Factors Related To The Incidence Of Hypertension In 20-44 Years Of Age In The Work Area Uptd Community Health Center Sp-1 Kalibumi, Nabire Regency

Norinda Jikwa[1], Nur Susan Iriyanti Ibrahim[2], Alfred D Lambey[3]
[123]Program Studi Gizi Sekolah Tinggi Ilmu Kesehatan Persada Nabire

Jl. Banjarmasin, Nabire, 98811, Papua Tengah, Indonesia
Corresponding author : norindajikwa9@gmail.com

ABSTRACT : Hypertension is one of the most common cardiovascular diseases and is suffered by many people. Based on Southeast Asian data, hypertension causes around 8 million deaths each year, with cases in Southeast Asia around 1.5 million deaths due to hypertension. Data from the Work Area of the SP 1 Kalibumi Health Center UPTD, the incidence of hypertension in 2023 was 116 people aged 20-24 years. Objective: to determine the factors associated with the incidence of hypertension at the age of 20-44 years in the Work Area of the SP-1 Kalibumi Health Center UPTD, Nabire Regency. Method: This type of research is quantitative using a cross-sectional study approach, conducted in the work area of the SP-1 Kalibumi Health Center UPTD, Nabire Regency. A sample of 54 respondents aged 20-44 years who met the inclusion and exclusion criteria. Data processing was carried out using SPSS version 16. Results: The results of the Chi-Square statistical test obtained a p-value = 0.00 for the diet variable, p-value = 0.07 for the physical activity variable, p-value = 0.34 for the smoking habit variable, and p-value = 0.06 for the family history variable. Conclusion: The variables related to the incidence of hypertension are diet, while physical activity, smoking habits, and family history have no relationship. Suggestion: The community can regulate and maintain their diet to avoid hypertension. For further research, observe other variables for the incidence of hypertension.

Keywords: Physical Activity, Hypertension, Smoking Habits, Diet, Family History

1. INTRODUCTION

High blood pressure (hypertension) is a disease that many people suffer from. High blood pressure is a serious health problem not only in Indonesia but throughout the world, because high blood pressure is a risk factor for diseases such as heart disease and stroke, kidney disease and stroke, High blood pressure is the leading cause of death in the world every year (Simanjuntak et al., 2022).

It is also known as high blood pressure "high blood pressure". High blood pressure is considered a silent killer because it does not show any symptoms or kill the person directly, but it can cause other serious diseases, as well as increase the risk of heart disease, heart and stroke death, kidney disease, and death (Fitria & Prameswari, 2021).

high blood pressure is a condition when blood pressure is above normal limits (90/140 mmHg or higher). This disease is very dangerous if not treated. Increased high blood pressure may not show symptoms (Sawitri et al., 2022).

High blood pressure can be genetic or hereditary Therefore, there is no genetic test that can accurately identify individuals at risk They die High blood pressure is caused by high blood pressure in people who suffer from this disease hereditary or genetic is twice as high as those who do not have a family history of high blood pressure.

This is shown by data from the World Health Organization (WHO) low-income countries have the majority (two-thirds) of their population affected by high blood pressure, with around 46% of the 1.28 billion adults aged 30 to 79 years in the world they are injured high blood pressure pressure Diabetes This is the leading cause of death in the world accounting for 33% per year. 2023 (WHO, 2023).

Data from Southeast Asia shows that high blood pressure 8 million people die each year and cases in Southeast Asia cause 1.5 million deaths. If it continues to be studied, then high blood pressure in the world will increase every year. in 2025 (Ministry of Health, 2018).

Basic Health Survey data in 2021 showed the prevalence of hypertension in Indonesia was 25.8%. These output statistics include the incidence of blood pressure on the sphygmomanometer of Indonesian citizens aged over 8 years (Ministry of Health of the Republic of Indonesia, 2021).

High blood pressure increases with age and gender is more likely to have high blood pressure. Behaviors such as lack of exercise and poor diet are the main reasons for high blood pressure. The cause of secondary hypertension 5-10% is kidney disease and 1-2% due to hormonal problems and consumption of certain drugs Factors that affect high blood pressure include age and gender and obesity (Abdul Majid Jurnal et. al., 2021).

According to research, there are many factors that contribute to the development of high blood pressure. Susilawati (2018) and Supratman (2019), risk factors Uncontrollable factors include family history, gender, and age, while secondary controllable factors include obesity, lack of physical activity, smoking, and caffeine intake, as well as low sodium intake, excessive alcohol consumption, and stress and weight Lots of fruits and vegetables.

