media on the level of knowledge of the elderly about preventing hypertension with a significance value on the results of the Paired T-Test test obtained ρ-value (0.000) < α (0.05). Education through Visual Media affects the level of knowledge of the elderly about the prevention of hypertension.

INTRODUCTION

Data (WHO) the number of elderly people worldwide is about 994 million, where the average age of the elderly is 60 years, of which 621 million in 2014 and 600 million in 2015. 45 million people already suffer from hypertension, up from 703 million in 2015. 758 million in 2016 and 2017 (Suaib, 2019). In 2018, they were 9.27% of the population or 24.49 million elderly. The number increased from last year, which was only 8.97% (23.4 million) of the elderly in Indonesia (Restu Widianti et al, 2020). There has been a significant increase in the elderly population in most countries, including Indonesia. The proportion of the world's elderly population increased from 13.5% in 2010 to 14.9% in 2025, possibly increasing to 16.4% in 2030 (World Population Aging, 2017). This is based on the fact that longer life expectancy is associated with higher risk factors for various health problems. What usually happens in the elderly is that the body's resistance to external influences weakens, and the physical condition of the elderly becomes vulnerable to various diseases, so that the elderly are vulnerable to various diseases (Rasiman & Ansyah, 2020).

Hypertension is called a silent killer because it is a deadly disease without symptoms that its victims must be aware of, so it is too late for victims to realize that the disease is coming (Harjo et al, 2019).WHO data (2018) The prevalence of hypertension reaches 26.4% worldwide (972 million) with hypertension. By 2030 it is estimated that there will be an increase of 29.2% among 972 million people with hypertension, about 333 million in modern countries and about 639 million in developing countries.

According to (Rikesdas 2018), the rate of hypertension in Indonesia is 34.1%. This is up from the prevalence of hypertension in the initial health study from 2013 of 25.8%. West Java Province health records in 2019, the hypertension rate due to blood pressure measurement in 2019 was 41.6%, while the Risk in 2018 was 39.6%, an increase from the Risk results in 2013 of 29.4%. In 2016 in West Java there were 790,382 cases of hypertension (2.46%), and 8,029,245 cases were examined (Akbar, 2020).

Cases of high blood pressure in the elderly, and potentially fatal, require correct treatment and care, because hypertensive disorders are often not recognized because they do not show specific symptoms. In addition to the potential for death, high blood pressure also causes complications, especially for vital organs such as the brain, heart, kidneys, and so on (Imran, 2011).In an effort to prevent the increasingly serious effects of hypertension, nurses have an important role in controlling blood pressure reduction so that it does not adversely affect the health of the elderly. (Wayan, 2018)

Lack of knowledge affects the respondent's ability to prevent recurrence and take precautions to prevent complications. Knowledge is the result of human perception, or the result of someone using their senses to know something about an object (Firsia Sastra Putri, 2020). The elderly's lack of knowledge about hypertension has an impact on bad habits related to the treatment of high blood pressure. Older people continue to consume too much salt. The habit of drinking coffee is one example of a bad habit that is still being practiced. Lack of knowledge and bad lifestyle habits in elderly people with high blood pressure can affect their motivation to do a diet with high blood pressure (Firsia Sastra Putri, 2020).

Hypertension control can be done to prevent hypertension, one of which is education. Hypertension education is provided by using power point media and leaflets. Several studies have shown that education has a positive effect in reducing hypertension and increasing respondents' knowledge and attitudes. The global goal for 2025 is to reduce the prevalence of hypertension by 25%. Launched in 2016 by WHO and the US Center for Prevention and

Control (Global Heart Initiative) supports governments in efforts to prevent and treat cardiovascular disease (Adiatman, 2020).

Increased public understanding of hypertension prevention is expected to reduce morbidity and mortality due to hypertension. Lack of awareness or knowledge about the prevention of hypertension is still an obstacle to public understanding.

(Maulana, 2022). Researchers are interested in conducting research on "The Effect of Visual Education on Elderly People About Hypertension Prevention". By making a study that can provide education or information about hypertension, risk factors, causes and diet, it will help increase public understanding in efforts to promote and prevent hypertension.

