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Relationship of Genetic History, Behavior, Environment and Health Services with The Event of Hypertension In Kolam Village, North Sumatera

Mina Ainun Harahap[(1)], Farah Fauziah[(2)], Gadis Permata Hati Manalu[(3)], Tri Niswati Utami[(4)]

Universitas Islam Negeri Sumatera Utara, Indonesia

E-mail: : [(1)]minaainunhrp@gmail.com

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Abstract

Every year, people with hypertension will experience an increase, in 2025 it is estimated that as many as 1.5 billion people are affected by hypertension, then it is also estimated that every year 9.4 million people will die due to hypertension and its complications (Kemenkes, 2019). The purpose of this study was to analyze what are the causes of high hypertension disease in the village of Pond, District of Percut Sei Tuan. This quantitative research uses an observational method with a cross sectional study design. Samples were taken about 150 respondents, consisting of men and women with an average age of 47 years. The sampling method is random sampling method. Data was collected by filling out questionnaires by respondents. The data variables studied were Age, Gender, Education, Genetic History, and variables including behavior, environment, and health services. This is related to HL Bloom's Theory which states that there are 4 factors influencing health status in a row. The results of the study using the 5% alpha statistical test showed that P-Value < 0.05 there was a relationship between genetic history and the incidence of hypertension, then regular exercise 3 times in a week has no relationship with hypertension, this is based on P-Value > 0.05, namely P-Value 0.706. Then there is a relationship between the behavior of consuming iodized salt with the incidence of hypertension, a P-Value value of 0.022 is obtained. The conclusion that causes the high prevalence of hypertension in the village of Pools is irregular eating patterns and the respondent's genetic history. and Health Services.

Keywords: behavior, environment, gender, genetic, hypertension

Introduction

Health problems that often occur in society in general are (PTM). Non-communicable diseases (NCDs) are known to be the cause of death. One type of PTM that is well known in the community is Hypertension. Where until now it is still a priority health problem because this type of disease has no visible symptoms from outside the body, so it can cause complications in other body organs (Nanda, 2014). Hypertension is a condition characterized by an increase in systolic blood pressure (TDS) and diastolic blood pressure (TDD) 140/90 mmHg. A person can get hypertension if his blood pressure check shows results above 140/90 mmHg or more, in a resting state with examinations carried out twice with an interval of 5 minutes. Where at rest systolic can be said to be normal if it is about 100-140 mmHg, then diastolic can also be said to be normal if it is at a value of 60-90 mmHg (Sari, 2017). According to the Health Research and Development Agency (BalitBankes) with the results of the 2018 Basic Health Research (Riskesdas) data, the prevalence of hypertension sufferers in Indonesia reaches 34.1%, where this figure has increased from 2013 which was 25.8%. Every year, people with hypertension will experience an increase, in 2025 it is estimated that as many as 1.5 billion people are affected by hypertension, then it is also estimated that every year 9.4 million people will die due to hypertension and its complications (Kemenkes, 2019).

Hypertension can be a serious problem, if not treated as early as possible and can cause complications that are very dangerous for the

body, such as kidney failure, heart or heart failure, stroke and visual impairment (Roshifanni, 2016). There are several causes that influence the occurrence of hypertension, namely (Age/ Age, Gender), Obesity from drugs (Naseem et al 2017).

The most frequently associated with the incidence of hypertension is age. Because with age, the elasticity of the arteries decreases. This occurs due to the accumulation of collagen and hypertrophy of thin, fragmented smooth muscle cells and fractures of elastin fibers. Then with increasing age, there will be structural abnormalities in the form of endothelial dysfunction, thereby increasing the stiffness of the arteries of the elderly (Amu, 2015). To overcome and prevent high hypertension, it can be done by controlling diet then reducing caffeinated drinks and also reducing excessive salt consumption and maintaining adequate activities such as regular exercise (Roshifanni, 2016).

Based on data from the Central Health Center, namely Bandar Kalippa, 4165 people in the Pond Village were affected by hypertension throughout 2020 to 2022. The degree of health is part of one measure of the welfare and quality of human resources, this is based on the Hl Bloom Theory proposed by Hendrik L Blum which is also related to the causes of high hypertension in the Pond Village, namely:

Environmental Factors (Environment)

Pond Village, Percut Sei Tuan Sub-district is surrounded by people who work as farmers with the majority of the community's final education being in high school, junior high and elementary school.