Behavior, lifestyle and environment are risk factors for high blood pressure in society, especially in adults where high blood pressure is caused by lifestyle factors. Risk factors include smoking, inactivity, sodium intake and stress. Family history, poor lifestyle, sleep quality and risk of systolic blood pressure in adults or the elderly. or high blood pressure (Fatmawati, 2017; Supraman, 2019).

Other causes of high blood pressure in adults due to unhealthy lifestyles include high salt intake such as processed foods, fast food, chips and salty snacks, including saturated fats such as fried foods and fatty foods. Lack of physical activity and smoking, due to high blood pressure makes the heart work harder and the walls of blood vessels are damaged more quickly (Burhan et al., 2020).

Blood pressure, called high blood pressure, can damage the body years before symptoms appear. If high blood pressure is left untreated, it can lead to disability, poor quality of life, heart disease, or stroke (Burhan et al., 2020).

Exercise One of the causes is high blood pressure Increasing physical activity is recommended to prevent high blood pressure. Light exercise, light exercise, heavy exercise and daily activity levels such as school, going to work, housework and exercise can improve physical health (Lay et al., 2019).

High blood pressure can be caused by many factors such as age, gender, education, genetics, etc. family history, poor diet, physical activity, obesity, alcohol consumption and smoking, stress, caffeine intake, and high blood pressure in childhood. The cause is increasing Weight and obesity in children and adolescents. A man himself is more likely to suffer from high blood pressure than women in adolescence. The National Heart, Lung, and Blood Institute (NHLBI) 2020.

Papua Province has the lowest incidence rate of 22.22% (Riskesdas, 2018). According to data from the Nabirah District Health Office, in 2023, high blood pressure sufferers will attack 18.41% of men with hypertension and 33.1% of women with hypertension. Furthermore, based on the Work Area Data of the SP-1 Kalibumi Health Center UPTD, the incidence of hypertension in 2023 was 116 people aged 20-24 years. Seeing that there are still many cases of hypertension, serious treatment is needed so that it does not cause death to sufferers.

Referring to the above, the researcher wants to conduct a study with the title. "Factors related to the increase in the incidence of hypertension in the age group of 20-44 years at the workplace of UPTD Puskesmas SP-1 Kalibumi, Nabire Regency".

2.   METHOD

The type of research used in this study is quantitative and observational analytical research design. This study uses a cross-sectional study approach, with independent variables in this study are diet, family history, smoking, physical activity and the dependent variable is the incidence of hypertension.

This study was conducted at the workplace of UPTD Puskesmas SP-1 Kalibumi, Nabire Regency and data collection was carried out from March to June 2024 with a sample of 54 people. The research instruments used were questionnaires, stationery, documentation tools and digital tensiometers. The data collected were primary and secondary data with data analysis using SPSS version 16.0 with the chi-square statistical test.

3. RESULTS AND DISCUSSION

RESULTS

1. Overview of Research Location

Kalibumi Health Center was established in 2006 with the decree of the Nabire Regent No. 32 of 2006 dated March 14, 2006, which is the result of the development of the SP1 Kalibumi Assistant Health Center (Pustu) located on Jalan Poros Kampung Bumiraya, Nabire District, Papua with Registration Number P9404071201.

In 2018, Kalibumi Health Center was Accredited and in 2019 became the UPTD Kalibumi Health Center, based on the Decree of the Nabire Regent No. 37 dated March 25, 2019 and underwent several building renovations.

In January 2023, the location of the Kalibumi Health Center UPTD building changed its address from SP 1 to SP 2, namely on Jalan Palapa, Kalisemen Village, West Nabire District. The newest health center building can be reached by taking the right lane after the West Nabire Police Sector Office (Polsek), then traveling for about 5-10 minutes past SMP Negeri 2 Wanggar and arriving at the new building of the SP-I Kalibumi Health Center UPTD, Nabire Regency.

2. Respondent Characteristics

Respondent characteristics are characteristics that characterize the identity of respondents that distinguish one respondent from another. Respondent characteristics such as age, gender, education and occupation were identified in the Working Area of UPTD Puskesmas SP-1 Kalibumi, Nabire Regency.

a) Age

Age is A person's age affects the course of the disease and the development of the disease. Age is also used as a basis for the Ministry of Health of a country to determine relevant guidelines for the work program to be carried out (Ministry of Health of the Republic of Indonesia., 2009).

Table 1 Respondent Characteristics Based on Age

Age	f	%
26-35	10	18.5
36-45	44	81.5
Total	**54**	**100**

Source: Primary Data 2024

Based on Table 1, it is known that of the 54 respondents in this study, the most respondents were in the 36-45 years old category (late adulthood) which was 44 respondents (81.5%). While the fewest respondents were in the 26-35 years old

category (early adulthood) which was 10 respondents (18.5%). The total respondents were 54 people or 100%.

b) Gender

Gender is the difference between men and women in appearance, height and sex. The most common biological differences are weight, structure and function of the reproductive organs (Lestary, 2021).

