



## Nutrition Counseling for Hypertension Patients in the Working Area of Puuwatu Health Center, Kendari City

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### ABSTRACT

Hypertension is the factor that contributes the most to the incidence of cardiovascular disease. Hypertension needs good management so that patients do not experience complications that aggravate their hypertension. One aspect of hypertension management that patients can do independently is dietary modification which is part of lifestyle modification. The purpose of this community service is that the community who is the target group after attending counseling can increase knowledge about a balanced menu and the dangers of hypertension as an effort to prevent complications from hypertension in the Puuwatu Health Center area of Kendari City, carried out in October 2023. Methods through counseling using a pocketbook, and filling out a pre-post test questionnaire to determine the level of success of the counseling conducted. Knowledge assessment using the questionnaire method and pretest-posttest values were tested with paired test statistics. The results of the average knowledge score before counseling was  $7.6 \pm 1.7$  and after counseling the average knowledge score was  $8.4 \pm 1.0$ . In conclusion, there is an increase in the average knowledge after being given counseling about the importance of regulating diet and diet to prevent complications of hypertension.

### INTRODUCTION

According to WHO, the current global prevalence of hypertension is 22% of the total world population. Of these sufferers, only less than a fifth make efforts to control their blood pressure (Organization, 2021). The results of the Basic Health Research (Riskesdas) in 2018, the prevalence of hypertension in Indonesia was 31.4% while Southeast Sulawesi Province (Southeast Sulawesi) reached 23.0% (Kemenkes RI, 2018). Data from the Kendari City Health Office in the last 3 years shows the incidence of hypertension in adults (20-44 years), namely in 2014 as many as 1,172 cases, in 2015 as many as 1,249 cases and in 2016 (January-September) there were 1,097 cases, where the highest prevalence of hypertension was in the Puuwatu Health Center Working Area, namely 889 cases (Siti Fatmawati, Junaid, 2017). Based on the health profile of Puuwatu Health Center in 2019, there were 4,294 cases of hypertension (Meliana, 2021).

Hypertension is a major risk factor for the occurrence of cardiovascular disease. If left untreated, hypertension can lead to stroke, myocardial infarction, heart failure, dementia, kidney failure, and visual impairment. The World Health Organization (WHO) estimates that hypertension causes 9.4 million deaths and accounts for 7% of the world's disease burden. This condition can be a burden both in financial terms, due to reduced productivity of human resources due to complications of this disease, and in terms of the health system.

Hypertension is called the "silent killer" because usually people who suffer from it do not know the symptoms beforehand and new signs arise when certain organ systems experience vascular damage (Nurhasana et al., 2020). Hypertension is grouped into two broad categories, namely primary hypertension and secondary hypertension. Primary hypertension is hypertension of unknown cause but may be caused by various factors such as improper

diet (excess sodium intake, low potassium intake, excess alcohol intake), low physical activity, stress, and obesity. Secondary hypertension is due to the presence of other diseases, such as kidney disease, heart disease, and endocrine and nervous disorders (Suryani., 2018).

There was a significant association ( $P < 0.05$ ) between blood pressure and age, educational status, occupation, socioeconomic class, tobacco consumption, waist circumference, waist-hip ratio, and nutritional status. No significant association was found with gender, religion, caste, marital status, family type, and size, family without non-communicable diseases (Vijna, 2022).

A lifestyle that is fond of fast food that is rich in fat, salty, lazy to exercise, and easily depressed plays a role in increasing the number of hypertensive patients. One of the factors affecting hypertension is excessive sodium or salt consumption (Retno Cahyani, Lintang Dian S, 2019).

In the metabolic process of the body, most of the salt consumed will be absorbed by the intestines and excreted by the kidneys through urine. However, if the amount of salt consumed exceeds the capacity of the kidneys to excrete it back, then the sodium level in the blood will increase, and to normalize it, the intracellular fluid must be pulled out so that the volume of extracellular fluid increases. The increase in extracellular fluid volume causes an increase in blood volume, resulting in the onset of hypertension. The risk of hypertension for people who consume more than 6 grams of salt per day is 5-6 times greater, compared to people who consume low amounts of salt. WHO recommends limiting salt intake to a maximum of 6 grams per day equivalent to 2400 grams of sodium. So that foodstuffs preserved with a salt such as *pindang* fish, skipjack fish, tude fish, roa fish, deho fish, and oci fish, consumption needs to be limited (Retno Cahyani, Lintang Dian S, 2019).

Hypertension diet is one of the important aspects that need to be done by hypertensive patients, while some hypertensive patients are not compliant in diet. This is partly influenced by the patient's knowledge about the diet that must be done.

The results of the service carried out (Setyawan & Ismahmudi, 2018) show that health promotion activities are one of the efforts to help

the community reduce the incidence of hypertension in the community by increasing knowledge so that there are changes in behavior and attitudes in carrying out healthy living behavior by consuming low salt foods so that blood pressure can drop close to normal.

The results of community service conducted (Langingi et al., 2020) stated that there was an increase in hypertension but the community had not maximized treatment and some people did not understand about hypertension.

The results of the service (Haryuni & Lutfiasari, 2018) showed an increase in knowledge about hypertension and its management from 62.5% to 90.6%, so it can be concluded that providing health education can increase knowledge about hypertension.

