

LOWERING BLOOD PRESSURE THROUGH FAMILY ASSISTANCE ON THE IMPLEMENTATION OF SELF-MANAGEMENT OF HYPERTENSION ELDERLY

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ABSTRACT

Hypertension is one health problem that continues to increase in the elderly age group. The increasing prevalence of hypertension from year to year requires treatment efforts, one of which is through hypertension care management. Treatment of hypertension by the family involves knowledge and skills, so there is a need for assistance from health workers to caregivers who care for the elderly with hypertension. This study aimed to provide an understanding of the family and direct application to care for the elderly with hypertension. The research is a case study involving six families and elderly clients with hypertension. Respondents are elderly who have hypertension and still live with their families as caregivers. Interventions are carried out in the form of assistance to families in implementing control of taking hypertension medication, stress management, physical exercise, and regulation of eating patterns. Results: all of the elderly experienced a decrease in blood pressure on the 3rd weekend. Family assistance in the implementation of self-management of the elderly effectively reduced the blood pressure of the hypertensive elderly. Health center staff are expected to be able to increase motivation and family participation in assisting the elderly with hypertension.

Keywords: blood pressure; elderly; hypertension

INTRODUCTION

Old age is the final stage of the human life cycle. The elderly is defined as someone who has reached the age of 60 years and over and is the fastest-growing population group globally. It is estimated that 1 in 6 people will be 60 years or older by 2030. The world's population was aged 60 years and over will currently increase from 1 billion in 2020 to 1.4 billion in 2030 and double to 2.1 billion in the year 2050 (World Health Organization, 2021). In Indonesia, population projection data in 2020 shows that 27.08 million people in Indonesia are elderly, and it is estimated that this number will continue to grow to reach 40.95 million in 2030 (Kementerian Kesehatan RI, 2017).

The increase in the elderly population reflects an increase in the Life Expectancy of the population, both throughout the world and in Indonesia. The high Life Expectancy is an indicator of the success of national development, especially in the health sector. However, if the elderly have health problems, it will have various impacts such as increased treatment costs, reduced income, and increased disability (Kementerian Kesehatan RI, 2017). One of the health problems that continue to increase in the elderly is hypertension, and it continues to increase with age (Miller, 2012; Lionakis et al., 2012). Hypertension is "The silent killer" or a silent killer if not handled properly and causes an iceberg phenomenon in society.

Hypertension that occurs in the elderly can cause several complications. WHO explains that hypertension complications cause 9.4 million deaths worldwide, and its prevalence will continue to increase by 80%, especially in developing countries (WHO, 2015). The profile of non-communicable diseases from various countries in 2018 shows that in Indonesia, non-communicable diseases are the most significant cause of death, namely 73%, where blood

vessel disease/hypertension is the most significant cause of as much as 35% compared to other non-communicable diseases (WHO, 2018).

Basic Health Research (2018), shows the prevalence of hypertension has increased from 25.8% in 2013 to 34.1% in 2018, with the highest prevalence of hypertension in the elderly compared to other age groups. The P2PL Division of the South Sulawesi Provincial Health Office revealed that the most non-communicable disease (NCDs) in health centers and hospitals in 2015 was hypertension at 53.51% compared to other PTMs. One of the districts in South Sulawesi that shows an increase in the prevalence of hypertension is the Gowa Regency, namely 23.8% in 2007, increasing to 29.2% in 2013 South Sulawesi Provincial Health Office, 2016).

The increasing prevalence of hypertension from year to year requires treatment efforts, one of which is through hypertension care management. Management of hypertension treatment consists of a balanced diet or known as Dietary Approaches to Stop Hypertension (DASH diet), doing physical activity, managing stress, taking medication, and regular health control (Ministry of Health, 2018; Perki, 2015). Management of hypertension care in the elderly requires support from the family because family support is a positive therapy to improve compliance, blood pressure monitoring, and treatment (Ofoli et al., 2017).

Family support has a positive effect on the motivation of the hypertensive elderly to check their blood pressure and reduce the degree of hypertension (Wulandhani, Nurchayati, & Lestari, 2014). In their research, show that Islamic-based stress management in the form of providing dhikr training is effective in increasing mental calm in the elderly with hypertension. Yudistiro (2017) in his research, shows that Islamic-based hypertension management using sound therapy in the form of mural al-Qur'an is effective in lowering blood pressure. Treatment of hypertension by the family requires knowledge and skills, so there is a need for assistance from health workers for caregivers who care for the elderly with hypertension. In this study, researchers carried out family assistance on implementing self-management of the elderly with hypertension.

