

Community Empowerment through Progressive Muscle Relaxation Therapy Training to Lower Blood Pressure of Hypertension Patients in Ayula Selatan Village

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Abstract

Hypertension is the most common non Hypertension is recorded as one of the cardiovascular diseases with the highest number of sufferers in Gorontalo, and is a global health issue. An increase in blood pressure that is not controlled will cause various dangerous complications such as disorders of the kidneys, heart and brain. To prevent complications, it is necessary to carry out non-pharmacological interventions in addition to pharmacological therapy as an effort to control blood pressure in hypertensive patients in the long term. Progressive muscle relaxation is an independent treatment option that can help hypertensive patients control their blood pressure. The purpose of this community service is to empower health cadres to increase community knowledge and skills in applying progressive muscle relaxation therapy as an effort to control blood pressure. Activities in this community service consist of forming a group of health cadres caring for hypertension who are trained in progressive relaxation therapy, then followed by assisting the cadres in providing education to the target community for hypertension sufferers. Evaluation of this activity was carried out by measuring the knowledge of cadres through data analysis from filling out questionnaires and measuring the blood pressure of hypertension sufferers. By the results of the pretest and posttest it was found that there was an increase in knowledge of 50% in health cadres and there was a decrease in systolic blood pressure of 29 mmHg and a decrease in systolic blood pressure of 12 mmHg in hypertensive subjects. From the results of this activity it can be implied that the application of progressive muscle relaxation can be used as alternatice intervention to control blood pressure in hypertensive patients as home care.

Keywords: Hypertension, progressive relaxation, blood pressure

INTRODUCTION

Hypertension is disease with increasing in blood pressure that exceeds normal limits. Referring to WHO, this condition is characterized by an increase in blood pressure exceeding or equal to 140/90 mmHG. It is estimated that the incidence of hypertension will increase by 25% in 2025, especially in adults (Rindang Azhari Rezki, Yesi Hasneli 2018) . Hypertension is one of several cardiovascular cases which is not only the focus of national health care, but also a global issue. 80% of the world's total hypertension sufferers are in developing countries. Hypertension sufferers in Indonesia reach 32% of the total age population in the young adult age category. From these data, some hypertensive sufferers are faced with dangerous complications, including stroke conditions, kidney disorders, and visual disturbances (Nuraini 2015). Generally, the risk of hypertension will increase after the age of 45 years. Hypertension is called the silent killer because it does not cause significant complaints that interfere with patient activities, but can lead to dangerous complications if not handled properly. Complications that can arise include heart failure, cerebro vascular disease and other diseases (Falah and Ariani 2022). Referring to (Riskesdas 2018), the prevalence of hypertension in 2018 was 34.1%. If hypertension is accompanied by complications, mortality from this disease will increase.

The prevalence of hypertension in Gorontalo Province increased from 29% to 31% in 2018, while of the 34 provinces, Gorontalo is included in the top 20 provinces with the highest incidence of hypertension (Kemenkes RI 2018). Referring to data from the Gorontalo Provincial Health Office, over the past 4 years, hypertension is a disease with the highest incidence compared to other non-communicable diseases with a total of 29,391 cases in 2020. This activity was carried out in Ayula Selatan Village, Bone Bolango Regency. Based on data from the

Gorontalo Provincial Health Office, Bone Bolango is included in the top five districts with the highest incidence of hypertension in Gorontalo Province. Data from 2018 found the incidence of hypertension reached 1,174 cases (5%), in 2019 it rose to 5,663 cases (10%) (Pakaya, Amalia, and Mokodompis 2021). Based on the initial data collection and interviews with health workers who are holders of the Non-Communicable Diseases program, it is known that there are 120 people with hypertension. From the results of the interviews it is known that around 60% of the people in the area still do not regularly participate in the PROLANIS program and are reluctant to have their blood pressure checked regularly at the Puskesmas.

