

**FACTORS ASSOCIATED WITH THE INCIDENCE
OF HYPERTENSION IN GAMPONG BAROH VILLAGE,
SETIA BAKTI DISTRICT, ACEH JAYA REGENCY**

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Abstract

One of the most common non-communicable diseases experienced by people in Indonesia is hypertension. Hypertension is a disease in which the blood pressure in the blood vessels increases chronically. This can happen because the heart works harder to pump blood to fulfill the body's need for oxygen and nutrients. If left untreated, this disease can affect the function of other organs, especially important organs such as the heart and kidneys. This study is quantitative study with cross-sectional or cross-sectional approach and also observational. From the results of bivariate analysis, the relationship between history of hypertension and the incidence of hypertension obtained a p value of 0.000 with an α value of 0.05, $p \leq \alpha$ means that there is a relationship between hypertension history factors. The relationship between gender and the incidence of hypertension obtained a p value of 0.166 with an α value of 0.05, $p \geq \alpha$ means there is no relationship. The bivariate relationship between physical activity and the incidence of hypertension obtained p value of 0.028 with an α value of 0.05, $p \leq \alpha$ means there is relationship. Based on the study of factors associated with the incidence of hypertension in Gampong Baroh Village, Setia Bakti Subdistric, it can be concluded that there is relationship between history of hypertension, physical activity and salt consumption with the incidence of hypertension and there is no relationship between gender, age and smoking with the incidence of hypertension.

Keywords: Hypertension, NCD, Risk factors

1. INTRODUCTION

Due to changes in lifestyle today, the number of patients with non-communicable diseases is increasing. Non-communicable diseases are a public health problem due to the high morbidity and mortality rates worldwide, and are a type of disease that cannot be transmitted from one person to another. This type of disease develops slowly and occurs over a long period of time. NCDs cause a high mortality rate each year and can affect people of all ages and from many countries around the world (Lukitaningtyas & Cahyono, 2023).

One of the non-communicable diseases experienced by many people in Indonesia is hypertension. Hypertension or high blood pressure is a health problem because it is a gateway or risk factor for diseases such as heart disease, kidney failure, diabetes, and stroke (Lukitaningtyas & Cahyono, 2023). Hypertension is a disease in which the blood pressure in the blood vessels is chronically elevated. This can happen because the heart works harder to pump blood to meet the body's need for oxygen and nutrients. If left untreated, the disease can affect the function of other organs, especially important organs such as the heart and kidneys (Elvira & Anggraini, 2019). A person will be said to be hypertensive if they have a systolic blood pressure ≥ 140 mmHg and or diastolic blood pressure ≥ 90 mmHg, on repeated examinations (Nuraeni, 2019).

Hypertension is caused by higher than normal blood pressure. There are two types of blood pressure in humans: systolic blood pressure and diastolic blood pressure. Systolic blood pressure is the blood pressure that occurs when the heart muscle contracts, and diastolic blood pressure is the blood pressure when the heart is not contracting or working harder, namely at rest (Jehaman, 2020). Hypertension or better known as high blood pressure is a chronic disease caused by excessive and almost constant pressure of blood on the arteries. Pressure is generated by the force of the heart when pumping blood. Hypertension is associated with a persistent increase in systemic arterial pressure, both diastolic and systolic. Symptoms of hypertension are difficult to recognize because it has no specific symptoms. Symptoms that are easily observed are dizziness, frequent restlessness, red face, buzzing in the ears, shortness of breath, fatigue, eye fogginess (Sijabat et al., 2020).

There are two risk factors for hypertension. One is unchangeable risk factors, such as age, gender, and genetics, and the other is changeable, such as obesity, smoking, lack of exercise, excessive salt intake, dyslipidemia, alcohol consumption, psychosocial factors, and stress (Ekarini et al., 2020). According to the World Health Organization (WHO), of the 50% of known hypertensive patients, 25% are treated, and only 12.5% receive appropriate treatment. WHO estimates that 600 million people worldwide currently suffer from high blood pressure, and 3 million of them die from hypertension each year. WHO estimates that about 4% of global health costs are due to the harmful effects of alcohol. This value corresponds to the effects of smoking (4.1%) and hypertension (4.4%) (Heriziana, 2017).