Table 2. Respondent Characteristics Based on Gender

Gender	f	%
Man	9	16.7
Woman	45	83.3
Total	**54**	**100**

Source: Primary Data 2024

Based on Table 2, it can be seen that female respondents, 45 respondents (83.3%), are more than male respondents, 9 respondents (16.7%). The total number of respondents is 54 people or 100%.

c) Education

Education is a high individual, it is hoped that individuals can gain knowledge that can influence income levels (Todaro in Sidik, 2021).

Table 3. Respondent Characteristics Based on Education

Education	f	%
SD	13	24.0
JUNIOR HIGH	7	13.0
SCHOOL	17	31.5
SENIOR HIGH	17	31.5
SCHOOL		
College		
Total	**54**	**100**

Source: Primary Data 2024

According to table 3 of 54 respondents, it can be seen that most respondents have a high school education or above. The number of respondents with a high school education is 17 people (31.5%) and those with a college education are 17 people (31.5%). Elementary school education is 13 people (24.1%) and high school education is 7 people (13%).

d) Work

Work is a social activity in which a person or group of people work hard at a time and place, sometimes with the hope of money or reward. In other ways, without expecting reward, but with responsibility towards others (Wiltshire, 2016).

Table 4. Respondent Characteristics Based on Occupation

Work	F	%
Private	17	31.5
Farmer	7	13.0
Housewife	30	55.5
Total	**54**	**100**

Source: Primary Data 2024

According to table 4. It can be seen that most of the respondents are domestic workers, namely 30 people (55.5%). The number of respondents who work as independent workers is 17 people (13.5%) and the least work as farmers, namely 7 people (13%). All respondents are 54 people.

3. Univariate Analysis

Univariate analysis was conducted to describe the differences in characteristics, frequency distribution and prevalence of the variables studied, namely diet, physical activity, smoking habits and family history with the incidence of hypertension in adults aged 20-44 years at the Kalibumi SP-1 Community Health Center, Nabire Regency.

a) Dietary habit

Diet is a multifaceted statement that describes the types and amounts of food eaten by individuals for a social group (Nurholilah et al., 2019).

Table 5. Data Distribution Based on Respondents' Eating Patterns

Dietary habit	f	%
Good	16	30
Not good	38	70
Total	**54**	**100**

Source: Primary Data 2024

Based on Table 5, it can be seen that some respondents have poor eating habits and are at risk of high blood pressure, namely 38 (70%). While 16 respondents have good or healthy eating habits (30%). All respondents are 54 people.

b) Physical Activity

Movement exercises by skeletal muscles and exertion of energy (Indonesian Health, 2019).

Table 6. Data Distribution Based on Respondents' Physical Activity

Physical Activity	f	%
Yes	20	37
No	34	63
Total	**54**	**100**

Source: Primary Data 2024

Based on table 6, it can be seen that some respondents are not actively doing physical activities, namely 34 people (63%), while 20 respondents (37%) routinely do physical activities. The total number of respondents is 54 people or 100%.

c) Smoking Habit

Smoking is one of the consequences of various health problems, one of which is high blood pressure. But in reality, there are still many people who smoke without considering the dangers of smoking to their health and the lives of others around them (Muhammad Ilham, 2024).

Table 7. Data Distribution Based on Respondents' Smoking Habits

Smoking Habit	F	%
Yes	26	48.1
No	28	51.9
Total	**54**	**100**

Source: Primary Data 2024

Based on table 7, it can be seen that most of the respondents are non-smokers, namely 28 respondents or 51.9%. In addition, 26 respondents are smokers or 48.1%. All respondents are 54 people.

d) Family History

Family history is examined in this study of high blood pressure or not. Singh explained in Kalangi et. al., (2015) that 40-60% of children suffer from hypertension in both parents.

Table 8. Data Distribution Based on Respondents' Family History

Family History	f	%
Yes	25	46.3
No	29	53.7
Total	**54**	**100**

Source: Primary Data 2024

Based on table 8, it can be seen that most respondents do not have a family history of hypertension, namely 29 respondents or 53.7%. Furthermore, there are 25 respondents who have a history of hypertension from their families, namely 25 people or 46.3%. The total number of respondents is 54 people.