Behavioral Factors (Life Style)

The lifestyle of the people in the Pool Village is also included in the middle and lower status, this can be seen from the many marriages at an early age that occur. Heavy use of cigarettes is good for the elderly.

Genetic Factors (heredity)

Many types of diseases are experienced by the people of the village of ponds, especially the elderly, where the disease comes from a genetic history owned by the community itself. Hypertension, Diabetes Mellitus and other diseases.

Factor Health Services (Health Services)

Health services also affect the degree of human health. The health service that is owned by the Swimming Village is PUSTU (Integrated Health Center). PUSTU has a routine monthly agenda, namely the Infant and Elderly Posyandu. Where the location of PUSTU is not far from the village of Pool itself so that this makes it easier for the community of Swimming Village to receive health services. From this HL Bloom Theory, therefore, the researcher wanted to know how the description of the analysis of the causes of high hypertension in the village of Swimming, Percut Sei Tuan, Deli Serdang Regency, North Sumatera.

Materials and Method

The research conducted in the village of Pond is a quantitative research that uses an observational method with a cross sectional study design. The sampling technique used is random sampling, which is a sampling technique in which the researcher relies on his or her own judgment when selecting members of the population to participate in the study. Respondents from this study were the people of Pond Village, Percut Sei Tuan District, with a total of 150 respondents.

The data used in this study is primary data. Primary data retrieval is done by using a questionnaire media. Questionnaires were distributed to both respondents who have a history of hypertension or respondents who do not suffer from hypertension. Before filling out the questionnaire, first check the blood pressure. The distribution of questionnaires was carried out on September 22 to September 24, 2022 in Pond Village, Percut Sei Tuan District.

The dependent variable in this study is the incidence of hypertension. The independent variables are age, gender, occupation, education, genetic history, smoking behavior, exercise, sleep, work activities, eating behavior, consumption of iodized salt, work environment, living environment, blood pressure checks, health facilities and infrastructure and provision counseling.

The analytical test used was univariate and bivariate. Univariate analysis was conducted to examine data on respondent characteristics such as age, gender, occupation and education. As for bivariate, it is done5% alpha statistical test to determine whether there is a relationship between one variable and another such as the relationship between genetic history, behavior such as smok-

Table 1. Age Distribution of Respondents

	N	mean	median	SD	Min	Max
Age	150	47.27	48	11,487	18	68

Table 2. Distribution of Gender, Occupation, and Education of Respondents

VARIABLE		N	%
Gender	Man	45	30
	Woman	105	70
	TOTAL	150	100
Work	Civil Servant	20	13.3
	NON Civil Servant	61	40.7
	Doesn't work	69	46
	TOTAL	150	100
Education	Elementary School	41	27.3
	Junior High School	27	18
	Senior High School	63	42
	College	19	12.7
	TOTAL	150	100

ing behavior, exercise behavior, sleep behavior, work activity behavior, eating behavior, and salt consumption behavior; environment such as work environment and living environment; and health services such as blood pressure checks, facilities and infrastructure, and counseling on the incidence of hypertension.

Results and Discussion

Univariate Test (Characteristics of Research Respondents)

Characteristics by Age

Based on the Table 1, it can be seen that the average age of the research respondents was 47 years with a minimum age of 18 years and a maximum age of 68 years. This is in line with previous research conducted by Ni Luh et al (2020) which stated that as age increases, the risk of hypertension also increases. Age is associated with endothelial dysfunction and increased arterial stiffness in hypertension.