One aspect that affects the compliance of hypertensive patients in dietary management is the knowledge of hypertensive patients regarding the diet that must be done. This is in accordance with the results of research (Darmarani et al., 2020) that there is a relationship between knowledge and dietary compliance in the elderly suffering from hypertension.

Based on this background, we intend to carry out community service with the title Nutrition Counseling for Hypertension Patients in the Puuwatu Health Center Working Area, Kendari City.

## METHODS

The methods carried out in this activity include: 1) Conducting socialization, advocacy, licensing, and coordination regarding the participation and duties of partners in community service activities with related parties, namely the Head of the Puskesmas, the Coordinator of Nutrition Executives (TPG), and Posyandu cadres related to the plan to implement community service activities; 2) Prepare a place and equipment for community service activities.

## RESULTS AND DISCUSSION

This community service activity begins with an opening and a brief explanation of nutrition education in the form of counseling using the help of a pocketbook that will be given, followed by an explanation of how to fill out the pre-test questionnaire, then the counseling participants are

asked to fill out a pre-test questionnaire for 10 minutes to get information on the initial understanding of the participants about hypertension.



Figure 1. Opening of Community Service



Figure 2. Activity participants

The participants were 30 members of the Prolanis exercise group in the working area of the Puuwatu Health Center, Kendari City, with an average age of 50.5 years with an age range of 38-67 years, and 93% (n = 28) were female. Prolanis gymnastics is a health service system and a proactive approach that is implemented in an integrated manner involving participants, health facilities, and health maintenance so that BPJS health participants with chronic diseases can

achieve optimal quality of life and effective and efficient health service costs. One of the Prolanis activities that is routinely carried out is gymnastics which is carried out gradually every week for people with hypertension (Warjiman et al., 2021).



Figure 3. Pocketbook for extension



Figure 4. Presentation of counseling materials

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average age of 50.5 years with an age range of 38-67 years, and 93% (n = 28) were female. Prolanis gymnastics is a health service system and a proactive approach that is implemented in an integrated manner involving participants, health facilities, and health maintenance so that BPJS health participants with chronic diseases can achieve optimal quality of life and effective and efficient health service costs. One of the Prolanis activities that is routinely carried out is gymnastics which is carried out gradually every week for people with hypertension (Warjiman et al., 2021).

In this counseling, participants were given a pocketbook as a tool to better understand the counseling material. Print media occupies an important position in health education because it provides clear messages that can be taken home, effective in strengthening information conveyed verbally. This is in line with the statement of children (Elzina Dina De Fretes, 2022) that the media plays a very important role in increasing nutritional knowledge in mothers and Posyandu cadres. The function of media in education is as props to convey information or messages about health.

Participants were quite enthusiastic about the process of delivering the material, followed by a question and answer process. Participants who asked questions and the service team explained according to the questions asked.

Most hypertensive patients in this community service activity know the risk factors, symptoms of hypertension, the dangers of hypertension such as heart disease, kidney, and stroke, as well as the prevention of hypertension, the majority of patients know, for example, not eating a lot of salt, reducing fatty foods and high cholesterol. How to control the risk factors of hypertension, diet in patients with hypertension includes food ingredients that are allowed and recommended cooking methods. It also explains how to prepare a menu for hypertension patients for a 10-day menu cycle.

The results of the counseling activities were measured using a knowledge questionnaire about hypertension. Participants were asked to fill out a questionnaire after counseling (post-test). The results showed that the number of participants who had a knowledge score after the intervention was lower than before the intervention was only one person, the rest had increased or the same

knowledge between before and after the intervention. The results of counseling were able to increase community knowledge about hypertension. This is indicated by the mean value during the pre-test of  $7.6 \pm 1.7$  and after counseling then giving the post-test obtained a mean value of  $8.4 \pm 1.0$ . Furthermore, the difference in the mean value of knowledge was tested using the paired T-test. The results of the paired T-test showed that there was a significant difference in the mean knowledge of hypertension before and after counseling.

This is in line with the statement hypertension (Setyawan & Ismahmudi, 2018) in the form of counseling is carried out to increase the understanding of hypertensive patients about the dangers of hypertension. (Wunderlich, 2013) states that nutrition education is an important component in improving diet and food choices, to reverse malnutrition and improve nutritional diagnosis. Poor dietary habits and lack of physical activity can be the main reasons for poor nutritional status among the elderly. The positive impact of nutrition education on the nutritional status of the elderly has been confirmed by many studies. A study conducted among a Korean elderly community showed that after nutrition education was provided, nutrition knowledge, nutrition attitudes, and eating habits improved significantly.

Effect of (Dongxu Wang., Donald Stewart., Chun Chang., 2015) stated that nutrition education programs are effective in improving adolescents' nutrition-related knowledge, attitudes, and behaviors, so interactive and innovative interventions are highly recommended for future nutrition promotion programs.

## **CONCLUSION**

Efforts to increase knowledge about hypertension in people with chronic diseases such as hypertension through nutrition education, and counseling methods using pocketbooks to prevent complications of hypertension, are highly recommended to be carried out periodically at public health service centers. The provision of health education is intended for the community to know the prevention and treatment of hypertension so as not to aggravate their hypertension and prevent dangerous complications of hypertension such as coronary heart disease and stroke.

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