4. Univariate Analysis

Univariate analysis To distinguish independent variables and related variables of the study, bivariate analysis was conducted. This analysis used the SPSS version 16 for Windows program and the chi-square test method. Below are the results of the test of the relationship between diet, exercise, smoking and family history.

a) Dietary habit

Based on the research results, the data obtained on the relationship between dietary patterns and the risk of hypertension in adults aged 20-44 years at the SP-1 Nabire Health Center UPTD are as follows:

Table 9. Relationship between Diet Patterns and Hypertension Incidence in Adults Aged 20-44 Years

Dietary habit	Hypertension Incident				Amount		P Value
	Yes		No				
	f	%	f	%	f	%	
Good	10	18.6	6	11.1	16	30	**0.00**
No	18	33.3	20	37.0	38	70	
Total	28	51.9	26	48.1	54	100	

Source: Primary Data, 2024

Based on table 9, it can be seen that some respondents have poor eating habits or can be at risk of causing hypertension, namely 38 people (70%), while 16 respondents have good healthy eating habits (30%). All respondents are 54 people.

The results of the Chi-Square statistical test obtained a p-value of 0.00. This states that the p-value $(0.00) < 0.05$, which means that there is a significant relationship between diet and high blood pressure in adulthood 20-44 years.

b) Physical Activity

Based on the survey results, data on the relationship between physical activity and the incidence of hypertension in adults aged 20-44 years at the SP-1 Nabire Health Center UPTD are as follows:

Table 10. Relationship between Physical Activity and Hypertension Incidence in Adults Aged 20-44 Years

Physical Activity	Hypertension Incident				Amount		P-value
	Yes		No				
	f	%	f	%	f	%	
Yes	11	20.5	9	16.6	20	37.0	**0.07**
No	22	40.7	12	22.2	34	63.0	
Amount	**33**	**61.2**	**21**	**38.8**	**54**	**100**	

Source: Primary Data 2024

Based on table 10, it can be seen that some respondents are unable to exercise, namely 34 people (63%) while 20 respondents (37%) routinely do physical activity. The total number of respondents is 54 people.

The results of the Chi-Square statistical test obtained a p-value of 0.071. This shows that the p-value (0.07) > 0.05, which means that there is no significant relationship between family history and the incidence of high blood pressure in adults aged 20-44 years.

c) Smoking Habit

Based on the research results, data was obtained on the relationship between smoking habits and the incidence of hypertension in adults aged 20-44 years at the SP-1 Nabire Health Center UPTD, as follows:

Table 11 Relationship between Smoking Habits and Hypertension Incidence in Adults Aged 20-44 Years

Smoking Habit	Hypertension Incident				Amount		P-value
	Yes		No				
	f	%	f	%	f	%	
Yes	10	18.5	10	18.5	26	48.1	0.34
No	24	44.5	10	18.5	28	51.9	
Total	34	63	20	37	54	100	

Source: primary data 2024

Based on table 11, it is known that the majority of respondents do not have a smoking habit, namely 28 people (51.9%) and respondents who have a smoking habit are 26 people (48.1%), the total number of respondents is 54 people.

The results of the Chi-Square statistical test obtained a p-value of 0.35. This shows that the p-value (0.34) > 0.05, which means that there is no significant relationship between smoking habits and the incidence of hypertension in adults aged 20-44 years.

d) Family History

Based on the research results, data was obtained on the relationship between family history and the incidence of hypertension in adults aged 20-44 years at the SP-1 Nabire Health Center UPTD as follows:

Table 12. Relationship between Family History and Hypertension Incident in Adults Aged 20-44 Years

Family History	Hypertension Incident				Amount		P-value
	Yes		No				
	f	%	f	%	f	%	
Yes	12	22.2	8	14.8	20	46.3	0.06
No	23	42.6	11	20.4	34	53.7	
Total	35	64.8	19	35.2	54	100	

Source: primary data 2024

Based on table 12, it can be seen that the majority of respondents do not have a family history, namely 29 people (53.7%) and then respondents who do not have a history of high blood pressure are a maximum of 25 people (46.3%) of the total 54 respondents. The results of the Chi-Square statistical test obtained a p value of 0.063. This states that the p-value (0.06) > 0.05, which means that there is no significant relationship between family history and the incidence of hypertension in adults aged 20-44 years.

Discussion

1. **The Relationship between Diet Patterns and Hypertension Incidence in Adults Aged 20-44 Years at the SP-1 Kalibumi Health Center, Nabire Regency**

High blood pressure is characterized by increased blood flow in the arteries. In most cases, high blood pressure is an internal disease without symptoms and high blood pressure occurs in the blood vessels of stroke, aneurysm, or heart failure (Ekarini et. al., 2020). Food is a means of consuming food that affects food security. If food is consumed in large quantities and of good quality, with variations Different foods and similar foods can provide different nutrients needed by the body, so that the body can meet nutritional needs properly. (Ministry of Health of the Republic of Indonesia, 2020).

