TRANSPUBLIKA INTERNATIONAL RESEARCH IN EXACT SCIENCES (TIRES)

FACTORS ASSOCIATED WITH INCIDENCE OF HYPERTENSION IN THE PATEK HEALTH CENTER AREA ACEH JAYA DISTRICT

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Abstract

Hypertension is a disease that is still the biggest problem in the world. Hypertension can cause complications for several other diseases, such as heart disease, stroke and kidney disease. According to WHO, the diagnosis of hypertension in adults is determined by at least two visits where it is higher or at 140/90 mmHg. The purpose of this study was to determine the factors that influence hypertension. Quantitative research with analytic descriptive design using a cross sectional study approach. The research sample of clients with hypertension is 30 respondents. Based on the results of the study, the factors that cause hypertension can be classified into uncontrollable hypertension factors such as family history, gender, and age and controllable factors such as food consumption patterns, smoking behavior, obesity, and lack of physical activity. In the study it was found that 1) smoking habits by 50% which indicates that there is a possibility of hypertension can be interpreted as smoking habits as one of the triggers for hypertension. 2) Obesity is 53.3%, in this study the level of obesity does not affect the relationship to hypertension, but obesity is a factor in hypertension. 3) The stress level is 46.7% and 53.3% is not, so it does not affect the incidence of hypertension but stress is one of the factors causing hypertension. 4) In physical activity it shows a value of 53.3 which does not carry out physical activity so that this affects the incidence of hypertension.

Keywords: *Hypertension, Obesity, Stress level*

1. INTRODUCTION

Hypertension cases according to WHO 2020 data show that around 1.13 billion people in the world suffer from hypertension, which means that every 1 in 3 people in the world is diagnosed with hypertension, only 36.8% of whom take medication. The number of people with hypertension in the world continues to increase every year. It is estimated that by 2025 there will be 1.5 billion people affected by hypertension and every year 9.4 million people die from hypertension and complications (Purwono et al., 2020).

Hypertension is a disease that is still one of the biggest problems in the world. Hypertension can cause complications to several other diseases, such as heart disease, stroke and kidney disease. According to WHO, the diagnosis of hypertension in adults is set at least two visits where it is higher or at 140/90 mmHg (Fitri dkk., 2018).

The prevalence of hypertension in Indonesia according to the Health Research and Development Agency (BalitBanKes) through data from the 2018 Basic Health Research (Riskesdas) is currently 34.1% which has increased from the previous figure in 2013 which was 25.8% (Purwono et al., 2020). While for Aceh the number of people with hypertension reached 21.5% (Hanum et al., 2019). Aceh has the 13th highest prevalence of hypertension at 9.7%. While the number of people with hypertension in Aceh in 2019

was 283,910 people or 25%. There were 4 districts/cities with 100% coverage, namely Simeulue, Aceh Jaya, Aceh Barat Daya and Banda Aceh City (Anwar & Iqbal, 2022).

Hypertension itself is a disease with various causes. Several studies have proven things that become risk factors that influence the onset of hypertension. The results of previous studies state that the factors that cause hypertension can be categorized into uncontrollable hypertension factors such as family history, gender, and age. And controllable factors such as food consumption patterns that have sodium content, fat, as well as smoking behavior, obesity, and lack of physical activity. The same opinion states that, several factors that can affect the incidence of hypertension include factors (age / age, gender), obesity from drugs (steroids, painkillers) and comorbidity characteristics.

Based on data from the patek health center, darul hikmah sub-district with the incidence of hypertension with a total of 122 people, the authors are interested in examining the factors associated with the incidence of hypertension in the patek health center area, Aceh Jaya Regency. Are age, gender, education level, family history, smoking habits, stress levels, physical activity, and obesity associated with the incidence of hypertension in the Patek Health Center Working Area of Aceh Jaya.

2. RESEARCH METHODS

The research design in this study was quantitative research with an analytic descriptive design using a cross sectional study approach. This research was conducted from January to March 2022 in Darul Hikmah District. The population in this study were those who contracted hypertension at the Patek Health Center, Darul Hikmah District, totaling 122 people.

The sampling technique used in this study was purposive sampling. The sample size was 30 respondents in Darul Hikmah District. Data collection used in this study was using a questionnaire. This questionnaire consists of 15 questions with correct and incorrect answer options. The correct answer is given a value of 1 and the wrong answer is given a value of 0. With categories ≤5 low, ≤10 medium, and ≤15 high. The data obtained will be analyzed using statistical analysis which includes univariate analysis conducted to determine the characteristics of demographic data. Each variable, namely the independent variable (factors of hypertension incidence) and the dependent variable (Hypertension Incidence). And bivariate analysis was carried out with the chi square test which was used to test the hypothesis of the relationship between the factors of hypertension incidence in Jaya Aceh Jaya District.

3. RESULTS AND DISCUSSION

3.1. Characteristics of Research Subjects

a. Gender

Table 1. Characteristics by Gender

Gender	(F)	(%)
Male	19	63.3%
Female	11	36.7

Gender	(F)	(%)
Total	30	100.0

Based on table 1, it is known that the male gender is 19 respondents, while the female is 11 respondents. The most common gender is male.

b. Age

Table 2. Characteristics based on Age

Age	(f)	(%)
31-40	10	33.3
41-50	20	66.7
Total	**30**	**100.0**

Based on Table 2, it is known that ages 31-40 were 10 respondents (33.3%), ages 41-50 were 20 respondents (66.7%).

c. Family History

Table 3. Characteristics Based on Family History

Family History	(f)	(%)
Available	22	73.3
None	8	26.7
Total	30	100.0

Based on Table 3, it is known that there is a family history of 22 respondents (73.3%) while those without a family history are 8 respondents (26.7%).

