

Article

The Influence of Health Education on Self Care Management Knowledge in Hypertension Elderly in the Pkm Karawang Area

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Abstract: Background: Hypertension is a degenerative disease that you should be wary of, because it generally occurs without any signs and symptoms. Most self-care practices are less experienced by elderly patients, because at this age people have more difficulty in changing lifestyle. One of the factors to reduce the increase in the number of hypertension sufferers is by providing health education. To determine the effect of health education on knowledge of self-care management in hypertensive elderly in the PKM Karawang area.

Method: This research is quantitative research that is quasi-experimental in nature. In this study, the intervention provided was in the form of health education. 40 respondents were given intervention in the form of health education. This study used 1 intervention group without using a control group. The measurement results between the pre-test and post-test were compared to analyze whether there was an influence of health education on knowledge of self-care management in elderly people with hypertension.

Results: Almost all respondents, namely 39 people (97.5%) had poor knowledge about self-care management. Almost all respondents, namely 34 people (85%) had good knowledge about self-care management after being given health education.

Conclusion: There is an influence of health education on self-care management knowledge among hypertensive elderly in the PKM Karawang area.

Keywords: Health education, Leaflets, Hypertension, quasi-experimental, elderly people.

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1. Introduction

A Hypertension is a degenerative disease that you should be wary of, because it generally occurs without any signs and symptoms. If left untreated it can cause fatal complications such as stroke (51%) and coronary heart disease (45%) which are the highest causes of death [1] WHO data for 2019 shows that around 1.13 million people in the world experience hypertension and this is mostly experienced by low-income countries. Low levels of education, knowledge and income as well as little access to health education programs cause residents in low-income countries to have low knowledge of hypertension [2]. The prevalence of hypertension sufferers in Indonesia is a country with low income, reaching 34.1% with an estimated number of cases of 63,309,620 people [3]. Apart from that, in 2018, as many as 427,218 Indonesians died due to hypertension [4].

Hypertension cases in West Java Province experienced a gradual decline from 2015 to 2019, however, hypertension cases remained in third place in the top ten diseases most commonly suffered in all health centers in West Java Province. In 2015, the number of hypertension sufferers was recorded at 114,421 people. The decline occurred in 2019 with the number of primary hypertension sufferers reaching 60,665 people in all health centers in West Java Province.

One of the factors to reduce the increase in the number of hypertension sufferers is by providing health education. Counseling aims to change behavioral patterns of individuals, families and communities in fostering and maintaining healthy behavior and a healthy environment, as well as playing an active role in efforts to achieve optimal health [1].

Health education plays an important role, because currently there are many lifestyle changes in society, such as the habit of overeating, too much activity, smoking a lot, and not getting enough rest. The pattern and lifestyle of this disease causes the heart and blood vessels to attack human health, especially in people aged over 40 years, one of which is hypertension [4]. The success of a treatment therapy is not only determined by the correct diagnosis and drug selection, but also by the patient's knowledge to carry out the therapy. One effort to increase patient knowledge in treatment is carried out by providing health education. These health efforts focus on efforts to increase healthy behavior, encourage behavior that supports health, prevent disease, treat disease, and restore health. If hypertension sufferers have sufficient knowledge about hypertension and its treatment therapy, it is hoped that the healing and treatment therapy will be achieved well [5].

The increasing number of hypertension sufferers can be caused by the public's lack of knowledge about hypertension, resulting in poor hypertension management behavior. Behavior can be formed from knowledge and changes in attitudes, which are then implemented in behavior. In general, individuals who have poor knowledge about an object will have a poor attitude and poor behavior towards that object, and vice versa [6]. The research results of Istiqomah et al (2022) [1] state that there is an influence of education using WhatsApp-based leaflets on the self-care management behavior of hypertension sufferers. These results are in accordance with the theory which states that health education is a form of activity carried out to improve knowledge, attitudes and practices for individuals and groups so as to improve health [1].

Other research, namely by (Istiqomah et al., 2022) [1] states that socialization using Instagram media can increase awareness in improving certain health behaviors. Suprayitno & Damayanti (2020) [8] said that social media-based education in the form of a web containing videos increases understanding of health problems. Haldi et al (2020) [7] said that increasing awareness about the importance of hypertension self-care management can utilize educational methods in the form of motion graphics using YouTube, flyers or leaflets. The prevalence of hypertension increases if hypertension is not treated early. [9] stated that individuals who have risk factors for hypertension must be alert and make preventive efforts as early as possible. Individuals with heart disease are advised to carry out self-management as a way to manage disease in daily life [10]. Lin's research results revealed that a self-management program was developed to support patients with chronic diseases, one of which was hypertension [12]. Hae Ra stated that hypertension is a disease that can be controlled with self-care management [11].