The prevalence of sweet eating habits tends to be higher in people who have bad eating habits (Peltzer & Pengpid, 2018). The following are included in eating habits in the risk factors for hypertension: The habit of eating sweets is one of the eating habits that can trigger an increase in blood pressure, namely the habit of eating foods that contain sugar or sweets. The habit of eating sweets too often results in Hyperglycemia, or high blood sugar can cause type 2 diabetes (Kowalak et al., 2013). The prevalence of hypertension in fatty eating habits also tends to be higher in people with frequent fatty eating habits, as much as 60.7% based on research (Pratiwi., 2018).

The results of the Chi-Square statistical test provide a p-value = 0.00, which states that the p-value (0.00) <0.05, which means that there is a significant relationship between diet and high blood pressure in adults aged 20-44 years in the community in the work area of the SP-1 Kalibumi Nabire Health Center UPTD.

According to Dungga's research (2020), researchers said that the p-value = 0.00 means p-value = <α (0.05). Of course, there is a significant relationship between diet and high blood pressure. There is nothing that affects high blood pressure, namely diet, namely high sodium consumption. Based on this research, the title of the researcher discusses the relationship between diet and improvement at the Jatimulya Tambun Selatan Health Center, Bekasi

Regency. These results are consistent with previous research (Kadir., 2019). This shows that there is a close relationship between diet and high blood pressure p-value = 0.00, which means that diet has an effect on the occurrence of high blood pressure.

2. **The Relationship between Physical Activity and Hypertension Incidence in Adults Aged 20-44 Years at the SP-1 Kalibumi Health Center, Nabire Regency**

Exercise is a movement performed by skeletal muscles and exerting force Physical inefficiency is a unique risk factor for chronic diseases that is often overlooked contributing to global mortality (Fadhli, 2018).

Physical activity can reduce the risk of non-communicable diseases. This study shows that physical activity in various groups (age, gender, pregnant women and women, prevention of premature death, prevention of chronic diseases, coronary heart disease, stroke, cancer, type 2 diabetes, bones and more world, preventing sudden heart attacks (PMK No. 41 Balanced Nutrition Guidelines).

A person with light activity tends to experience hypertension by 60.5% based on research conducted in Medan (Pratiwi, 2018). Exercise One of the causes of high blood pressure is increased physical activity is recommended to prevent high blood pressure. Exercise is a movement of the body's muscles that increases the effort and performance of daily life, including travel, work or housework, including movement and activity to improve health (Lay et al., 2019).

Save all body movements that are the result of skeletal muscle work and increase strength and energy. These activities include activities carried out in the school environment, work activities, family or home activities, or activities while commuting and activities at other times carried out to fill free time on that day (P2PTM, 2018).

3. **The Relationship between Smoking Habits and Hypertension Incidence in Adults Aged 20-44 Years at the SP-1 Kalibumi Health Center, Nabire Regency**

Smoking is a habit of smoking that is done every day, this cannot be avoided for smokers. The habit of smoking is indeed fun for smokers, but on the other hand it can have a negative impact on smokers and those around them. In fact, people know that smoking has a bad impact on health problems due to cigarettes having become a national problem (Rahayu, 2017).The results of the Chi-Square statistical test show a p-value = 0.34. This shows that the p-value (0.34) > 0.05, which means that there is a significant relationship between smoking habits and high blood pressure in adults aged 20-44 years in the community in the working area of the SP-1 Kalibumi Nabire Health Center UPTD. The results of statistical tests in other studies obtained a p-value = 0.76, which means there is no relationship between

smoking status and the incidence of hypertension in the 35-59 year old population at the Kebumen Health Center workplace.

From the findings and interviews regarding this matter, it can be seen that most of the respondents to this survey were women (77.5%) and women did not participate in this study in terms of smoking. In this study, the results showed that smoking status was not a factor in causing high blood pressure. This study refutes the theory that smoking is a risk factor for high blood pressure by Surnisyah Nadir (2019) who reported no relationship between smoking habits and high blood pressure in the Wajo Health Center workplace (p-value = 0.65). However, this study and study conducted by Mory Kartika et. al. (2020) said between smoking and high blood pressure in the Rawang Health Center work area of Sungai Penuh City. In this study it was reported that smokers were 2273 times more likely to have high blood pressure than non-smokers (OR = 2.27).