METHODS

This study uses a case study design involving six families and elderly hypertensive clients in the working area of the Bajeng Health Center, Gowa Regency. Respondents who were included in the study were elderly who had hypertension and still lived with their families as caregivers. Interventions were carried out in the form of assistance to families on the implementation of control over taking hypertension medication obtained from the Community Health centers, stress management, physical exercise, and dietary regulation. Stress management used in this study included deep breathing relaxation exercises, dhikr, and murottal therapy; a physical exercise in the form of brisk walking and gymnastics, as well as regulation of eating patterns by applying a healthy diet, namely foods that are low in salt, low in sugar, drinking eight glasses of water a day, and eating fruits and vegetables. This assistance aims to provide an understanding of the family as well as direct application to care for the elderly with hypertension; evaluate the implementation/monitoring of taking medication, stress management, physical exercise, and healthy eating patterns; and see changes in the blood pressure of the elderly during the mentoring.

Monitoring was carried out for three weeks, and blood pressure evaluation was carried out every week. The researcher was accompanied by health cadres to educate the family in caring for the elderly with hypertension, and then the family was asked to monitor the

implementation of self-management of the elderly, which included taking medication, stress management, physical exercise, and a healthy diet. Researchers conducted blood pressure checks before the mentoring, after the first week, after the second week, and after the third week of mentoring.

Families and elderly clients with hypertension reported in this study were families and the elderly who, during the outreach period, routinely took medication every day during monitoring; carry out stress management, physical exercise, and dietary regulation at least once a week (at least three times during monitoring). The instrument used was a self-management monitoring sheet in the form of a checklist for the implementation of taking medication, stress management, physical exercise, and dietary regulation. The monitoring sheet also includes monitoring the elderly's blood pressure before, during, and after mentoring on the third weekend.

In this study, the researcher applies the ethical principle of respecting human rights and dignity, the principle of expediency, and the principle of justice. This research has also gone through an ethical review from the Faculty of Medicine and Health Sciences UIN Alauddin Makassar with the number C.011/KEPK/FKIK/I/2020. The analysis carried out is a descriptive analysis to see a picture of changes in blood pressure during monitoring, as well as a description of the implementation of assistance in taking medication, stress management, physical exercise, and dietary regulation.

RESULTS

This study describes the results of family assistance carried out in 6 families with elderly hypertension with the characteristics of the respondents listed in table 1.

Table 1
Distribution of respondent characteristics (n=6)

Characteristics of Respondents	Total	
	n=6	%
Gender		
Man	1	16.67
Woman	5	83.33
Religion		
Islam	6	100.00
Ethnic group		
Makassar	6	100.00
Caregiver relationship with the elderly		
Husband	2	33.33
Child	3	50.00
Grandchild	1	16.67

Table 1 shows that most of the respondents in this case report are women (83.33%), and most of them as caregivers are children (50%). All respondents are Muslim and ethnic Makassar. The results of monitoring blood pressure for three weeks and the number of days of taking medication, implementing stress management, physical exercise, and implementing a healthy diet are shown in table 2 as follows:

Table 2:

Changes in Blood Pressure and Implementation of Self-Management for the Elderly with Hypertension

No	Initials	Blood pressure (mmHg)				Monitoring items (Days)			
		Pre	week 1	week 2	week 3	Take medicine	Stress management	physical training	Healthy eating pattern
1	Mrs Yl	150/80	130/80	130/80	130/80	21	21	21	21
2	Mrs St	180/90	180/90	150/90	150/80	21	4	4	3
3	Mrs Sy	160/100	160/100	150/90	140/90	21	5	7	4
4	Mrs Nr	150/90	130/90	140/90	130/80	21	9	13	9
5	Mr Sf	180/100	130/80	130/80	140/90	21	9	6	8
6	Mrs Sr	160/80	140/80	130/80	140/80	21	8	9	9

Table 2 shows that all the elderly experienced a decrease in blood pressure on the third weekend compared to before family assistance was carried out in the implementation of hypertension management in the elderly. During the monitoring, all the elderly routinely consume antihypertensive drugs obtained from the Community Health centers. There is one older person who, in addition to taking the medication regularly, also applies all self-management items every day during monitoring, namely stress management, physical exercise, and dietary regulation every day. There was one elderly person who had the least frequency of stress management, physical exercise, and healthy eating during monitoring, which was only four days of stress management, four days of physical exercise, and three days of eating patterns.

DISCUSSION

Measurement of blood pressure every week during mentoring for the implementation of self-management of hypertension in the elderly showed changes in blood pressure before and after mentoring. The measurement results showed that there was a decrease in blood pressure after the mentoring activity, whereas before the mentoring was carried out, the highest systolic BP was 180 mmHg, and diastolic 100 mmHg dropped to 150 mmHg systolic BP and 90 mmHg diastolic. Management of hypertension consists of 2 main parts, namely pharmacological therapy and non-pharmacologic/lifestyle management. Pharmacological therapy is therapy to treat high blood pressure that can help prevent more serious, even life-threatening complications. The target of treatment for hypertensive patients, according to the Eighth Joint National Committee (JNC), is less than 140/90 mmHg for those aged less than 60 years (American Academy of Family Physicians, 2014). Lifestyle modification is an adjunct therapy for all clients with hypertension who are receiving pharmacological therapy.