From the data above, it can be concluded that the prevalence and incidence of hypertension in the target area is quite high. Handling hypertension and self-care management that is not appropriate will be at risk of developing further complications which can have an impact on reducing the patient's quality of life and increasing mortality. Therefore, it is very important to carry out control efforts to prevent complications from excessively high blood pressure which can harm the patient. Control of hypertension is carried out through pharmacological therapy with medicamentosan and non-pharmacological therapy. In addition to pharmacological therapy through drugs, people need to be taught non-pharmacological therapies as independent therapies that can be practiced by people with hypertension at home as an effort to control blood pressure.

Alternative therapy that can be given is progressive relaxation therapy. Progressive muscle relaxation is physical therapy by stretching muscles throughout the body to reduce muscle tension, reduce stress, and control blood pressure. Research conducted by (Damanik and Ziraluo 2018) found that there was a significant effect of progressive relaxation exercises on reducing blood pressure in hypertensive patients. Research by (Karang 2018) also found a decrease in blood pressure in patients after implementing progressive muscle relaxation therapy interventions. Research by (Rahayu, Hayati, and Asih 2020) found a decrease in blood pressure of 21.8 mmHg in the elderly who applied continuous progressive muscle relaxation therapy. Based on the results of initial data collection with local regional health workers, it was found that socialization regarding progressive relaxation therapy had never been carried out in the community. This is the background for carrying out community service activities related to assisting in progressive muscle relaxation therapy skills to reduce blood pressure in hypertension sufferers in Ayula Selatan Village.

METHOD

This community service activity is divided into 2 stages. The activity began with educating cadres about hypertension and training in progressive muscle relaxation therapy. The second stage is assisting cadres in conducting blood pressure screening in hypertensive patients and demonstrating progressive relaxation therapy through home visits to patients. The subjects of this activity were 25 health cadres and 50 people with hypertension who live in Ayula Selatan Village. In this activity, each trained cadre was assigned to accompany 2 people with hypertension and their families. Assistance was carried out for one month with a total of four visits. Before and after the intervention, cadres were evaluated through a questionnaire to see the extent of their understanding of hypertension, while hypertensive patients were evaluated through blood pressure measurements. The instruments used in this activity were questionnaires, leaflets, blood pressure measuring instrument sets, and blood pressure observation sheets. The knowledge questionnaire about hypertension in cadres was adapted from research (Mulyo 2018) which totaled 15 questions. Data collection was carried out by distributing questionnaires, discussing, and checking the patient's blood pressure.

RESULTS

The results achieved in this activity showed an increase in knowledge and a decrease in blood pressure in the target group which can be seen in the following table:

Table 1. Cadre Knowledge Before and After Activities

| <i>Pretest Score</i> | <i>Posttest Score</i> | <i>Percentage Increase</i> |
|----------------------|-----------------------|----------------------------|
| 5 | 9 | 50% |

Table 2. Systolic Blood Pressure of Hypertensive Patients Before and After Hypertension Education and Progressive Relaxation Therapy

| <i>Sistolic Pressure before Intervention</i> | <i>Sistolic Pressure after Intervention</i> | <i>Decreasing Average</i> |
|--|---|---------------------------|
| 159 mmHg | 130 mmHg | 29 mmHg |

Table 3. Diastolic Blood Pressure of Hypertensive Patients Before and After Hypertension Education and Progressive Relaxation Therapy

| <i>Sistolic Pressure before Intervention</i> | <i>Sistolic Pressure after Intervention</i> | <i>Decreasing Average</i> |
|--|---|---------------------------|
| 91 mmHg | 79 mmHg | 12 mmHg |