4. **Relationship between Family History and Hypertension Incidence in Adults Aged 20-44 Years at SP-1 Kalibumi Health Center, Nabire Regency**

Family history One of the risk factors for high blood pressure can be divided into non-modifiable risk factors (such as genetics, gender, and age) and modifiable risk factors (such as weight, obesity, anemia). Exercise, physical activity, smoking, stress, alcohol and salt consumption(Diana, 2018). Family history of High blood pressure (hereditary/genetic factors) can be caused by High blood pressure, especially primary hypertension genetic affects the regulation of Salt metabolism and renin in cell membranes If both parents suffer from high blood pressure, it is still close to 45% passed on to children, and if the parents suffer from high blood pressure, approx. 30% is given to children (Ministry of Health, 2013).

The results of the Chi-Square statistical test showed a p-value = 0.06, p-value (0.06) > 0.05, meaning that there was no significant relationship between family history and high blood pressure in adults aged 20-44 years in the community in the working area of the SP-1 Kalibumi Nabire Health Center UPTD. This is evidence based on research by Andini et. al., (2018) stated that there is no genetic link to the occurrence of bleeding. However, this is contrary to the results of research by Nugroho et. al., (2019) This shows that people can have a family history of high blood pressure is a risk Compared to those who do not have a family history have a higher risk of developing high blood pressure. according to the results of the study, it is recommended that family blood history is not a risk factor for treatment problems in cancer patients of childbearing age. In the western Kerangsuno village, the Mughtan section Because the p-value = 0.572. > 0.05 is not significant. congenital bleeding has an effect Regarding compliance with antihypertensive treatment, a family history of taking

antihypertensives does not affect blood pressure compliance at birth in the Kerangsono village, the western Meghtan region, in fact the sooner the patient agrees to a blood transfusion, the greater the effect. because of the attention of the community, namely family support. index in this study. Decrease in respondents' commitment to family support.

4. CONCLUSION AND SUGGESTIONS

Conclusion

Based on the research results, the following conclusions can be drawn:

1) There is a relationship between diet and the incidence of hypertension in adults aged 20-44 years in the working area of UPTD Puskesmas SP-1 Kalibumi. The results of the Chi-Square statistical test obtained a p-value = 0.00, this shows that the p-value (0.00) <0.05, which means that there is a significant relationship between diet and the incidence of hypertension in adults aged 20-44 years.

2) There is no relationship between physical activity and the incidence of hypertension in adults aged 20-44 years. The results of the Chi-Square statistical test obtained a p-value = 0.07, this shows that the p-value (0.07)> 0.05, which means that there is no significant relationship between physical activity and the incidence of hypertension in adults aged 20-44 years.

3) There is no relationship between smoking habits and the incidence of hypertension in adults aged 20-44 years. The results of the Chi-Square statistical test obtained a p-value = 0.34, this shows that the p-value (0.34)> 0.05, which means that there is no significant relationship between the relationship between smoking habits and the incidence of hypertension in adults aged 20-44 years.

4) There is no relationship between family history and the incidence of hypertension in adults aged 20-44 years. The results of the Chi-Square statistical test obtained a p-value = 0.06, this shows that the p-value (0.06)> 0.05, which means that there is no significant relationship between the relationship of family history and the incidence of hypertension in adults aged 20-44 years.

Suggestion

Based on the conclusions, the following suggestions are provided:

1. For the Community

   a) Arrange your diet according to balanced nutrition by following a low-fat and low-sodium (salt) diet accompanied by consuming fruit and vegetables.

   b) Do more physical activity, especially exercising every day for 30-40 minutes.

c) Quit smoking to avoid complications and do therapy by drinking 6-12 glasses of water per day to help remove nicotine from the body.

d) Set a sleep pattern with a sleep duration of 6-8 hours a day.

2. For the SP-1 Kalibumi Health Center

a) Increase health promotion about hypertension and risk factors for hypertension by using various media, such as posters, leaflets, and so on.

b) Conducting counseling, especially regarding food intake in balanced portions to overcome and control blood pressure.

3. For Research

Adding other variables besides the variables in this study, such as smoking habits, diet, physical activity, family history and others.

BIBLIOGRAPHY

Al-faida, N. (2023). Nutrition Research Methodology. Central Java: PT Nasya Expanding Management.

Adrian, (2019)., Musakhar, Djafar, (2021)., Application of Water Therapy to Reduce Blood Pressure in Hypertension Patients in Krapyak Village,file:///C:/Users/ACER/Downloads/617-1655-1-SM

Altmojo. (2019). The Effect of Benson Relaxation Therapy on Blood Pressure in Hypertension Patients. Journal of Professional Nursing Research Volume 6 Number 2, April 2024 e-ISSN 2715-6885; p-ISSN 2714-9757 http://jurnal.globalhealthsciencegroup.com.