The estimated global prevalence of hypertension is 1.28 million among those aged 30-79 years from the total world population in developing and middle class countries in 2021. According to the Ministry of Health, the prevalence of hypertension is more at the age of 55-64 years (55.2%), 65-74 years (63.2%) and >75 years (69.5%) in Indonesia. Nationally, the province that ranks ninth with a hypertension prevalence rate of 33.43% is DKI Jakarta (Nuraisyah & Kusumo, 2021). Based on Riskedas data in 2018, the prevalence of high blood pressure is the most common disease in the elderly in Indonesia, based on measurements of the population aged 18 years and over. In 2013 the incidence of hypertension was 25.8%, but in 2018 it increased to 34.1% (Riskedas, 2018).

The prevalence of hypertension in Indonesia measured by age group above 18 years was 25.8%, with the highest prevalence in Bangka Belitung (30.9%), followed by South Kalimantan (30.8%), East Kalimantan (29.6%), and West Java (29.4%). In Aceh Province, the incidence of hypertension was 21.5%. The incidence of hypertension in Indonesia has decreased from 31.7% in 2007 to 25.8% in 2013 (Andika & Safitri, 2019). The Global Action Plan recommended by WHO in 2014 in an effort to control the prevalence of non-communicable diseases includes controlling risk factors such as smoking, consumption of a high salt diet, physical inactivity and controlling stress or psychology (Triandini, 2022).

Many people with hypertension have uncontrolled blood pressure and the number is increasing. Treatment of hypertension, although important, is incomplete without preventive measures to reduce risk factors for hypertensive cardiovascular disease (Lisiswanti & Aulia Dananda, 2016). This study aims to determine the factors associated with the incidence of hypertension, so that it can be used as input in the preparation of

extension programs and in the policy framework in overcoming the prevention of hypertension in Gampong Baroh Village, Setia Bakti District, Aceh Jaya Regency.

2. RESEARCH METHODS

This study is a quantitative study with a cross-sectional or cross-sectional approach and also observational. This assessment was carried out by interviewing respondents and also directly checking the respondent's blood pressure. The research subjects in this study were the people of Gampong Baroh Village, setia Bakti Subdistrict, Aceh Jaya Regency, totaling 37 people.

3. RESULTS AND DISCUSSION

Table 1. Characteristics of Respondents Based on Gender

Gender	Status	Frequency
Blood Pressure	Hypertension	24 (64,9%)
	Not Hypertensive	13 (35,1%)
Gender	Male	11 (29,7%)
	Female	26 (70,3%)
Age	<55 Years	16 (43,2%)
	>55 Years	21 (56,8%)
Smoking	Yes	10 (27,0%)
	No	27 (73,0%)
History of Hypertension	Available	23 (62,2%)
	None	14 (37,8%)
Physical Activity	Active	13 (35,1%)
	Sedentary	24 (64,9%)
Salt Consumption	Normal	17 (45,9%)
	High	20 (54,1%)
Total	95	37 (100%)

Table 1 explains the frequency distribution of each variable. There were 24 respondents with hypertension (64.9%) and 13 respondents without hypertension (35.1%). The majority of respondents in this study were female with a total of 26 people (70.3%) and 11 men (29.7%). Respondents under 55 years of age totaled 16 respondents (43.2%) and those over 55 totaled 21 respondents (56.8%). Respondents who smoke amounted to 10 people (27.0%) and those who did not smoke amounted to (73.0%). Respondents who had a history of hypertension totaled 23 people (62.2%) and those who did not have a history of hypertension totaled 14 (37.8%).

