ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF HEALTH MEDICINE AND CURRENT RESEARCH

RISK FACTORS FOR HYPERTENSION IN MEN AGE 45-50 YEARS IN KATANA VILLAGE, EAST TOBELO DISTRICT, NORTH HALMAHERA REGENCY

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ABSTRACT

Background: Hypertension or high blood pressure is a risk factor for cardiovascular disease and is a major problem in both developed and developing countries.

Research Methods The method used is a quantitative method with the type of analytical Survey research.

The results of this study showed that from 49 respondents there was a relationship between smoking with the incidence of hypertension and those who were at risk with a percentage of 63.3% who were not at risk at 36.7%, and alcohol with frequent hypertension was 73.5% and rarely 26.5%, and eating pattern with good hypertension incidence 61.2% and not good 38.8%, in Katana Village, East Tobelo District, North Halmahera Regency. In Katana Village in 2020, there were 109 cases. And at the beginning of January to July 2021, the number of cases of hypertension sufferers was 86 people. In women, the number of cases of hypertension is as many as 37 and in men as many as 49 people. **The Conclusion** from the research results that can be concluded, from the three variables, studied, all three have a significant relationship where the results of statistical tests using the chi-square test that this researcher obtained are 0.002.

DISCUSSION

Hypertension is an increase in blood pressure in the arteries that can be experienced by all ages. Hypertension is defined as systolic blood pressure >140 mmHg and diastolic pressure >90 mmHg. Hypertension or high blood pressure is a risk factor for cardiovascular disease and is a major problem in both developed and developing countries.

Risk factors for the occurrence, in general, an increase in blood pressure in general is a risk factor that cannot be overcome and can be overcome, which cannot be overcome, such as genetic factors, gender, race and age. While the risk factors that can be overcome or modified consist of obesity, smoking, alcohol, stress, excessive salt consumption, and diet.

The occurrence of an increase in blood pressure will increase with increasing age of a person. The increase reached 29% at the age of 25 - 44 years. at the age of 45-64 years, it reaches 51% and at the age of more than 65 years, it reaches 65%.

Basic Health Research in 2013 cases of increased blood pressure aged over 18 years as much as 25.8% of the total population of Indonesia. And in 2018 concluded that hypertension sufferers reached 34.1% of the total population of Indonesia. So this data aims to analyze the factors that influence the incidence of hypertension.

According to the Ministry of Health (2017), hypertension is still a major challenge in Indonesia because it is a condition that is often encountered in primary health services such as Puskesmas.

Hypertension Management

Treatment of hypertension using non-pharmacological therapy for treatment in the form of recommendations for lifestyle modifications that are quite effective can reduce cardiovascular risk with minimal cost and minimal risk.

a. Sport
b. Weight loss
c. Limiting alcohol
d. Reduce consumption of saturated fat
   Quit smoking

Treatment

Non-pharmacotherapy: By implementing a healthy lifestyle such as regular exercise, and reducing foods that contain too much salt

Risk Factors for Increased Blood Pressure Uncontrollable risk factors

1. Age
Partly degenerative process. Hypertension is naturally only found in adults and there is an increasing trend of prevalence at the age level of more than 40 years.

2. Genetics
A person can get a faster chance of developing high blood pressure if their parents have high blood pressure disease. Genetic factors in the family will cause the family to be at risk of suffering from hypertension.

3. Race
High blood pressure is more common in black people than white people. Until now, the cause is unknown. but blacks found lower levels of renin and greater sensitivity to vasopressin.

Controllable risk factors

A similar previous study was conducted by Nuriani et al. (2021) The relationship between smoking and the Pidginence of hypertension in Pidgi Jaya Regency concluded that there was a significant relationship between smoking and the incidence of hypertension.

A similar study was also conducted by Wiwiek Natali et al (2021) in

Pekalongan and concluded that there is a significant relationship between stress and lifestyle with the incidence of hypertension.

A similar study was also conducted by Nurleny et al (2021) in Padang, Obesity with food consumption in the incidence of hypertension, concluded that there was a significant relationship between obesity and food consumption factors.

The same study was conducted by Yodya Syaanindita et al (2021) in Surakarta, Age, education, occupation, and family history, concluded that age, education, and family history had a significant relationship with the incidence of hypertension.

RESEARCH METHODS
Types of research
The type of research used in this research is an analytical survey method, with a *cross-sectional approach* (cross-sectional). To see the risk factors for hypertension.

RESEARCH RESULTS AND DISCUSSION
Research result
Population data in 2021 shows that the population living in Katana Village is 1,100 people, with a total of 284 families and a total of 196 houses, consisting of 582 men and 518 women.

Characteristics of Respondents
Table 4.1 Frequency Distribution of Respondents by Age

Age	Frequency	Percentage
45-47	20	48.0%
48-50	29	59.2%
Total	49	100%

Table 4.1: shows that from 49 respondents, 48.0% and 48-50 as many as 29 respondents 59.2%. By the highest number aged 45-47 as many as 20 people

Table 4.2: Respondents by education level

Education	Frequency	Percentage
SD	40	81.6%
Middle School	4	8.2%
High School	5	10.2%
Total	49	100%

Based on the data in table 4.2 shows that from 49 respondents with elementary education background as many as 40 respondents 81.6% junior high school as many as 8.2% were high school respondents and 5 respondents 10.2%.