Research conducted by Cahyani (2019) [11] states that self-care management is an individual's ability to maintain effective behavior including following diet and exercise, use of recommended medications, self-monitoring and emotional coping. Elderly people experience difficulty in carrying out self-care or self-care management for themselves which can reduce their health status. Lack of self-care management in elderly people with hypertension is considered normal, even though this can potentially cause complications in elderly people with hypertension [12].

Based on the results of the annual report at the Karawang Community Health Center in 2021, the top 10 diseases most frequently suffered by patients. Hypertension is the first order. Hypertension sufferers in 2021 consist of 5 age groups, namely the 20-44 year age group with 74 sufferers, the 45-54 year age group with 118 sufferers, the 55-59 year age group with 85 sufferers, the 60-69 year age group with 110 sufferers and the > 70 years old, there were 45 sufferers, and the largest number of cases were in RW 1, totaling 114 people, this is the basis for selecting the research location in RW 1, Karawang Village [3].

The age group that experiences the highest hypertension is the 45-54 year age group, which is included in the elderly category (elderly). Hypertension that lasts for a long time and does not receive regular treatment and control can harm sufferers and can even cause death. Hypertension risk factors can be controlled through behavior modification and controlling blood pressure which can help prevent and reduce complications such as heart, kidney, brain and eye complications [1].

Results of a preliminary study using the interview method of 10 hypertension sufferers in the Karawang Community Health Center working area. 7 hypertension sufferers said they did not control their blood pressure regularly, did not implement a strict low-fat and cholesterol diet and did not regularly undergo check-ups at health service centers. Meanwhile, the other 3 sufferers said they carried out regular controls,

adopted a low-fat diet, but did not know how to treat hypertension independently. Hypertension that cannot be controlled is caused by reduced physical activity, excessive salt consumption, a history of smoking, etc., which are the main risk factors for stroke. These risk factors can be controlled, among other things, by maintaining a healthy lifestyle which includes balanced nutrition, maintaining an ideal body weight, regular exercise, stopping smoking and avoiding alcohol consumption.

Research conducted by Istiqomah et al (2022) [1] shows that health education is one of the things that influences the self-care behavior of hypertension sufferers to prevent more serious conditions such as stroke. Education regarding self-care needs to be developed because it has a significant influence on changing the behavior of hypertensive patients. Barriers to knowledge to prevent hypertension include lack of information, belief in wrong risk behavior, irregular treatment, and lack of environmental support. Furthermore, increased self-care behavior in hypertensive patients can be caused by increased knowledge through health education.

Research regarding the influence of health education on knowledge of self-care management in hypertensive elderly has not been carried out much to date, even though education is very important in increasing knowledge about self-care management in hypertensive elderly. Thus, the author is interested in analyzing the influence of health education on self-care management knowledge in hypertensive elderly in the PKM Karawang area.

1.1. Research Purposes

To determine the effect of health education on knowledge of self-care management in hypertensive elderly in the PKM Karawang area

2. Research Methodology

This research design uses a cross sectional method, where this research only uses one time to measure or observe data on the independent and dependent variables only once at a predetermined time. In this study, the intervention provided in the form of health education will be given to elderly people with hypertension who are the research sample and then measured through a pre-test (measurement before the intervention) and post-test (measurement after the intervention). The measurement results between before and after will be compared to analyze whether there is an influence of health education on knowledge of self-care management in hypertensive elderly in the PKM Karawang area.

Sampling in this research was nonprobability sampling with a purposive sampling technique, namely a technique for determining samples that meet the criteria desired by the researcher. In this study, the sample size was 40 hypertensive patients who were Pronalis participants. Bivariate analysis in this study used a paired t test to determine the difference in scores between the pre-test and post-test as well as the effect of health education using leaflet media on self-care management of hypertension.

3. Research Result

This chapter presents the results and discussion of research, the data used in this research is primary data obtained from measurements and assessments of the influence of health education on knowledge of self-care management in elderly hypertension in the PKM Karawang area. The sample used in this research was 40 respondents. This research uses a cross sectional method, where this research only uses one time to measure or observe data on independent and dependent variables to obtain the effect of health education on knowledge of self-care management in the elderly with hypertension.