Table 3. Relationship of Genetic History with Hypertension Incidence

	Hypertension Status				Total		P Value
Genetic History	**Hypertension**		**No Hypertension**				
	n	%	n	%	N	%	
There is	47	31.3	1	0.7	48	32	0.000
There isn't any	66	44	36	24	102	68	
Total	113	75.3	37	24.7	150	100	

Table 4. Relationship of Smoking Behavior with the Occurrence of Hypertension

Smoke	Hypertension Status				Total		*P Value*
	Hypertension		**No Hypertension**				
	n	%	n	%	N	%	
There is	61	40.6	17	11.3	78	52	0.451
There isn't any	52	34.7	20	13.3	72	48	
Total	113	75.3	37	24.7	150	100	

Characteristics by Gender, Occupation and Education

Based on Table 2, it can be seen that the distribution by gender, female respondents were more than male, namely 105 respondents (70%). Furthermore, the distribution based on work, research respondents are mostly unemployed, namely as many as 69 respondents (46%). Meanwhile, based on the characteristics of education, most of the research respondents had high school education as many as 63 respondents (42%).

The results of this study based on gender are related to the 2013 RISKERDAS Indonesia report. The prevalence of hypertension is also dominated by women. Gender has a big influence on the incidence of hypertension. In women, the risk of hypertension becomes higher after entering menopause, in this case hormonal factors, namely estrogen, can be one of the predispositions (Ministry of Health, Director of PPTM, Sub-Directorate of Heart and Blood Vessel Disease Control, 2013). This data is not in line with the results of the study, there is a possibility that the respondents are indeed dominant in women so

they cannot be compared with men. The results of the research work on the largest hypertension respondents were (housewives, not working) 63 respondents (55.8%). In Ulya Zakiyatul's study in 2017 who became a sufferer of hypertension, where work that did not rely on regular physical activity had an effect on blood pressure.

This study proves that work is a risk factor for hypertension. Hypertension research resultsThe large number of respondents who work as housewives causes respondents to rarely carry out activities such as less work activities and spend more time at home. Habits like this can then be a trigger for hypertension. Then the results of research based on education. This research is in line with research conducted by Susanti, et al (2020) which shows the results that responses with low education experience more hypertension. The risk of developing hypertension is higher at low education. This is because people with low education will have less knowledge about health and of course will be difficult and slow in receiving information, for example counseling about hypertension and the dangers of hypertension and its prevention provided by officers so that it has an impact on healthy behavior/lifestyle. Budget, 2013).

Bivariate Test

The Relationship between Genetic History and the Incidence of Hypertension

Based on the Table 3 shows statistical test at 5% alpha, P-Value was 0.000, this figure indicates that P-Value <0.05. It can be concluded that there is a relationship between genetic history and the incidence of hypertension. The risk of primary (essential) hypertension may increase due to a close family history of hypertension (hereditary factors). In addition, external roles such as other environmental factors also have an important role.

This theory is not in line with the results of the study because most of the respondents did not have a family history of hypertension (there is a possibility that the respondents did not know and could not remember the history of their closest family illness, both parents and siblings). This is also supported by hypertension which often does not cause complaints in the sufferer (silent killer).

Behavioral Relationship With Hypertension Incidence

Based on the Table 4 shows statistical test at 5% alpha, the P-Value was 0.451, it showed that the P-Value > 0.05. From these values, it can be concluded that there is no relationship between smoking behavior and the incidence of hypertension.This could be due to the small sample of hypertensive smoking respondents in the village of Pond. (Perhaps there are more female respondents than male respondents).

The relationship between smoking and blood pressure is not univocal, with some studies showing a positive association (Bowman, Graziano, Buring, & Sesso, 2007), and others havinginverse relationship (Li, H., Tong, W., Wang, A., Lin, Z., & Zhang, 2010). In addition, a study by (Uguy, Nelwan, & Sekeon, 2019) also stated that smoking was not associated with hypertension.

The inverse association between smoking and hypertension can be due to other factors that influence but are not included in theanalysis.Although the relationship is inverse in this study, it does not mean that smoking can be ignored as a risk factor for hypertension because in addition to hypertension, smoking also causes other organ disorders such as breathing (Dikalov et al., 2019).

Based on the Table 5 shows statistical tests at 5% alpha, P-Value is 0.706, this indicates that P-Value > 0.05. From the P-Value it can be concluded that regular exercise 3 times a week has no relationship with the occurrence of hypertension.

Based on the results of exercise habits with the incidence of hypertension, this study did not find a relationship between exercise habits and the incidence of hypertension. These results are in accordance with the results of the research of Siringoringo et al (2013) which stated that there was no significant relationship between exercise habits and the incidence of hypertension, meaning that exercise habits were not a risk factor for the incidence of hypertension in respondents.

