Health Education about Self-Management of Elderly with Hypertension in the Wesabbe Complex Working Area of Tamalanrea Makassar Health Center

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Health Education about Self-Management of Elderly with Hypertension in the Wesabbe Complex Working Area of Tamalanrea Makassar Health Center

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Abstract: *Hypertension is a growing epidemic in the United States, with more than 40% of adults aged 45-64 years and more than 70% of adults aged 65 years and older diagnosed with this condition. Hyperglycemia and high cholesterol contribute to damage to blood vessel walls which triggers hypertension. Physical damage due to hypertension is cumulative, so compliance with treatment is the key to preventing serious illnesses such as end-stage kidney disease. In an effort to improve self-management of elderly people with hypertension, health education activities were carried out at the Wesabbe Complex, working area of the Tamalanrea Community Health Center, Makassar, involving 30 participants. The activity lasted for two days and included lectures, discussions, distribution of leaflets, and blood pressure checks. The results showed an increase in self-management, where before the activity, 66.7% of participants had poor self-management, but after education, 86.7% of participants showed a significant increase in self-management. The evaluation showed an increase in participants' knowledge in hypertension management, including the ability to control blood pressure and recognize signs of increased blood pressure. Conclusion: Health education has proven effective in improving self-management of elderly people with hypertension, which has an impact on increasing their ability to control blood pressure and make health decisions independently. It is recommended that more adequate facilities and infrastructure be provided to support activities to improve public health in the Wesabbe Complex in the Tamalanrea Makassar Health Center Working Area.*

1. INTRODUCTION

The main physiology of the heart is to maintain hemeostasis by pumping O2-rich blood in the circulatory system to the body's cells along with food substances and removing metabolic waste. Blood circulation in the fetustung is called the cardiac circulationinfluenced by the transfer of electrical impulses from the base to the heart effect. Apart from that, sodium and potassium make the heart move systolic and diastolic, each contraction produces 70 ml of blood (stroke volume), the amount of blood pumped in one minute.(Sutanta, 2021). In regulating blood pressure, the hemodynamic system is played by changes in hosmotic pressure and hydrostatic pressure, both intravascular and extravascular. The main role of sodium levels is directly influencing the osmotic value of fluids, thereby influencing the

process of aldosterone and hormone secretionanti-juretic kThese two hormones will affect blood volume and blood pressure (Sutanta, 2021). Under normal circumstances the amount of blood pumped by the right ventricle and left ventricle is the same so there is nothere will be hoarding vThe volume of blood pumped by the ventricles per beat is calledstroke volume or stroke volume tNot all the volume of blood in the ventricles is expelled during contraction, but only about 70 mils are expelled and 50 mils remain. Hypertension is called the silent killer because it often does not cause symptoms and tends to be left uncontrolled, but persistently high blood pressure can cause complications such as retinopathy, thickening of the heart walls, kidney damage, coronary heart disease, rupture of blood vessels, stroke, and can even cause death.(Sriwahyuni & Nour Sriyanah, 2023). Hyperglycemia and cholesterol are factors that trigger damage to the walls of blood vessels which can ultimately lead to hypertension(Reanita et al., 2022)A person is diagnosed with hypertension when the results of the systolic blood pressure (BP) measurement are ≥ 140 mmHg and/or the diastolic blood pressure (TTD) is ≥ 90 mmHg after repeated blood pressure checks. The results of this measurement apply to all individuals/patients aged > 18 years. Hypertension or high blood pressure is a condition where there is an increase in blood pressure above the normal threshold of 120/90 mmHg.(Hidayati et al., 2022)