Table 1. Knowledge of self-care management before providing health education to hypertensive elderly in the PKM Karawang area

Knowledge	n	%
Good	1	2,5
Not Good	39	97,5
Total	40	100,0

Based on table 1, it can be seen that almost all respondents, namely 39 people (97.5%) have poor knowledge about self-care management.

Table 2. Knowledge of self-care management after providing health education to hypertensive elderly in the PKM Karawang area

Knowledge	n	%
Good	34	85
Not Good	6	15
Total	40	100,0

Based on table 2, it shows that almost all respondents, namely 34 people (85%) have good knowledge about self-care management after being given health education.

Table 3. The influence of health education on knowledge of self-care management in hypertensive elderly in the PKM Karawang area

Knowledge	Good		Not Good		Total		p-value
	n	%	n	%	n	%	
Pre	1	3	39	97	40	100	0,001
Post	34	90	6	10	40	100	

Based on table 3, it shows that there is a significant change between the pre-test and post-test in hypertensive elderly in the PKM Karawang area with the results of the paired t test obtaining a p-value of 0.001 or greater than the alpha value of 0.05, which means that there is an influence of health education on self-knowledge. care management for hypertensive elderly in the PKM Karawang area.

4. Discussion

4.1. Description of self-care management knowledge before health education is given to hypertensive elderly

In this study, the intervention provided in the form of health education will be given to elderly people with hypertension who are the research sample and then measured through measurements before the intervention and measurements after the intervention. The measurement results between before and after will be compared to analyze whether there is an influence of health education on knowledge of self-care management in hypertensive elderly in the PKM Karawang area. This research is in line with research by Suprayitno & Damayanti (2020) [8] regarding knowledge and self-care for managing hypertension in Timorese tribal communities. Knowledge is an important area that shapes human behavior. Compared with behavior without knowledge, knowledge-based behavior will be more consistent. This knowledge can influence hypertensive patients in making efforts to control blood pressure [1].

The age categories of respondents in this study were in the early elderly and late elderly categories with the youngest age range being 44 years and the oldest 75 years. According to Widyaningrum et al (2019) [9] respondents are susceptible to increased blood pressure, due to the aging process at that age. The aging process has an impact on changes in heart contractility and blood vessel elasticity. These changes cause the need for higher pressure to squeeze blood throughout the body and return blood to the heart. The results of the study show that age has a significant relationship with the occurrence of hypertension, as age increases, blood pressure will increase by 80% [9]. The research results show that there are still many research respondents who have elementary school education. A low level of education will be followed by a decline in a person's level of health, because a person's knowledge is sufficient to prevent hypertension [1].

4.2. Description of self-care management knowledge after being given health education to hypertensive elderly

Based on table 2, it shows that almost all respondents, namely 34 people (85%) have good knowledge about self-care management after being given health education. The health education carried out was using the leaflet method regarding self-care management of hypertension. This outreach aims to provide knowledge about self-care management of hypertension to the public so that people can make efforts to treat hypertension.

Information obtained from counseling can have a short-term influence so that it can produce changes or increases in knowledge [1].

The success of a treatment therapy is not only determined by the correct diagnosis and drug selection, but also by the patient's knowledge to carry out the therapy. One effort to increase patient knowledge in treatment is carried out by providing health education. These health efforts focus on efforts to increase healthy behavior, encourage behavior that supports health, prevent disease, treat disease, and restore health. If hypertension sufferers have sufficient knowledge about hypertension and its treatment therapy, it is hoped that the healing and treatment therapy will be achieved well [7].

The increasing patient knowledge about self-care management of hypertension will encourage someone to behave better in controlling hypertension so that their blood pressure remains under control. The patient's knowledge about hypertension also influences patient compliance in carrying out treatment. As knowledge about hypertension increases, management of the disease can be carried out so that patients become better [6]. Good knowledge about hypertension can influence people's behavior in preventing hypertension [5]. Health education plays an important role, because currently there are many lifestyle changes in society, such as the habit of overeating, too much activity, smoking a lot, and not getting enough rest. The pattern and lifestyle of this disease causes the heart and blood vessels to attack human health, especially in people aged over 40 years, one of which is hypertension [7].

The research results of Suprayitno & Damayanti (2020) [8] state that there is an influence of education using WhatsApp-based leaflets on the self-care management behavior of hypertension sufferers. These results are in accordance with the theory which states that health education is a form of activity carried out to improve knowledge, attitudes and practices for individuals and groups so as to improve health [3].