In a previous study conducted by Rahajeng and Tuminah (2009), it was stated that based on physical activity or sports, the proportion of respondents who lacked physical activity in the hypertension group was found to be higher (42.9%) than the non-hypertensive group (41.4%). .

Physical exercise or exercise is one of the efforts in the management of hypertension with a non-pharmacological approach in addition to diet regulation, smoking cessation and alcohol consumption. In the management of hypertension with a pharmacological approach, drugs are used.

Table 5. Relationship of Sports Behavior to Hyperten-

Regular Exercise	Hypertension Status				Total		P-Value
	Hypertension		No Hypertension				
	n	%	n	%	N	%	
Yes	53	35.3	19	12.7	72	48	0.706
Not	60	40	18	12	78	52	
Total	113	75.3	37	24.7	150	100	

Table 6. Relationship between Sleep Behavior and Hypertension Incidence

Sleep Time	Hypertension Status				Total		P-Value
	Hypertension		No Hypertension				
	n	%	n	%	N	%	
<8 Hours	71	47.3	19	12.7	90	60	
8 hours	35	23.3	18	12	53	35.3	0.068
>8 Hours	7	4.7	0	0	7	4.7	
Total	113	75.3	37	24.7	150	100	

However, exercise is not recommended for hypertensive patients who have a systolic blood pressure of more than 170 mmHg and or a diastolic blood pressure of more than 110 mmHg (Afriwardi, 2009).

Based on Table 6 shows statistical tests at 5% alpha, P-Value is 0.068, this indicates that P -Value > 0.05. This value concludes that there is no relationship between sleep behavior and the incidence of hypertension.

The analysis above explains that respondents who have good sleep patterns tend to avoid hypertension in contrast to the group who have poor sleep patterns. Whichwhere this condition is in accordance with the opinion that based on the results of his study reported that the risk of hypertension was significantly increased in individuals diagnosed with sleep disorders compared to individuals without sleep-related disorders. The higher risk applies to all age groups and genders. Poor sleep quality can alter the stress hormone cortisol and the sympathetic nervous system, which can lead to an increase in blood pressure.

Based on the Table 7 shows statistical test at alpha5% obtained P-Value 0.044, this indicates that the P-Value <0.05. From these values, it can be concluded that there is a relationship between work activity behavior and the incidence of hypertension.

Table 7. Relationship between Occupational Behavior and Hypertension incidence

Work Activities	Hypertension Status				Total		P-Value
	Hypertension		No Hypertension				
	n	%	n	%	N	%	
Light	61	40.7	13	8.7	74	49.3	
Currently	44	29.3	23	15.3	67	44.7	0.044
Heavy	8	5.3	1	0.7	9	6	
Total	113	75.3	37	24.7	150	100	

Table 8. Relationship between eating behavior and hypertension incidence

Eating Activities	Hypertension Status				Total		P-Value
	Hypertension		No Hypertension				
	n	%	n	%	N	%	
3 times a day	103	68.7	26	17.3	129	86	0.005
2 x a day	10	6.7	11	7.3	21	14	
Total	113	75.3	37	24.7	150	100	

Many occurrences of hypertension in workers indicate that the government's strategic policies to implement physical activity in the work environment have not been effective, including: the application of laws and regulations supporting the implementation of physical activity, partnership and multi-sector approaches, increasing and developing resources for implementing activities, focusing attention on equal rights and eliminating disparities between community groups, increasing effective evidence-based interventions in various settings, implementing operational research and developing long-term policies and strategies for the sustainability of community-based NCD prevention.

Based on the Table 8 shows statistical test at 5% alpha, the P-Value was 0.005, this indicates that the P-Value <0.05. From these values, it is concluded that there is a relationship between eating behavior in a day with the incidence of hypertension.