Anggriani, Musakkar, Djafar. (2021). Connect regularlyhttp://repository.poltekkes.ac.id/7260/3/BAB%20II%20Tinjauan%20Pustaka, http://repository.poltekkes-denpasar.ac.id ›

Aswad & Ratnawati, (2019)., Dietary Patterns and Hypertension Incidence, Jambura Health and Sport Journal Vol. No. 2, August 2019 p- ISSN: 2654- 718X, e-ISSN: 2656-2863SS

Azzahra, Q. (2016). Physical Activity as a Dominant Factor in the Incidence of Prehypertension Hypertension in Adolescents Aged 15-18 Years at State Senior High School 3 Kisaran, North Asahan Regency in 2016. University of Indonesia.

Almatsier. (2010). Basic Principles of Nutritional Science. Gramedia Pustaka Utama.

Anggara and Prayitino, (2013). The Relationship Between Physical Activity and Hypertension Incidence in Young Adults in Lolak Village, Lolak District, Bolaang

Mongondow Regency. (JIKMA) MANADO HEALTH SCIENTIFIC JOURNAL https://journal.jikma.net DOI: doi e-ISSN 2829-6516 Vol. 3 No. 2 (May 2024) 22-05

Budiman, B., Sihombing, R., & Pradina, P. (2017). The Relationship between Dyslipidemia, Hypertension and Diabetes Mellitus with the Incidence of Acute Myocardial Infarction. Andalas Public Health Journal, 10(1),32-37.https://Doi.Org/10.24893/Jkma.V10i1.160

Indonesian Ministry of Health., (2009)., Classification of Age Groups Based on Box Counting Fractal Dimension Analysis of Facial Images with Canny Edge Detection, Volume 2 No.6 2017., ISSN 2301-9115.https://media.Neliti.com

Dara Aprilia Aurilita Mawanti., (2020). Factors Affecting Compliance with Treatment of Hypertension Patients of Productive Age in Karangsono Village, West District, Magetan Regency. Bachelor's Thesis. Bhakti Husada Mulia Health Sciences College.

Elvira, Mariza, (2019)., Overview of Hypertension Incidents in Hamlet III, Gunung Tinggi Health Center Work Area, Pancur Batu District in 2023., INNOVATIVE: Journal Of Social Science Research Volume 4 Number 1 Year 2024 Page 7225-7238 E-ISSN 2807-4238 and P-ISSN 2807-4246 Website: https://j-innovative.org/index.php/Innovative

Fitria, Prameswari. (2021). The Influence of Health Education About the Fast Method on the Knowledge of Families Suffering from Hypertension in Passo Village, Baguala District, Scientific Journal of Medicine and Health (CLINIC) Vol.3, No.1 January 2024 E-ISSN: 2809-2090, ISSN: 2809-235X, Pages 129-145 DOI:https://doi.org/10.55606/klinik.v3i1.2262

Iqbal, Jamal. (2023). Hypertension Counseling for Visitors to Posyandu RW 14, Sumber Village, Horizon: Global Community Service Journal Vol.3, No.1 February 2024 E-ISSN: 2962-0848; P-ISSN: 2964-5271, Pages 126-132 DOI:https://Doi.Org/10.30640/Cakrawala.V3i1.2122, Horizon+Vol.+3,+No.+1+February++2024+Page+126-132%20(1).

Ministry of Health of the Republic of Indonesia, (2021)., The Relationship Between Knowledge and Smart Behavior with Blood Pressure Control in Hypertension Patients. C:/Users/Acer/Downloads/2033-Article%20text-10025-2-10-0230825%20(1).

Kusuma et al., (2021)., Factors Influencing the Use of Herbal Medicines in Complementary Therapy in Hypertension Patients,file:///C:/Users/ACER/Downloads/14.+JIPJISK+VOL+14+No+2+April+2024+pages+596-604+(Ni+Putu+Aryati+Suryaningsih_oka).

Kowalak, JP, Welsh,W., & Brenna,M (2013). Textbook of Pathophysiology: Endocrine System. Jakarta EGC.

Health RI, (2019). Relationship between Physical Activity Levels and Obesity in Adolescents. Detector: Journal of Health Science Research Innovation. Vol.1, No.1nFebruary 2023. E-ISSN: 2963-2005, P-ISSN: 2964-6081; Pages 14-26.