Hypertension is a growing epidemic in the United States, according to the Centers for Disease Control and Prevention, more than 40% of adults aged 45-64 years and more than 70% of adults aged 65 years and over are diagnosed with hypertension, the physical damage from hypertension is cumulative, so that adherence to treatment becomes an important health behavior in preventing more serious diseases such as end-stage kidney disease, heart failure and stroke(Kang et al., 2020)with a more active lifestyle and wanting to try, everyone regardless of age can minimize or prevent and overcome the problems they experience(Milroy & Neil, 2000), such as health problems, both acute and chronic diseases, by instilling obedient and obedient attitudes such as taking and taking medication on time, actively doing physical activities or exercising, consulting health services, the ability to seek treatment information, following the recommended diet and other things that are considered to be ways or beliefs in dealing with health problems(Kara, 2017). As you get older, the risk of experiencing hypertension becomes greater. In old age, the majority of cases found are increased systolic blood pressure. This causes structural changes in large blood vessels so that the lumen becomes narrower and the blood vessel walls become stiffer(Kalehoff & Oparil, 2020).

Based on data from the South Sulawesi Provincial Health Service in 2020, it is found in the cityMakassaras many as 290,247 cases.because it does not cause symptoms and tends to be left uncontrolled which can cause sudden death. Apart from that, it is also a multifactoral disease caused by various individual factors such as age, gender, genetic factors. (Susanti et al., 2019),Data from the Makassar City Health Service states that hypertension is 2nd out of the 10 most common diseases. The prevalence of hypertension in Makassar City in 2016 reached 27.61% while the mortality rate reached 18.6%.4 The latest data shows that the number of hypertension sufferers reached 35.7% of the total morbidity due to non-communicable diseases.(Sakinah et al., 2020).

The results of preliminary studies carried out by patients with a history of blood pressure above 140/90 mmHg or indications of hypertension. The results of interviews with health workers on duty said that the average age of members was in the range of over 50 years and above who were unable and did not understand how to regulate daily lifestyles to prevent complications and lack of exposure to information about preventing hypertension. From this background we felt it is necessary to carry out Community Service regarding Health Education Self-management of elderly people with Hypertension in families in the Wesabbe Complex, Tamalanrea Makassar Health Center Working Area

2. ACTIVITY IMPLEMENTATION METHOD

The community service activity method used is to create a class of training participants and cadres using the method:

1. Theory Learning: Lectures and question and answer discussions by distributing leaflets
2. Practical Learning : Blood pressure checks in the elderly are carried out after joint counseling with cadres and lecturers

The targets for this community service activity are 30 elderly people with a history of hypertension who are in the Wesabbe Complex in the Tamalanrea Makassar Health Center Working Area. The steps for implementing community service activities are carried out in three stages, consisting of:

Preparatory stage

At this stage the team made preparations which included coordinating with the health team from the community health center and cadres in the Wesabbe Complex in the Tamalanrea Makassar Community Health Center Working Area to prepare pre-activities which included targets, place and time

Implementation stage

Service activities Before carrying out the blood pressure checking activity, a lecture and questions and answers were first given about hypertension starting from the definition of hypertension, causes, signs and symptoms that occur, treatment of hypertension, then to assess knowledge and understanding about hypertension, questions and answers and examinations were carried out. participant blood pressure.

Evaluation Stage

At the second meeting, a short-term evaluation was carried out, with indicators of success after carrying out community service in the form of carrying out activities and participants gaining information on knowledge and skills about hypertension.

3. RESULTS AND DISCUSSION

Description of Activity Implementation

This activity was carried out in the Wesabbe complex in the working area of the Tamalanrea Health Center, Makassar with a total of 30 participants, which lasted for two days. Before carrying out the activity, they first coordinated with health workers and cadres and related officials in the Wesabbe complex, the working area of the Tamalanrea Public Health Center, Makassar. These cross-sectors really welcome the community service activities that will be carried out, the core activity is an explanation of hypertension material in the elderly, followed by checking blood pressure in the elderly.