Table 9. Relationship of Iodized Salt Consumption Behavior with Hypertension Incidence

Consumption of Iodized Salt	Hypertension Status				Total		P-Value
	Hypertension		No Hypertension				
	n	%	n	%	N	%	
Yes	110	73.3	32	21.3	142	94.7	0.022
Not	3	2	5	3.3	8	5.3	
Total	113	75.3	37	24.7	150	100	

Table 10. Relationship between Respondents' Work Environment and Hypertension Incidence

Work environment	Hypertension Status				Total		P-Value
	Hypertension		No Hypertension				
	n	%	n	%	N	%	
Indoor	79	52.7	18	12	97	64.7	0.028
Outdoor	34	22.7	19	12.7	53	35.3	
Total	113	75.3	37	24.7	150	100	

Table 11. Relationship between Living Environment and Hypertension Incidence

Living Environment	Hypertension Status				Total		P-Value
	Hypertension		No Hypertension				
	n	%	n	%	N	%	
No Noise	37	24.7	18	12	55	36.7	0.115
Noisy	76	50.7	19	12.7	95	63.3	
Total	113	75.3	37	24.7	150	100	

Table 12. Relationship of Blood Pressure Examination with Hypertension Incidence

Blood Pressure Check	Hypertension Status				Total		P-Value
	Hypertension		No Hypertension				
	n	%	n	%	N	%	
Yes	44	29.3	6	4	50	33.3	0.015
Not	69	46	31	20.7	100	66.7	
Total	113	75.3	37	24.7	150	100	

With the relationship between the test results above, this is in accordance with the results of Amila's examination (2018), so most of the respondents have a good diet with the incidence of hypertension. Therefore, the most likely influence on hypertension in the village of Swimming is a diet that eats foods that contain salt (sodium) and high fat.

The side effects of this review are also in accordance with Susanti's research (2017) which states that there is a relationship between sodium intake and circulatory pressure in people who have hypertension.

Based on the Table 9 shows statistical test at 5% alpha, the P-Value was 0.022, this indicates that the P-Value <0.05. From these values, it can be concluded that there is a relationship between the behavior of consuming iodized salt and the incidence of hypertension.

The results of this study are supported by the research of Devi Dewi, S. said in her research regarding the relationship between the level of salt consumption and the incidence of hypertension in Nagari Lunang Barat, the working area of Tanjung Beringin Public Health Center, Lunang District, Pesisir Selatan Regency, it showed that respondents who consumed high salt intake suffered from hypertension more than respondents. who consume less salt.

Research on salt intake was also carried out by Lin by showing the results that the daily salt intake of the majority of citizens living in Ningbo exceeds the DRI (6 g / d) in China, increasing the risk of hypertension. Consumption of salt or the amount of sodium content in the food consumed by the community is one of the causes of hypertension. Sodium is absorbed into the blood vessels from high salt consumption resulting in water retention, so that blood volume increases.

This causes an increase in blood pressure. High sodium intake will cause excessive release of natriouretic hormone which will indirectly increase blood pressure.

According to the researchers, the pattern of salt consumption of the respondents is very influential on the occurrence of hypertension. Salt has a proportional relationship with the incidence of hypertension. The more the amount of salt in the

Table 13. Relationship of Health Service Facilities and Infrastructure with Hypertension Incidence

Facilities and infrastructure	Hypertension Status				Total		P-Value
	hypertension		No Hypertension				
	n	%	n	%	N	%	
Not enough	8	5.3	2	1.3	10	6.7	
Well	87	58	34	22.7	121	80.7	0.094
Very good	18	12	1	0.7	19	12.7	
Total	113	75.3	37	24.7	150	100	

Table 14. Relationship of Counseling Regarding Hypertension with Hypertension Incidence

Giving Counseling	Hypertension Status				Total		P-Value
	Hypertension		No Hypertensio				
	n	%	n	%	N	%	
Yes	84	56	18	12	102	68	0.008
Not	29	19.3	19	12.7	48	32	
Total	113	75.3	37	24.7	150	100	

body, there will be an increase in plasma volume, cardiac output, and blood pressure. In addition, consumption of high amounts of salt can shrink the diameter of the arteries, so the heart has to pump harder to push the increased blood volume through narrower spaces, which can lead to hypertension.

Environmental Relationship With Hypertension Incidence

Based on the Table 10 shows statistical test at 5% alpha, the P-Value was 0.028, this indicates that the P-Value <0.05. From these values, it can be concluded that there is a relationship between the respondent's work environment and the incidence of hypertension.