Lay. (2019). Socialization of the Dangers and Prevention of Hypertension in Waimolong Hamlet, Maluku ProvinceJournal of Community Service Results Vol. 2, No. 1 January 2024 e-ISSN: 3031-6812; p-ISSN: 3031-6758, Pages 168-175 DOI:https://doi.org/10.61132/inber.v2i1.149,

Lestary. (2021), Differences Between Sex and Gender, Know the Definition,https://www.detik.com

Meghan Shiffa., (2019). The relationship between diet and increased blood pressure in hypertension patients at the Jatimulya Tambun Selatan Health Center, Bekasi Regency. Bachelor's Thesis. Nursing, College of Health Sciences. Mitra Keluarga, Bekasi.

Mahanta, T.G., Mahanta, B., Deuri, A., Baruah, S., Rasailey, R., & Mahanta, B. (2018). Determinants of hypertension among school going adolescents aged 13–15 years in Assam. Clinical Epidemiology and Global Health. https://doi.org/10.1016/j.cegh.2017.08.005

Noprizon & Rikmasari, (2020)., Hypertension Complications in Relation to Patient Knowledge of Hypertension and Prevention Efforts, Journal of Medical Nursing Research, Vol. 2 No. 2, http:// ejournal.delihusada.ac.id/index.php/JPKM

Nursalam, (2019)., the relationship between diet and physical activity with uric acid levels in the elderly in Kendek Village & Bono Baru, Lokotoy Health Center Work Area, Banggai Laut Regency, Gudang Jurnal Ilmu Kesehatan Volume 2; February 2024; page 12-19 Doi:https:///doi. org/ 10 .59435/gjik. V2i I .273 Website: https: // gudangjurnal. Com/index. Php/gjik.

Notoatmodjo, (2018),. Sugiyono, (2019), the relationship between lifestyle and the incidence of hypertension in young adults in Sukahati Village RT 03 RW 09, JKOM: Journal of Health and Nursing Sciences JKOM- Volume 6 number 1, 2023 E- ISSN: 2987- 825XI p- ISSN: 2615-6822.

Purnawan. (2020). The Influence of Health Education Through the Booklet Media "Hypertension Management" on the Level of Knowledge of Patients with Hypertension, Socius: Journal of Social Sciences Research Volume 1, Number 6, January 2024, Pages 140-146 E-ISSN: 3025-6704 DOI:https://doi.org/10.5281/zenodo.10496448.

Putri. (2019). Self-Concept in Early Adulthood Experiencing Maladaptive Daydreaming, C:/Users/ACER/Downloads/2865-7719-2-PB.

Qaddumi, J., Holm, M., Alkhawaldeh, A., Albashtawy, M., AL Omari, O., Batiha, A.-M., Alhalaiqa, F., Suliman, M., Aljohani, K., & Da'she, A. (2016). Prevalence Of Hypertension And Pre-Hypertension Among Secondary School Students. International Journal Of Advanced Nursing Studies. https://Doi.Org/10.14419/Ijans.V5i2.6878

Rachmayanti & Zaenurrohmah, (2017)., The relationship between medication compliance and history of hypertension with blood pressure control measures in hypertensive patients at the Magelang district health center, Borobudur Pharmacy Review, vol. 3 No. 1 (2023) pp. 31- 36, e- ISSN: 2798- 3552

Riskesdas, (2018). Determinants of Hypertension Incidence Literature Review Study, C:/Users/ACER/Downloads/80-89+Yana+Afrina%20(3).

Trisliatanto, (2022)., the relationship between stress and the incidence of hypertension in hypertension patients in the work area of the Paccellekang Health Center, Panaikang Village, Pattallssang District, Woga Regency, JIMPK: Student Scientific Journal & Nursing Research, Volume 3 Number 3, 2023.

World Health Organization(WHO) International. (2023). Healthy Lifestyle Behavior, Smart, Compliant and Control Hypertension.http://abdiinsani.unram.ac.id.e-ISSN: 2828-3155. P-ISSN: 2828-4321

Wiltshire (2016)., Mega Aktiva: Journal of Economics and Management, The Impact of Work as a Calling on Job Satisfaction and Organizational Commitment, Website: https://megaaktiva.umkendari.ac.id/index.php/Jurnal, vol 11, No 1, April 2022 ISSN: 2086-1974 (Print), ISSN:2654-5780(Online)

Whelton et al., (2017).Family Nursing Care of Mr. D to Mrs. W with Cardiovascular System: Hypertension in Kutayu Village RT 04 RW 01 Tonjong District Brebes Regency. Jurnal Medika Nusantara Vol. 1, No. 4 November 2023 e-ISSN: 2986-7061; p-ISSN: 2986-7878, Pages 69-83 DOI: https://doi.org/10.59680/medika.v1i4.607