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Picture. 1. Implementation of Activities

Overview of Target Characteristics

Table 1. Frequency Distribution Based on Respondent Age

Age	Frequency (n)	Percentage (%)
40-50 Years	6	20.0
51-60 Years	13	43.3
> 60 Years	11	36.7
Total	**30**	**100.0**

Based on Table 1, it shows that of the 30 respondents, the age frequency distribution of respondents showed that 6 respondents (20.0%) had an age range of 40-50 years, 13 respondents (43.3%) had an age range of 51-60 years and 11 respondents (36, 7%) have an age range of > 60 years.

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Table 2. Frequency Distribution Based on Respondent's Gender

Gender	Frequency (n)	Percentage (%)
Man	14	46.7
Woman	16	53.3
Total	**30**	**100.0**

Based on Table 2, it shows that of the 30 respondents, the gender frequency distribution of respondents showed that 14 respondents (46.7%) were male and 16 respondents (53.3%) were female.

Table 3. Frequency Distribution Based on Respondents' Educational Level

Level of education	Frequency (n)	Percentage (%)
elementary school	8	26.7
junior high school	4	13.3
high school	11	36.7
College	7	23.3
Total	**30**	**100.0**

Based on Table 3, it shows that of the 30 respondents, the frequency distribution of the respondents' education levels showed that 8 respondents (26.7%) had elementary school education, 4 respondents (13.3%) had junior high school education, 11 respondents (36.7%) had high school education and 7 respondents (23.3%) have a college education.

Table 4. Frequency Distribution Based on Respondents' Length of Suffering

Long Suffering	Frequency (n)	Percentage (%)
1-6 Months	11	36.7
7-12 Months	8	26.7
13-18 Months	2	6.7
19-24 Months	5	16.7
> 24 Months	4	13.3
Total	**30**	**100.0**

Based on Table 4, it shows that of the 30 respondents, the frequency distribution of respondents' long suffering was found to be 11 respondents (36.7%) who had a long suffering range of 1-6 months, 8 respondents (26.7%) had a long suffering range of 7-12 months, 2 respondents (6.7%) had a long suffering range of 13-18 months, 5 respondents (16.7%) had a long suffering range of 19-24 months and 4 respondents (13.3%) had a long suffering range of > 24 months.

Table 5. Frequency Distribution Based on Respondents' Comorbidities

Concomitant Diseases	Frequency (n)	Percentage (%)
There is	14	46.7
There isn't any	16	53.3
Total	**30**	**100.0**

Based on Table 5, it shows that of the 30 respondents, the frequency distribution of comorbidities among respondents showed that 14 respondents (46.7%) had comorbidities and 16 respondents (53.3%) did not have comorbidities.

Table 6. Frequency Distribution Based on Pre-test to Improve Respondents' Self-Management

Pre-test	Frequency (n)	Percentage (%)
Not enough	20	66.7
Tall	10	33.3
Total	**30**	**100.0**

Based on Table 6, it shows that of the 30 respondents, the frequency distribution of Pre-test Improving Self-Management of respondents showed that 20 respondents (66.7%) were low in self-management and 10 respondents (33.3%) were high in self-management.

Table 7. Frequency Distribution Based on Post-test on Improving Respondents' Self-Management

Post-test	Frequency (n)	Percentage (%)
Not enough	4	13.3
Tall	26	86.7
Total	**30**	**100.0**

Based on Table 7, it shows that of the 30 respondents, the frequency distribution of Post-test Improving Self-Management of respondents showed that 4 respondents (13.3%) were low in self-management and 26 respondents (86.7%) were high in self-management.