Table 4.3: Respondents by occupation

Work	Frequency	Percentage
Fisherman	2	4.1%
Entrepreneur	3	6.1%
Farmer	44	89.8%
Total	49	100%

Based on Table 4.3: show that of the 49 respondents with Fishermen 2 people 4.1%, Entrepreneurs 3 people 6.1%, and Farmers 44 people 89.8%.

Univariate Analysis
Univariate analysis was carried out to see the frequency distribution of data from the dependent and independent variables in the study of Risk Factors for Hypertension in Katana Village, East Tobelo District, North Halmahera Regency 2021.

Table 4.4: Smoking Risk Factors

Smoking	Quantity	Percentage
At-Risk	31	63.3%
No-Risk	18	36.7%
Total	49	100%

Table 4.4: Of the 49 respondents' Risk Factors Smoking is at risk as many as 31 respondents 63.3% and 18 respondents who at risk 36.7%.

Table 4.5: Respondents Based on Alcohol Risk Factors

Alcohol	Amount	Percentage
At-risk	36	73.5%
No-Risk	13	26.5%
Total	49	100%

Table 4.5 Of the 49 Alcohol Risk Factor respondents who consumed as many as 36 respondents 73.5% and those who did not consume as many as 13 respondents 26.5%.

Table 4.6: Distribution of Respondents Based on Risk Factors Diet

Dietary Habit	Amount	Percentage
Good	30	61.2%
Poor	19	38.8%
Total	49	100%

Table 4.6 Of 49 Respondents Risk Factors for Good Eating Patterns were 30 respondents 61.2% and those who were not good were 19 respondents 38.8%.

Bivariate analysis

Bivariate analysis is a statistical test used to see the relationship between the independent variables, namely smoking, alcohol, and diet with the dependent variable, namely the *Chi-Square approach.*

Table 4.7: Smoking with Hypertension Incidence.

Smoke	Hypertension Incidence				Total		P-Value
	Level 1		Level 2				
	F	%	f	%	n	%	
At risk	18	36.7	13	26.5	31	63.3	0.02
No Risk	18	36.7	0	0.0	18	36.7	
Total	36	37.5	13	26.5	49	100	

Table 4.7 shows that of 49 the smoke and are at risk of increasing blood pressure, 31 respondents (63.3%), who do not smoke and do not have hypertension are 18 people (36.7%).

Table 4.8 : Alcohol with Hypertension Incidence.

Alcohol	Hypertension Incidence				Total		P-Value
	Level 1		Level 2				
	f	%	f	%	n	%	
Beesiko	31	63.3	5	10.2	36	73.5	
No Risk	5	10.2	8	16.3	13	26.5	0.02
Total	36	37.5	13	26.5	49	100	

Table 4.8 shows that of the 49 respondents who consume P-Value and were at risk of developing hypertension, 36 (73.5%).

Table 4.9: Diet with Incidence of Increased Blood Pressure.

Dietary Habit	Hypertension Incidence				Total		P-Value
	Level 1		Level 2				
	f	%	f	%	n	%	
Good	27	55.1	3	6.1	30	61	0.02
Not Good	9	18.4	10	20.4	19	38.8	
Total	36	37.5	13	26.5	49	100	

Based on table 4.949 respondents, 30 respondents (61.2%) and less good eating habits were as many as 19 respondents (38.8%). This means that there is a relationship between dietary risk factors and increased blood pressure in the community in Katana Village, Kec. East Tobelo.

Discussion

From the results of the study above, from 49, respondents, the largest number of ages was between the ages of 45-47 years as many as 20 responded with 48.0% and ages 48-50 years with as many as 29 respondents with 59.2%.

From the results of the research above, it shows that of the 49 respondents, the highest educational background was SD as many as 40 people, 81.6%, and at least 4 people from junior high school 8.2%, and high school background as many as 5 respondents 10.2%. Because education is an important role in human life, the higher a person's education, the easier it is to receive information. Because a person's level of education can affect the ability to absorb information, solve problems, and behave well. Someone who has extensive knowledge will give a positive response to the information obtained and think long about the benefits they might get from The results of the discussion table 4.3 explains that of 49 people with hypertension with a job as a fisherman 2 respondents 4.1%, entrepreneurs 3 respondents 6.1%, and most of them work as farmers 44 respondents 89.8%.

From the results of the study above, the discussion in Table 4.4 shows that of 49 people with hypertension, males gender aged 45-47 years, 20 respondents were 40.8%, and men aged 48-50 as many as 29 respondents 59.2%.

4.2.1 Risk Factors for Hypertension Incidence in Men Age 45-50 Years in Katana Village, Kec. East Tobelo Kab. North Halmahera.

From the results of the above study based on table 4.6, it shows that of the 49 respondents who smoked and were at risk for hypertension, 31 respondents (63.3%), while those who did not smoke and did not have hypertension were 18 respondents (36.7%).