d. Description of Research Variables Smoking Habit

Table 4. Distribution of Respondents based on smoking habits

Smoking Habit	(f)	(%)
Available	15	50
None	15	50
Total	30	100.0

Based on Table 4, it is known that there are smoking habits as many as 15 respondents (50%), and there are no smoking habits as many as 15 respondents (50%).

e. Stress Level

Table 5. Distribution of Respondents by Stress Level

Stress Level	(f)	(%)
Available	14	46.7

Stress Level	(f)	(%)
None	16	53.3
Total	30	100.0

Based on Table 5, it is known that there is a level of stress as many as 14 respondents (46.7%), and there is no level of stress as many as 16 respondents (53.3%).

f. Physical activity

Table 6. Distribution of respondents based on Physical Activity

Physical Activity	(f)	(%)
Available	14	46.7
None	16	53.3
Total	30	100.0

Based on Table 6, it is known that there are physical activities as many as 14 respondents (46.7%), and there are no stress levels as many as 16 respondents (53.3%).

g. Obesity

Table 7 Distribution of respondents based on Obesity

Physical Activity	(f)	(%)
Available	14	46.7
None	16	53.3
Total	30	100.0

Based on Table 7, it is known that there are Obesity as many as 14 respondents (46.7%), and there is no stress level as many as 16 respondents (53.3%).

h. Incidence of Hypertension

Table 8. Distribution of Respondents Based on The Incidence of Hypertension

Incidence of Hypertension	(f)	(%)
Available	15	50.0
None	15	50.0
Total	30	100.0

Based on Table 8, it is known that there is an incidence of hypertension as many as 15 respondents (50.0%), and there is no incidence of hypertension as many as 15 respondents (50.0%).

i. Relationship between Smoking and Hypertension

Table 9. Relationship Between Smoking Habits and Hypertension

Smoking Habits	Hypertension						Sig.
	Yes	%	No	%	Total	%	
Available	8	26.7	7	23.3	15	50.0	0.01
None	7	23.3	8	26.7	15	50.0	

Table 9 contains data related to the relationship between smoking and the incidence of hypertension. In several studies that have been conducted, one of them by Ridwan (2012) shows that the factors associated with the incidence of hypertension are the number of cigarettes smoked, the type of cigarette, the length of time smoking cigarettes. Smoking is also one of the causes of hypertension that can be changed, so smoking is not the main cause of hypertension but smoking is one of the triggers or smoking has a risk for hypertension.

j. Relationship between Stress and Hypertension

Table 10. Relationship Between Stress Level and Hypertension

Stress Level	Hypertension						P Value
	Yes	%	No	%	Total	%	
Available	6	20.0	8	26.7	14	46.7	0.01
None	9	30.0	7	23.3	16	53.3	

In table 10 Relationship between Stress Level and Hypertension where the number of respondents who answered no (30%) so that when tested with the incidence of hypertension resulted in 53% having no effect on the incidence of hypertension. It is possible that at the time of answering the questionnaire the respondent was not experiencing stress, as stated in a journal published by the State Medical Society of Wisconsin, stress does not directly cause hypertension. However, this can happen if you experience repeated increases in blood pressure due to stress. In addition, hypertension can also occur if you have more than one stress-causing factor. The stressors that can affect blood pressure include work, social environment, white coat hypertension, race, or emotional distress. In addition, stress due to lack of sleep can also cause hypertension. (https://hellosehat.com/jantung/hipertensi/stres-menyebabkan-hipertensi/).

k. Relationship between Obesity and Hypertension

Table 11. Relationship between obesity and hypertension

Obesity	Hypertension						P Value
	Yes	%	No	%	Total	%	

Available	6	20.0	8	26.7	14	46.7	0.01
None	9	30.0	7	23.3	16	53.3	

In table 11 the relationship between obesity and the incidence of hypertension is 53.3% not obese so that it has no relationship to the incidence of hypertension. Even though obesity is one of the factors that cause hypertension, this is supported by research conducted by Tiara (2020) which states that someone who has obesity tends to have a higher risk for hypertension (Andriaty et al., 2022). With the presence of obesity in hypertensive patients which will determine the severity of hypertension.

l. Relationship between Physical Activity and Hypertension

Table 12. Relationship between Physical Activity and Hypertension

Physical Activity	Hypertension						P Value
	Yes	%	No	%	Total	%	
Available	10	33.3	4	13.3	14	46.7	0.01
None	5	16.7	11	36.7	16	53.3	

In table 12, the relationship between physical activity and hypertension is 53.3 who do not carry out physical activity activities so that this causes one of the triggers for hypertension. This is as revealed by Cristanto, Saptiningsih and Indriarini (2021) that physical activity significantly reduces systolic and diastolic blood pressure and can prevent hypertension and other non-communicable diseases.

4. CONCLUSION

Based on the results of the study that the factors that cause hypertension can be classified into uncontrollable hypertension factors such as family history, gender, and age and controllable factors such as food consumption patterns, smoking behavior, obesity, and lack of physical activity.

In the study, it was found that 1) smoking habits amounted to 50%, which indicates that there is a possibility of hypertension, which can be interpreted as smoking habits as one of the triggers for hypertension. 2) Obesity is 53.3%, in this study the level of obesity does not affect the relationship to hypertension, but obesity is one of the factors of hypertension. 3) Stress level, who have a stress level of 46.7% and who do not 53.3%, so it does not affect the level of incidence of hypertension but stress is one of the factors causing hypertension. 4) In physical activity shows a value of 53.3 who do not do physical activity so that this affects the incidence of hypertension.

There is a need for further socialization and counseling related to the dangers of hypertension in an effort to increase knowledge about the dangers of hypertension, as well as public awareness about health so as to reduce dangerous risks.

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