METHOD

Quantitative research using the quasi experiment method. The design used was one-group preposttest design with 55 respondents. This research was conducted in the working area of the Selasari Health Center, Pangandaran Regency from February to April 2024. The instruments used were the respondent's consent sheet, leaflet sheet, questionnaire sheet, and power point. Education is given after the respondent fills out the questionnaire sheet (preetest). The measurement results were recorded in the observation sheet for analysis. The data entry and coding process was carried out in ms excel while the data analysis process used SPSS Version 26 software. The data analysis process used SPSS Version 26 software with paired t-test statistical test. Data on participant characteristics are displayed in frequency and percentage while the effect of the intervention is expressed in P-Value.

RESULTS

1. Respondent Characteristics

a. Characteristics of Respondents by Age

No.	Category	Frequency (n)	Percentage (%)
1.	Elderly (60-70 years old)	48	87,3
2.	Elderly (75-90 years)	7	12,7
	Total	55	100

In this characteristic, it was found that most of the respondents were in the elderly category aged around 60-74 years, namely 48 respondents (87.3%), and a small number of respondents in the elderly category, namely 7 respondents (12.7%).

b. Characteristics of respondents based on Gender

No.	Gender	Frequency	Percentage (%)
1.	Male	12	21,8
2.	Female	43	78,2
	Total	55	100

In this characteristic, it was found that the majority of respondents were female, totaling 43 (78.2%), while male respondents totaled 12 (21.8%).

c. Characteristics of Respondents Based on Education Level

No.	Education Level	Frequency	Percentage (%)
1.	Not in School	6	10,9
2.	Elementary	44	80
3.	Junior High	1	1,8
4.	High School	1	1,8
5.	College	3	5,5
	Total	55	100

Elementary school elementary school amounted to 44 respondents (80%). While a small proportion of respondents Elementary elementary school amounted to

44 respondents (80%). While a small proportion of respondents.

d. Characteristics of Respondents Based on Occupation

No.	Employment	Frequency	Percentage (%)
1.	Not Working	2	3,6
2.	Housewife	5	9,1
3.	Farmer	45	81,8
4.	Retired	3	5,5
	Total	55	100

In this characteristic, it was found that most of the respondents in this study worked as farmers, totaling 45 respondents (81.8%) and a small proportion of respondents in this study did not work. respondents (81.8%) and a small proportion of respondents in this study did not work, totaling 2 respondents (3.6%).

2. Computerized Results
a. Distribution of Elderly Knowledge About Prevention of Hypertension Before Given Education

No.	Knowledge Level	Frequency	Percentage (%)
1.	Less	39	70,9
2.	Enough	13	23,6
3.	Good	3	5,5
	Total	55	100

The distribution of knowledge before being given education obtained data on respondents 39 (70.9%), 13 (23.6%) respondents with sufficient knowledge, 3 (5.5%) respondents with good knowledge.

b. Distribution of Elderly Knowledge About Hypertension Prevention After Being Provided Education

No.	Knowledge Level	Frequency	Percentage (%)
1.	Less	3	5,5
2.	Enough	7	12,7
3.	Good	45	81,8
	Total	55	100

The distribution of knowledge after being given education obtained data on respondents with poor knowledge levels as many as 3 (5.5%), respondents with sufficient knowledge as many as 7 (12.7%) and respondents with good knowledge levels as many as 45 (81.8%).

c. Paired T Test Results

Research on 55 respondents who have done data testing using the Kolmogrov Smirnov test found normal distributed data (sig <0.05), so the computerized test used is the Paired T Test test.

Knowledge Level	Pretest		Post Test		Hasil Uji
	Frek	%	Frek	%	
Good	3	5,5	45	81,8	p-value 0,000
Enough	13	23,6	7	12,7	
Less	39	70,9	3	5,5	
Total	55	100	55	100	

Based on the table above, the general results of the level of knowledge of the elderly about preventing hypertension which was previously lacking 39 respondents (70.9%) remained to be lacking as many as 3 respondents (5.5%) after education, which was previously good 3 respondents (5.5%) increased by 45 respondents (81.8%) after education. previously good 3 respondents (5.5%) increased by 45 respondents (81.8%) after being given education.

While the paired t test obtained a value of t = -3.855 with a probability of ρ - value = 0.000. Because p - value <0.05, Ha is accepted, namely there is a change in respondents' knowledge before and after being given education about the prevention of hypertension, with a negative meaning of change between the level of knowledge of respondents before and after being given education. hypertension, with a negative meaning of change between the low level of knowledge before receiving education (pre-test) compared to the level of understanding after being given (post-

test). Therefore, there is an effect of education through leaflet and power point media on the level of knowledge of the elderly about preventing hypertension in the Selasari Health Center working area.