The results of this study showed that almost all respondents, namely 34 people (85%) had good knowledge about self-care management after being given health education. Based on the results of the analysis of respondents' post-test answers, questions number 1, 2, 15, 16, and number 25 were answered 100% correctly by respondents. Question number 1 is "Hypertension is a disease where blood pressure reaches $\geq 140/90$ mmHg". Question number 2 is "Hypertension can cause stroke". Question number 15 is "Eats high in fruit, high in vegetables and low-fat dairy products are foods that are recommended for hypertension sufferers." Question number 16 is "Salty food can cause hypertension". Question number 25 is "Hypertension affects heart and kidney function". According to researchers, the high level of correctness of respondents in answering the post test was due to the health education given to respondents that succeeded in increasing the respondents' knowledge

The results of the analysis of 1 respondent with poor knowledge showed that the respondent was elderly, namely 65 years. Age is one of the main factors that influences a person's ability to receive and absorb information. The older a person is, the lower their ability to receive and understand information. This is the reason why 6 people after being given the intervention did not experience an increase in knowledge.

Based on the research results, it was concluded that almost all respondents, namely 34 people (85%) had good knowledge about self-care management after being given health education. In line with the theory according to (Haldi et al., 2020) [7]. Knowledge or cognitive ability is a very important dominant factor in shaping a person's actions (over behavior). Behavior that is based on knowledge will be more lasting than behavior that is not based on knowledge, and knowledge is influenced by age.

4.3. The influence of health education on knowledge of self-care management in hypertensive elderly in the PKM Karawang area.

Based on table 3, it shows that there is a significant change between the pre-test and post-test in hypertensive elderly in the PKM Karawang area with the results of the paired t test obtaining a p-value of 0.001 or greater than the alpha value of 0.05, which means that there is an influence of health education on self-knowledge. care management for hypertensive elderly in the PKM Karawang area.

The results of this research are supported by research by Istiqomah et al (2022) [1] which shows that there is a significant difference between the final level of knowledge and the initial level of knowledge in respondents who received education or health counseling. Health education is an activity that can influence changes in respondent behavior, one of which is changes in knowledge. By providing health education, respondents receive learning that results in a change from previously not knowing to knowing and previously not understanding to understanding [2].

Research conducted by Istiqomah et al (2022) [1] states that self-care management is an individual's ability to maintain effective behavior including following diet and exercise, use of recommended medications, self-monitoring and emotional coping. Elderly people experience difficulty in carrying out self-care or self-care management for themselves which can reduce their health status. Lack of self-care management in elderly people with hypertension is considered normal, even though this can potentially cause complications in elderly people with hypertension [3].

The measurement results between knowledge results before and after the intervention will be compared to analyze whether there is an influence of health education on knowledge of self-care management in hypertensive elderly in the PKM Karawang area. Education using the leaflet method is more effective than coercion in increasing health knowledge. This is because the leaflet method is considered more effective for use with patients but often causes boredom if the material presented is less interesting and the writing is too long [3].

During the pre-test, most respondents answered incorrectly on questions number 9, 10, 13, 14, and question number 16. Meanwhile, during the post-test, only 35% of respondents answered incorrectly on questions with these numbers. Questions number 9 to number 16 are questions related to signs and symptoms of hypertension, management of hypertension and prognosis of patients suffering from hypertension. Apart from that, the post test results showed that almost all respondents, namely 34 people (85%) had good knowledge about self-care management after being given health education. Based on the results of the analysis of respondents' post-test answers, questions number 1, 2, 15, 16, and number 25 were answered 100% correctly by respondents. This shows that after the intervention the majority of respondents experienced an increase in knowledge about hypertension.

The results of further analysis of the respondents' answers showed that in the pre-test results the respondents got the lowest score on question number 10 regarding "Hypertension is an increase in blood that does not persist", of the 40 respondents only 3 answered correctly. Next is question number 14, namely "Hypertension can be cured", which was answered correctly by one respondent. Furthermore, question number 21 was about "The chemical content in cigarettes does not affect blood vessels", this question was answered correctly by 8 respondents.

In the post test results, there was an increase in knowledge which was seen from the increase in the number of respondents who answered correctly. In the results of the analysis of post test answers, 5 questions were obtained which were answered correctly by all respondents, namely question number 1 regarding "Hypertension is a disease where blood pressure reaches 140/90 mmHg". Question number 2 is about "Hypertension can cause stroke". Question number 12 is "Excessive alcohol and coffee consumption can cause hypertension." Question number 15 is "Foods high in fruit, high in vegetables and low-fat dairy products are recommended foods for hypertension sufferers." Next is question number 16 regarding "Salty foods can cause hypertension". This question was answered correctly by 40 respondents (100%).