1. Overview of Elderly Knowledge About Hypertension

In general, the results of this service activity were from 30 respondents. The pre-test frequency distribution for Improving Self-Management showed that 20 respondents (66.7%) were lacking in self-management, but after being given health education about self-

management of elderly people with hypertension, changes occurred in which 26 respondents (86, 7%) high in self-management. This includes the success of the target number of health education participants who are planned to influence other people, whether individuals, groups, or society, so that they do what is expected by the perpetrators of health education or promotion. In carrying out this activity, data was obtained regarding increased knowledge and changes in behavior to better understand and be able to carry out self-management such as controlling blood pressure, complying with treatment both pharmacological and non-pharmacological, which can be done independently by the patient at home. Previous studies describe the causal and independent impact of education on hypertension and blood pressure and outline cardiometabolic mediators as priority targets for the prevention of hypertension caused by low education(Wang et al., 2023). Treating hypertension is a long-term process that requires collaboration between doctors and patients, and blood pressure variability is closely related to clinical prognosis(Li et al., 2023)thus the proposed blood pressure target values in 24-hour ambulatory blood pressure monitoring in clinical practice (Lewandowska et al., 2023) The fact that measuring blood pressure at home can improve treatment compliance and that recording patient HBPM (Home Blood Pressure Monitoring) can motivate doctors to provide more active treatment (Kim & Shin, 2023) However, it is also necessary to pay attention to an important part of preventing hypotension, namely accurate and strict blood pressure monitoring (Bergholz et al., 2023) Regular exercise can help lower blood pressure, increase fitness and improve the body's metabolism which can control blood pressure (Noyumala, Sri Darmawan, Sriwahyuni, 2021). The important role of this community service activity is to increase knowledge, especially about hypertension, as a way to reduce and control the blood pressure of the elderly while always remaining in a stable condition.

2. Activity Evaluation

In general, the data obtained from all participants supports the implementation of community service. This can be proven by the high enthusiasm of the community, especially among residents with a history of hypertension, based on participant demographic data with dominant age characteristics, namely 13 respondents (43.3%) with an age range of 51- 60 years old, 16 respondents (53.3%) were female, 11 respondents (36.7%) had a high school education, 11 respondents (36.7%) had a duration of 1-6 months, 16 respondents (53.3%) do not have comorbidities. and from the evaluation results, participants said that those who took part in health education about hypertension experienced an increase in knowledge, especially management of hypertension and treatment if signs and symptoms occur and psychologically

felt calmer and more relaxed because they were able to control blood pressure so that it remained in a stable condition. Achievements in this education are expected to allow the public to recognize and treat disease incidents more quickly so that forms of prevention so that complications do not occur can be carried out very well.(Sriwahyuni, Sri Darmawan, 2022)

3. Limitations

The limitations of this activity are as follows:

a) The number of targeted participants is still small so not all elderly people with hypertension can attend due to health conditions and the distance to the activity location is far so that only those who attend are located around the location.

b) The location used to carry out counseling and measure blood pressure is Baruga Al.Falah which is in the Wesabbe complex as a means and facility that can be used by residents for every activity.

4. Continuation of Activities

Based on the results of the evaluation of the activities, it was found that the yoga training participants were able to do it independently and with unlimited time, it could be done at any time, so that the next stage that was planned was to plan training in basic yoga movements based on the needs and conditions of the community, especially diabetic women. mellitus in the working area of the Tamalanrea Makassar Community Health Center to carry out physical activity activities, yoga practice every week or weekend as a way to maintain and increase the body's endurance so that it remains in a healthy condition.

4. CONCLUSION AND SUGGESTIONS

Based on the results of activities and several previous studies, it can be concluded that participants who took part in community service by providing health education about hypertension accompanied by taking blood pressure measurements 100% experienced changes in knowledge, one of which was being able to control blood pressure and already knowing the signs and symptoms felt if pressure their blood pressure increases and they are able to make decisions independently at home which can be done at any time with unlimited time and without cost as a way or therapy for hypertension sufferers to keep their blood pressure within normal limits and their health condition remains stable in addition to physical activity or exerciseRegular exercise can train breathing so that the lungs and heart become

healthier. As for suggestions, by looking at the enthusiasm of the residents and the support from various parties involved in participating in this community service activity, we suggest that we can improve more adequate facilities and infrastructure to carry out activities to improve the level of public health, especially in the Wesabbe complex in the working area of the Makassar Tamalanrea Health Center.

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