DISCUSSION

1. Level of Knowledge of Elderly People About Hypertension Prevention Before Being Given Education Through Visual Media

Based on the results of research from 55 respondents in the Selasari Health Center Working Area, after being given a questionnaire, it shows that most of the respondents 39 (70.9%) with a poor level of knowledge category when the respondents have not been educated about hypertension prevention.

In theory, a person's education affects his knowledge, namely the higher the education, the knowledge that the person has will increase, while the lower the education, the more limited the knowledge. Knowledge is a collection of information that is used and obtained through the life process and then used as a tool to regulate oneself and for the environment. (Edison, 2019).

The results showed that the majority of respondents with elementary school educational backgrounds were 44 (80%) out of 55 respondents. The results also showed that the majority of respondents in the elderly category aged around 60-74 years were 48 (87.3%) where this age is an advanced age. Age can affect a person's knowledge.

According to (Notoatmodjo, 2012 in Monoarfa et al, 2022) Age is a demographic variable that is used as an absolute measure or other psychological indicators, the more mature a person is, the more mature a person's strength in thinking and working. and work. However, the older a person is, the slower the thinking process becomes because it is influenced by several factors such as visual and hearing impairments, which cause the ability to think and work to decrease. (Manullang & Rosalina, 2021).

2. Elderly Knowledge Level About Hypertension Prevention After Given Education Through Visual Media

Based on the results of research from 55 respondents in the Selasari Health Center Working Area, after being examined, it showed that the majority of respondents 45 (81.8%) had a good level of knowledge after being given education about hypertension prevention.

Respondents with a high level of education will be more informed, so they know how to protect themselves and their health. Although now everyone, including those with low education, has a cellphone that can access the internet and use it to find information about diseases, it will be difficult for them to capture information that is trusted and difficult to apply in their daily lives. This study is in line with research conducted by (Manullang & Rosalina, 2021) entitled The Effect of Health Promotion with Leaflet Media on Increasing Knowledge of Hypertension Prevention in the Elderly in Kampung Sawah, North Jakarta, with the results that there are differences in knowledge in the intervention group before and after health promotion through health education and leaflets on increasing knowledge of hypertension prevention in the elderly.

3. Level of Elderly Knowledge about Hypertension Prevention Before and After Education Through Visual Media

The discussion of this study aims to make the data obtained can provide an overview of the effect of hypertension education on the level of knowledge of the elderly about the prevention of hypertension in the Selasari Health Center working area in March 2023. In general, almost most of the respondents as much as 70.9% had a poor level of knowledge before being given education, after being given knowledge education increased to a good category. While the difference in knowledge before and after being given education to 55

respondents with the Paired T Test test, the results obtained ρ - value 0.000.

Because ρ - value (0.000) < α (0.05), then Ha is accepted, so it can be concluded that there is an effect of education through leaflet and power point media on the level of knowledge of the elderly about preventing hypertension. While the value of T -3.855, means has a negative direction of influence, so it can be concluded that after education, the knowledge of respondents in this study is increasing.

In this study, educational activities on hypertension prevention through power point media and leaflets can be used to increase respondents' knowledge about hypertension prevention in the Selasari Health Center Working Area. The results of the study

The results showed that there was an effect of education through leaflet and power point media on the level of knowledge of the elderly about the prevention of hypertension.

The results of this study are in line with research (Dafriani et al, 2022), that there is an effect of health education on hypertension knowledge in the elderly before and after being given health education in the Working Area of the Basa Ampek Balai Tapan Health Center in 2021.

CONCLUSIONS AND RECOMMENDATION

Based on the results of data collection, processing and analysis related to "The Effect of Education Through Visual Media on the Level of Knowledge of the Elderly About Hypertension Prevention", it is concluded that:

1. The elderly's knowledge about preventing hypertension before being given education in the Selasari Health Center working area is mostly in the poor category as many as 39 respondents (70.9%).
2. The elderly's knowledge about the prevention of hypertension after being given education in the Selasari Health Center working area is the

majority in the good category as many as 45 respondents (81.8%).

3. There is an effect of education through leaflet and power point media on the level of knowledge of the elderly about the prevention of hypertension.

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