Based on the researcher's assumptions, there are differences in the results of measuring knowledge between the respondents studied, this shows that there are differences in respondents in the process of obtaining information, the transformation process and the evaluation process. These differences can be caused by differences in the level and type of work held by respondents. Education means guidance that someone gives to others so they can understand something. It cannot be denied that the higher a person's education, the easier it is for him to receive information, and in the end the more knowledge he will have. On the other hand, if someone has a low level of education, it will hinder the development of that person's attitude towards newly introduced information and values. The work environment can enable a person to gain experience and knowledge, both directly and indirectly. Based on the discussion above, it can be concluded that the level of knowledge of respondents regarding hypertension self-care management is mostly good, namely 34 people. This can be influenced by educational factors, mostly middle school and elementary school. In addition, the low level of knowledge about hypertension is caused by low sources of information and the variety of respondents' types of work.

Based on the results of data analysis, most of the respondents who had good knowledge were respondents with low education (78.2%). Education is one of the factors that influences a person's knowledge. The higher a person's level of education, the better their knowledge will be, so that this has an impact on increasing one's potential to maintain, maintain and improve one's health. However, a low level of education does not preclude the possibility of these people accessing various information from available public media [7].

According to research conducted by Sari et al (2018) [2] regarding the influence of hypertension education on the risk behavior of hypertensive patients, the results of the counseling had an influence on behavior regarding hypertension including self-care management of hypertension ($0.014 < 0.05$) which was also strengthened by the average pretest results regarding hypertension (15.90) while the posttest average was (17.53).

Management for hypertensive patients begins with non-pharmacological therapy, namely lifestyle modification which is closely related to nutrition and diet [11]. If the blood pressure target is not achieved in 4-6 weeks, pharmacologic therapy will be applied. Thus, every time you provide education and counseling to pre-hypertensive and hypertensive patients, you need to understand new recommendations regarding comprehensive hypertension management so that the goals of diet therapy can be achieved [1].

Efforts to prevent and control hypertension can be carried out through education because education is needed to obtain information, which supports health so that it can improve the quality of life, but family support is also very necessary to support sufferers' compliance in coming for treatment [10]. The results of this study are in accordance with research by Widyaningrum et al (2019) [9] which states that hypertensive patients still find it difficult to manage their diet, physical activity, stress, alcohol intake and smoking habits even though they are aware that they have been diagnosed with hypertension. The results of research related to self-regulation show that respondents fall into the high self-regulation category. According to researchers, the average hypertension sufferer has been diagnosed with hypertension for a long time so they understand the signs and symptoms and know the causes related to changes in blood pressure and take action based on their observations.

This assumption is supported by self-management theory which states that the theories that maintain the success of self-management, one of which is perceived control which is defined as a person's belief in being able to determine his own internal circumstances and habits, influence him. environment, and/or expected goals [8]. Self-regulation reflects the patient's behavior through self-monitoring of symptoms and actions based on his observations. According to researchers, how to determine which self-management is good and bad, how hypertensive patients behave and whether patients are able to change or modify self-management behavior, for example by being able to understand the goals of self-management, for example. knowing what therapy to do, what foods to avoid. Providing stimulation to change a person's thought patterns, attitudes and behavior with the aim of becoming better, for example by practicing music or making oneself relaxed and happy so that it will change the heart and soul to be happy.

Based on the research results, it was concluded that there was an influence of health education on knowledge of self-care management in hypertensive elderly. According to the researchers' assumptions, if someone has good knowledge about hypertension self-care management, such as knowing the impact of not taking medication, then hypertension sufferers will try as much as possible to avoid complications from hypertension by taking a little time to go out regularly. go to the health center or hospital and take medication regularly. regular. This is supported by Khomsatun & Sari (2022) [6] did, namely that respondents with high and low levels of knowledge both wanted to recover from hypertension.

5. Conclusion

Almost all respondents, namely 39 people (97.5%) had poor knowledge about self-care management. Almost all respondents, namely 34 people (85%) had good knowledge about self-care management after being given health education. There is an influence of health education on knowledge of self-care management among hypertensive elderly in the PKM Karawang area.

Conflicts of Interest: Write conflict of interests or write "The authors declare that they do not have any conflict of interests."

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