Respondents who did active physical activity amounted to 13 people (35.1%) and those who did sedentary physical activity or activities that refer to any type of activity carried out outside of sleep time, with very little calorie output characteristics amounted to 24 people (64.9%). Respondents who consumed normal salt amounted to 17 people

(45.9%) and those who consumed excessive or high salt amounted to 20 people (54.1%) out of a total of 37 respondents (100%).

Table 2. Relationship between Dependent and Independent Variables

Variable	Status	Incidence of Hypertension				Total		P Value
		Hypertension		Not hypertensive				
		N	%	N	%	N	%	
History	Available	23	100	0	0	23	100	0,000
	None	1	7,1	13	92,9	14	100	
Gender	LK	9	81,8	2	18,2	11	100	0,166
	PR	15	57,7	11	42,3	26	100	
Age	<55	8	50	8	50,0	16	100	0,103
	>55	16	76,2	15	23,8	21	100	
Physical Activity	Active	5	38,5	8	61,5	12	100	0,028
	Sedentary	19	79,2	5	20,8	24	100	
Smoking	Yes	8	80,0	2	20	10	100	0,440
	No	16	59,3	11	40,7	27	100	
Salt Consumption	Normal	4	23,5	13	76,5	17	100	0,000
	High	20	100	0	0	20	100	

The results of bivariate analysis in table 2 show that the relationship between the dependent variable (hypertension occurrence) and independent (history of hypertension, gender, age, physical activity, smoking and salt consumption). The results of this analysis were carried out by cross tabulation with the Chi Square test with a confidence level of $\alpha = 0.05$. From the results of bivariate analysis, the relationship between history of hypertension and incidence of hypertension obtained p value = 0.000 with a value of $\alpha = 0.05$, $p \leq \alpha$ (H_0 is rejected) means there is an association between hypertension history factors.

The relationship between gender and the incidence of hypertension obtained p value = 0.166 with a value of $\alpha = 0.05$, $p \geq \alpha$ (H_0 accepted) means there is no relationship between gender and the incidence of hypertension. The relationship between age and the incidence of hypertension obtained a p value = 0.103 with a value of $\alpha = 0.05$, $p \geq \alpha$ (H_0 accepted) means there is no relationship between age and the incidence of hypertension. This is in line with previous research conducted by Yuliana (2020) The results showed that there was no relationship between age and the incidence of hypertension in Botteng health center with a p value = 0.666.

The results of bivariate analysis of the relationship between physical activity and the incidence of hypertension obtained a p value = 0.028 with a value of $\alpha = 0.05$, $p \leq \alpha$ (H_0 rejected) means that there is a relationship between physical activity and the incidence of hypertension. This research is also in line with previous research conducted by Sudin et al (2023) which obtained the result of p value = 0.015 which means there is a relationship between physical activity and the incidence of hypertension. Lack of exercise often causes high blood pressure. People who do not move often experience high blood pressure. Lack of exercise or lack of movement can increase blood pressure in the

body. Regular exercise reduces high blood pressure. Blood pressure is also affected by physical activity, blood pressure is higher during physical activity and lower at rest. (Heriziana, 2017).

The relationship between salt consumption and the incidence of hypertension obtained the result of p value = 0.000 with a value of $\alpha = 0.05$, $p \leq \alpha$ (H_0 rejected) means that there is a relationship between salt consumption and the incidence of hypertension. Previous research conducted by Musrah & Akbar (2022) also obtained the same results that there was an association between salt consumption and the incidence of hypertension with a p value = 0.000. Salt can cause fluid accumulation in the body and cause an increase in blood pressure.

4. CONCLUSION

Based on research on factors associated with the incidence of hypertension in Gampong Baroh village, Setia Bakti sub-district, Aceh Jaya district, it can be concluded that there is a relationship between history of hypertension, physical activity and salt consumption with the incidence of hypertension and there is no relationship between gender, age and smoking with the incidence of hypertension in the community of Gampong Baroh village.

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