DISCUSSION

Based on Table 1, it was found that there was an increase in knowledge of health cadres about hypertension. The results of this activity are in line with community service activities carried out by (Rahman, Ayuningtias, and Susanto 2022) who found an increase in knowledge about hypertension after being given education about hypertension. Research conducted by (Pratama et al. 2021a) found that there was an effect of cadre education in increasing the knowledge of Health cadres in controlling hypertension. Before the cadres visited the community with hypertension, the cadres were given education about hypertension and progressive muscle relaxation therapy. In addition, cadres are also provided with videos about hypertension education and progressive relaxation therapy. After being given education, there was a change in the perception of Health cadres about the handling and treatment of hypertension which includes diet management, physical exercise, stress management and lifestyle changes. In addition to being given education about hypertension management, cadres are also given counseling and demonstrations about techniques for performing progressive relaxation therapy and techniques for measuring blood pressure so that cadres can be involved in providing education to people with hypertension. The results of observations when providing assistance in the community, cadres were able to provide education and screen blood pressure in hypertensive patients. Research conducted by (Natasya 2016) found sufficient knowledge of cadres about hypertension to support the role of cadres in health promotion, community mobilizers and referring people with hypertension to health service facilities. The elderly tend to experience health problems caused by decreased body functions due to the aging process. In physiological changes, there is a decrease in the immune system in the face of disturbances from inside and outside the body. One of the most common health problems experienced by the elderly is the cardiovascular system. Physical exercise such as regular gymnastics also helps prevent chronic conditions or diseases, such as high blood pressure. The benefits of elderly exercise can increase the body's metabolic activity and oxygen demand.

Tables 2 and 3 show a decrease in blood pressure in hypertensive patients after being given assistance in the application of progressive relaxation therapy by cadres. In this activity, each trained cadre is assigned to accompany 2 hypertension patients and their families, so the number of hypertension patients targeted is 50 people. The results of this activity are in line with research conducted by (Rahayu et al. 2020) which found that there was an effect of progressive muscle relaxation therapy on reducing systolic and diastolic blood pressure in hypertensive patients. Research conducted by (Sulistiyani, Utomo, and Hasneli 2015) proved that there was a decrease in diastolic blood pressure of 10 mmHg in patients who applied progressive muscle relaxation therapy. Progressive muscle relaxation therapy is useful for reducing peripheral resistance and increasing blood vessel elasticity. The muscles and blood circulation will be more perfect in taking in and circulating oxygen. Progressive muscle relaxation can be a vasodilator whose effect widens blood vessels and can lower blood pressure directly. Progressive muscle

relaxation is a relaxation method that does not require imagination, has no side effects, is easy to do, makes the body and mind feel calm and relaxed. This exercise can help reduce muscle tension, stress, lower blood pressure, increase tolerance for daily activities, increase immunity, so that functional status and quality of life improve (Karang 2018) .

To maintain blood pressure control, apart from being given assistance in implementing progressive relaxation therapy, hypertensive patients are also given education about the handling and treatment of hypertension by cadres. Hypertensive patients who are given education will have sufficient knowledge about hypertension so that they can be motivated to make lifestyle changes so that their blood pressure is more controlled. Research conducted by (Pratama et al. 2021b) shows that education for health cadres has proven to be effective in increasing knowledge of hypertension sufferers in the community. Research conducted by (Amalia 2021) found that there was a relationship between knowledge and blood pressure in hypertensive patients. The decrease in blood pressure in patients can be caused by increasing patient compliance in diet management after being given education. Research conducted by (Fachrudin 2016) found that there was an effect of cadre education on increasing adherence to a low-salt diet in patients with hypertension. A low-salt diet is one of the main pillars in controlling blood pressure in hypertensive patients. Another factor that can affect the decrease in blood pressure in patients can be due to increased adherence to taking medication in patients after being given education about the importance of pharmacological therapy in patients with hypertension. Research conducted by (Natasya 2016) found that there was an effect of cadre education in improving medication adherence in patients with hypertension.

CONCLUSIONS AND RECOMMENDATIONS

From the decrease in blood pressure in the target group, it can be concluded that mentoring activities in the application of progressive relaxation therapy can reduce blood pressure of hypertension patient. The therapy can used as a non-pharmacological therapy alternative for hypertensive patients in community.

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APPENDIX



Figure 1. Education to cadre about hypertension



Figure 2. Progressice Muscle Relaxation Therapy Demonstration and Training



Figure 3. Cadres assistance in measuring blood pressure



Figure 4. Cadres assistance in educating hypertension patient and the family member