Adherence to hypertension treatment management can reduce the amount and dose of antihypertensive drugs. Specific self-care management such as diet and exercise, whether on an individual, family, or community basis, can improve therapy goals (Riegel et al., 2017). Self-care management can also lower blood pressure and reduce risk factors for heart attack, stroke, and diabetes (Akhter, 2010). Lifestyle modifications for people with hypertension include weight loss, diet management, alcohol restriction, smoking cessation, regular exercise, stress management, monitoring blood pressure, and adherence to medication. Dietary adjustments can reduce the severity of hypertension and, in some cases, reduce the need for

medication. People with hypertension should consume a diet low in salt, not exceeding one teaspoon per day, calories, cholesterol, and saturated fat (P2PTM Ministry of Health RI, 2018). (P2PTM Kemenkes RI, 2018). People with hypertension should eat more fruits, vegetables, whole grains, and nuts than fat. In addition, they should replace beef in their diet with alternatives such as fish or chicken. The dietary principle currently developed and recommended by JNC for hypertensive patients is known as DASH (Dietary approach to stop hypertension), which is to reduce sodium, cholesterol, fat, and sugar intake and increase the intake of fruits, vegetables, and low-fat dairy products to help manage hypertension (The Royal Australian College of General Practitioners, 2015).

Hypertension treatment management can also be done by changing lifestyle. Regular physical activity is associated with reduced blood pressure, reduced cardiovascular risk, and cardiac remodeling (Hegde & Solomon, 2015). Regular physical activity is beneficial for increasing relaxation, regulating body weight and strengthening the heart and blood vessel system. The recommended exercises for people with hypertension are; to walk 3 KM or exercise at least 30 minutes per day at least five times a week (P2PTM Ministry of Health RI, 2018). Stress management and various relaxation therapies, including meditation, music, rest, and psychotherapy, can reduce blood pressure. Relaxation is very beneficial if practiced regularly in everyday life. Techniques that involve relaxation are widely used by people to reduce anxiety and deal with stress-related problems. Deep breathing and muscle relaxation as a stress management technique can lower blood pressure in trainees (Dawanti et al., 2019).

Monitor blood pressure and patient compliance with medication. Hypertension is a chronic disease that requires a person to comply with treatment and care. People with hypertension must take medication, monitor blood pressure, and visit health care facilities regularly so that blood pressure is well controlled and hypertension does not occur. Handling hypertension as soon as possible (prompt treatment) is carried out through treatment and care, rehabilitation, and palliative services, as well as making referrals to advanced health care facilities. In handling cases, health workers must create and promote compliant behavior, namely: regular health checks, overcoming diseases with appropriate treatment, maintaining physical activity safely, striving for a healthy diet and balanced nutrition, avoiding cigarette smoke, alcoholic beverages, and carcinogenic substances.

Self-care management or lifestyle management in the elderly with hypertension is essential for individuals in managing their disease and controlling and preventing complications of hypertension. (Goverwa et al., 2014). The family is the main support system for the elderly in care, including maintaining or caring for, maintaining and improving mental status, anticipating socio-economic changes, and providing motivation and facilitating the spiritual needs of the elderly. One of the factors that can influence self-care management is family. According to Wassertheil et al., (2004) in Risa 2017 states that families play a very important role in providing support in food selection and preparation, helping patients to follow recommended behaviors (eg, quitting smoking), supporting patients in treatment and compliance in visits to health services to control stress. his blood. Family support for the elderly is an important aspect in helping the elderly solve problems

According to Friedman, they are explaining that a family is a safe place to process each individual's emotions. In accordance with an eastern culture children must always respect their parents and are obliged to take care of their parents as a reward for the services rendered to them until adulthood. Feelings of worth and self-confidence felt by the elderly can make

their lives of the elderly more focused. Family support plays an important role in the self-care management of people with hypertension (Flynn et al., 2013). Patients with hypertension said that family members often facilitated compliance with hypertension treatment plans, helped prepare meals, visited health facilities, and reminded them to take hypertension medication. Research by Osama (2015) showed that hypertensive patients who received support from their families were significantly more compliant in implementing self-care management than those who did not receive family support.

CONCLUSION

Family assistance in the implementation of elderly self-management, which includes monitoring of taking antihypertensive drugs, stress management, physical exercise, and healthy eating patterns, is effective in reducing blood pressure in the elderly with hypertension in the six respondents who were assisted. Health center staff are expected to be able to increase motivation and family participation in assisting the elderly with hypertension.

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