The results of *the Chi-Square* test statistical test the is smaller than the *a* value, the value obtains value *p value (Value)* = 0.02 alpha *an (alpa) =* <0.05. So H0 is rejected and Ha is accepted, so it can be concluded that there is a relationship between smoking habits and the incidence of hypertension. Then the above comparison results based on table 4.7 shows that respondents who consume alcohol and are at risk of developing hypertension are 36 respondents (73.5%), while those who do not consume alcohol and are not at risk of hypertension are 13 respondents (26.5%).

The results of the Chi-Square statistical test *p-value* is greater than the *a* value, the value obtained is *p-value (Value)* = 0.02 with a*n (alpa) =* <0.05. Then H0 is rejected and Ha is accepted, so it can be concluded that there is a relationship between consuming alcohol and the incidence of hypertension. This research is in line with previous research that has been studied by Mayasari Rahmadhani with the title,

Factors Affecting the Occurrence of Hypertension in Communities in Bedagai Village, Pinang City. The risk factor for hypertension is smoking. The results of the Chi-Square statistical test with p-value =

0.000 and alcohol p = 0.000. This means that H0 is rejected and Ha is accepted.

The results of the research above, based on table 4.8 it show that of 49 respondents with good eating habits, 30 respondents 61.2%, and those who are not good as many as 19 respondents 38.8%. The results of the Chi-Square statistical test because the *p-value* is greater than the *a* value, the value obtained is *p (Value)* = 0.02 with *an(alpa)* = <0.05. Then H0 is rejected and Ha is accepted. This research is in line with previous research that has been carried out by Elisa Oktavia under the title, Relationship of Sex, Physical Activity and Diet with Hypertension Incidence in the Community in the Work Area of the South Alalak Health Center, Banjarmasin City in 2021. The results of the Chi-Square statistical test with p-value= 0.000 means that H0 is rejected and Ha is accepted.

The results showed that 36 respondents with level 1 hypertension were 37.5% and level 2 hypertension was at least 13 respondents 26.5%.

Conclusion

From the results of the study using the Chi-square test on the sample, it was found that of the three variables studied, all three had a significant relationship and what this researcher obtained was 0.002.

Suggestion

It is necessary to improve health services and be more active in providing counseling to people who are still limited by education in order to find out the causes of hypertension.

BIBLIOGRAPHY

1. Shely M, Hasnah T, Indah Purnama S. The Relationship of Smoking Habits with Hypertension Incidence in Men Over 40 Years Old in the Work Area of the Kampar Kiri Health Center, Initium Medica Journal 2021; 2798-2289.

2. Http://www.WHO.org.id. Risk Factors for Hypertension in 2018.

3. Warjiman, Er, UE, Yohana, G., Hapsari, & Dwi, F. Screening and education of hypertension sufferers. *Journal of Asylum for People in Service (JSIM),* 2020;2(1);15-26

4. Ministry *of Health, Basic Health Research 2018, Jakarta*, Ministry of Health of the Republic of Indonesia. 2018.

5. The Effect Of Consumption Of Worm Laor (Polychaeta) On Blood Pressure In Patients With Hypertension In The Work Area Of Kusuri The Health Center In The West Tobelo District, North Halmahera, *International Journal of Health Medicine and Current Research*

6. Erma Kasumayanti, Maharani Factors Associated with the Incidence of Hypertension of Productive Age in Pulau Jambu Village, UPTD Kuok Health. Jurnal. Ners. 2021;5(1):1-7

7. *Widya Mei Suriningsih, Arina Malia.* Descriptive of Knowledge Level and Physical Activity of People with Hypertension with Complications in the Work Area of Kartasura Public Health Center, Sukoharjo Regency. 2021.

8. Hypertensive Adults Typology And Self-Care Behaviors In The Management Of Hypertension In Lanao Del Sur, Philippines. *International Journal of Health Medicine and Current Research.* 2020;5(3):1863-1879.

9. Nuriani, Kintoko Rochadi and Fazidah Aguslina Siregar. The Relationship of Smoking to the Incidence of Hypertension in Pidie Jaya Regency. *Journal of Health Sains 2021;* 2(6).

10. Wiwek Natalya, S Sugiharto, Hilda Oktaviani. Characteristics of Age, Stress Levels, and Lifestyle of Hypertensive Clients in the Work Area of Wonopringgo Health Center, Pekalongan Regency. 2021.

11. Nurleny Nurleny, Meria Kontesa. Obesity and Food Consumption Associated with Hypertension Incidence in the Elderly. *Permas Scientific Journal: Kendal STIKES Scientific Journal* 2021;11(2).

12. Widya Mei Suriningsih, Arina Malia. Descriptive of Knowledge Level and Physical Activity of People with Hypertension with Complications in the Work Area of Kartasura Public Health Center, Sukoharjo Regency. 2021.

13. Rahmadani M, Factors Affecting the Occurrence of Hypertension in Communities in Bedagi Village, Pinang City. Journal of Medicine STM(Medical Science and Technology)2021;4(1),52-62.