

THE RELATIONSHIP BETWEEN DIET PATTERNS AND HYPERTENSION EVENTS IN POLARA PUBLIC HEALTH CENTER IN KONAWA ISLANDS DISTRICT

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Abstract

Background: Hypertension is a non-communicable disease that is still a health problem in the work area of the Polara Health Center since 2018 until now in 2020. Hypertension has increased in cases in the last three years. In 2018 8 146 cases of hypertension then increased to 154 cases in 2019 and decreased in 2020. The results of the initial survey showed that 70% of hypertensive patients had unhealthy eating patterns such as consuming fast food containing preservatives, too high salt content in food, excess fat consumption. This study aims to determine the relationship between diet and the incidence of hypertension in the Polara Health Center Work Area ,Konawa Islands Regency.

Methods: This research uses analytical research method with *Cross Sectional Study approach*. The population in this study were all outpatients seeking treatment at the Polara Public Health Center for the period January to February 2021 totaling 268 people, with a total sample of 73 people selected by simple random sampling technique.

Results: The results showed that 43.8% of respondents who have a poor diet and have hypertension ,9.6% who do not have hypertension. Then there are 13.7% of respondents who have a good diet but have hypertension ,32.9% who do not have hypertension. The results of statistical tests using the chi square test obtained a p-value of 0.000 and a coefficient of Phi (ϕ) = 0.531, so the null hypothesis was rejected, meaning that there was a moderate relationship between diet and the incidence of hypertension at Polara Health Center, Konawa Islands Regency.

Conclusions: diet has significant impact to hypertension at Polara Health Center, Konawa Islands Regency.

Keywords: *hypertension, diet, patterns*

INTRODUCTION

Hypertension or an increase in a blood vessel disorder that can inhibit the supply of oxygen and nutrients carried by the blood to the body's tissues that need it. Hypertension is often called the silent killer because it occurs without symptoms(1). Specifically, hypertension globally accounts for about 54 percent of all strokes and 47 percent of coronary artery disease (2). Hypertension is common in Southeast Asian populations (3, 4). WHO estimates that a third of adults in Southeast Asia suffer from hypertension, and nearly 1.5 million deaths are caused by hypertension every year. In addition, 50% of patients with hypertension, 25% received treatment and 12.5% were well treated. WHO also estimates that people with hypertension in the world reach 600 million with a death toll of 3 million (5).

The prevalence of hypertension in Indonesia based on Riskesdas 2018 data is 31.4 % . The highest prevalence occurred in South Kalimantan (44.1%) and the lowest in Papua (22.2%)(6). Meanwhile, in Southeast Sulawesi Province in 2018, the estimated number of hypertension sufferers aged above or equal to 15 years was 372,159 cases. Meanwhile, the percentage of people with hypertension who received services from the province of Southeast Sulawesi was 21.39 % , which is still far from the national target of 100 percent. Furthermore, in 2019, the estimated number of hypertension sufferers aged above or equal to 15 years was 389,325 cases with a prevalence of 22.14%. Meanwhile, data from the Konawe Islands District Health Office shows that the number of hypertension cases in 2017 was 7 as much 1,928 with a prevalence of 12.55 % , in 2018 as much 2,084 with a prevalence of 13.20 % and in 2019 as much as 2,135 with a prevalence of 14.58 % (7).

Based on a non-communicable disease surveillance report at the Polara Health Center in 2018 , it showed that hypertension was in the first place, from 17 types of diseases totaling 146 people, 47 of

whom were male and 99 were female , while in 2019 there were 154 visits by hypertension sufferers. and in 2020 there were 106 hypertension visits . Outpatient treatment report data included in the chart of the top 10 diseases at the Polara Health Center in 2020 hypertension was ranked 1 out of 17 non-communicable diseases. The number of outpatient visits in 2021 at the Polara Health Center for the January to February period was 268 people. The Polara Health Center has a working area of 4 villages and 1 kelurahan with a population of 1,025 adults in 2020 (Polara(8)). Preliminary survey results show that 70% of hypertensive patients have unhealthy eating patterns such as consuming fast food containing preservatives, too high salt content in food, excess consumption of fat. The purpose of this study was to determine the relationship between diet and the incidence of hypertension in the Polara Health Center Work Area ,Konawe Islands Regency.

METHODS

This research uses analytical research method with Cross Sectional Study approach. The population in this study were all outpatients seeking treatment at the Polara Public Health Center for the period January to February 2021 totaling 268 people, with a total sample of 73 people selected by simple random sampling technique. Data was collected using a questionnaire and then processed using a computer with the steps of editing, coding, entry and tabulating. Data analysis used the Chi-Square test for the relationship between diet and the incidence of hypertension.

RESULTS

The results of the analysis in Table 1 show that of the 73 respondents, the characteristics of the respondents with the most category was male, namely 42 respondents (57.5%), age 55-59 years, as many as 28 respondents (38.4 %), farmers' occupations were 24

respondents (32.9 %), 39 respondents (53.4 %) had hypertension and 31 respondents (%) had a poor diet and 42 respondents (57.5 42.5 %) did not have hypertension.

Table 1. Characteristics of Respondents

Variable	Frequency	Percentage (%)
Gender		
Man	42	57.5
Woman	31	42.5
Age		
45-49 years old	9	12.3
50-54 years old	23	31.5
55-59 years old	28	38.4
60-64 years old	13	17.8
Work		
Fisherman	7	9.6
Farmer	24	32.9
civil servant	3	4.1
Doesn't work	23	31.5
Self-employed	16	21.9
Dietary habit		
Not enough	39	53.4
Well	34	46.6

The results showed that from 73 respondents, there were 39 respondents who had a poor diet, of which 32 respondents (43.8%) had hypertension and 7 respondents (9.6%) did not have hypertension. Then there are 34 respondents who have a good diet, of which there are 10 respondents (13.7%) have hypertension and 24 respondents (32.9%) did not have hypertension. The results of statistical tests using the chi square test obtained a p-value of 0.000 and a coefficient of Phi (ϕ) = 0.531, so the null hypothesis was rejected, meaning that there was a moderate relationship between diet and the incidence of hypertension at Polara Health Center, Konawe Islands Regency .

DISCUSSION

The diet referred to in this study is the type of food consumed such as the habit of consuming vegetables, fruits and types of fast food that are high in fat. Nutritional factors are closely related to the occurrence

of hypertension through several mechanisms (9). Atherosclerosis is the main cause of hypertension related to a person's diet, although age also plays a role, because at old age blood vessels tend to become stiff and their elasticity decreases (10).

The results showed that respondents who had a poor eating pattern were due to the fact that they often consumed fast food, rarely consumed fruits (bananas, avocados, papayas, etc.), often consumed oily foods (fried foods, coconut milk). times a week, often consume salted fish 3-4 times a week and your family members often use used oil. Furthermore, respondents who suffer from hypertension because the results of blood pressure measurements by health workers are < 140/90 mmHg when doing treatment at the Polara Health Center. The respondent's high blood pressure is caused by several factors including irregular eating patterns, frequent consumption of fast food and high salt levels , lack of exercise behavior and in men having a high smoking habit. These things are the causes of hypertension in the respondents.

Respondents who have a poor diet but do not suffer from hypertension, this can be caused because the diet has not lasted long so it cannot affect the respondent's circulation system, in addition to the respondent's age factor which is still in the range of 60-64 years so that the level of elasticity of blood vessels also still good. Some respondents also said that after consuming foods high in fat such as meat, respondents often consumed herbal drinks to prevent an increase in blood pressure. This is why respondents do not suffer from hypertension even though their diet is still at risk. While respondents who have a good diet even though they suffer from hypertension, this can be caused by the age factor so that even though they maintain a good diet, their blood pressure does not experience a significant decrease so that the respondent's blood pressure is still high. Another factor is the lack of activity or physical exercise carried out by the respondent so that it affects the cardiovascular system, as well as a history of hypertension from family members, especially the respondent's parents.

The results of statistical tests showed that there was a moderate relationship between diet and the incidence of hypertension at the Polara Public Health Center, Konawe Islands Regency . A bad diet triggers a higher incidence of hypertension (11). Unhealthy eating patterns, namely the habit of consuming food without paying attention to the type and ingredients, can trigger obesity which results in constriction of blood vessels, causing the heart muscle to pump blood harder, which leads to high blood pressure (12).

In this study, people's old eating patterns were quite good, namely high consumption of fiber and carbohydrates, now shifting towards a westernized diet, which is high in protein and fat, thereby increasing the risk of hypertension. The type of fat that is harmful to increasing blood pressure is the type of saturated fat found in animal foods. Blood pressure is also influenced by the

amount and type of fiber from the food consumed. Blood pressure will decrease if we consume a lot of fibrous foods (13). Diet is closely related to the occurrence of hypertension through several mechanisms. Atherosclerosis is the main cause of hypertension related to one's diet, although age also plays a role, because at old age blood vessels tend to become stiff and their elasticity decreases (14, 15). Types of foods that cause hypertension are ready-to-eat foods that contain preservatives, salt levels that are too high in food, excess consumption of fat (16).

CONCLUSION

Based on the results of research and discussion in this study, the authors can conclude that someone who has an excessive eating pattern is one of the factors causing hypertension compared to those who are not excessive at the Polara Health Center, Konawe Islands Regency . The solution from the researchers so that the public always accesses information about the types of healthy food, the frequency and dosage of food to avoid hypertension

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