Many occurrences of hypertension in workers indicate that the government's strategic policies to implement physical activity in the work environment have not been effective, including: the application of laws and regulations supporting the implementation of physical activity, partnership and multi-sector approaches, increasing and developing resources for implementing activities, focusing attention on equality. rights and eliminating disparities between community groups, increasing effective evidence-based interventions in various settings, implementing operational research and developing long-term policies and strategies for the sustainability of community-based NCD prevention. The results showed that the type of work became a protective factor against hypertension, namely PNS/TNI/Polri/BUMN/BUMD, entrepreneurs, farmers, fishermen, laborers and other occupational groups.

can prevent hypertension because physical activity due to work is good for blood circulation, people who do not work are at risk of suffering from hypertension 8.95 times compared to people who work (22,23). The habit of doing physical activity to fill spare time has not become a habit, computerization reduces physical activity (24,25). Other studies have shown that the higher the physical activity, the lower the blood pressure. Another illustration shows that shift workers have a higher percentage of hypertension than non-shift workers.

Based on the Table 11 shows statistical test at 5% alpha, the P-Value was 0.115, this indicates that the P-Value is > 0.05. From this value, it can be concluded that there is no relationship between living environment based on noise level and the incidence of hypertension.

The results of this study are in accordance with research conducted by Zulharmans, et al (2015), which states that there is a significant relationship between noise exposure and blood pressure increases. Noise has a disturbing impact on humans of varying severity, from temporary to self-healing to permanent. In addition to having a negative impact (permanent/temporary) on the hearing system, noise can also disrupt the balance system, increase blood pressure, increase heart rate and be easily breathless when working in noisy places, sleep disturbances and stress. (Tambunan, 2005; 123).

Thus, it will disturb the level of comfort and peace for the residents of the house because the more dense the occupancy of the house can trigger a large noise in the area, so that it will have a bad impact on health.

Therefore, according to statistical research by van Kempen on many results of the study of

noise effects, it is found that there is an effect of noise exposure on pressure. A statistically significant increase was found for occupational noise exposure, for systolic blood pressure of 0.51 (0.01 – 1.00) mmHg / 5 dBA, while for diastolic the increase was not significant (Subekti, 2015).

Based on the Table 12 shows statistical test at 5% alpha, the P-Value was 0.015, this indicates that the P-Value <0.05. From these values, it can be concluded that there is a relationship between routine blood pressure checks in health services and the incidence of hypertension.

From previous research, blood pressure control behavior is an activity carried out by people with hypertension in controlling blood pressure in health services. However, hypertensive patients only control health services if signs and symptoms appear even if complications such as stroke have occurred (Martins, Atallah & Silva (2012) in Sari (2015).

Based on this study controlling blood pressure is very related to the incidence of hypertension, this is because hypertension attacks all ages and all genders. Awareness for patients is very influential on the importance of maintaining health, especially people with hypertension. It is known that the higher the blood pressure, the more complications that will result and are fatal to health. In addition to the awareness of motivation by the family, it is also very influential for patients to control blood pressure and tell what cannot be eaten by people with hypertension.

Based on the Table 13 shows statistical test at 5% alpha, the P-Value was 0.094, this figure indicates that the P-Value is > 0.05. From the P-Value value, it can be concluded that there is no relationship between health service facilities and infrastructure and the incidence of hypertension.

In this study, the researchers assumed that the majority of the people in the village of Swimming are of the opinion that because the distance between the health care facility and the community's house is quite far and will only go to the health service when the hypertension complaint recurs, so people are lazy to go for a health check so that hypertension is experienced allowed to drag on.

Based on the Table 14 shows statistical test at 5% alpha, the P-Value was 0.008, this indicates that the P-Value <0.05. From this value, it can be concluded that there is a relationship between providing counseling about hypertension to the community and the incidence of hypertension.

The results of this study are in line with research by Beigi, (2014) which states that there is an influence of educational programs with changes in knowledge. Purwati, (2014) in her research stated that there was an effect of health education on knowledge.

The counseling carried out can increase a person's knowledge regarding hypertension, previously he did not know what and how hypertension was after receiving counseling from health workers he could find out things related to hypertension. With the knowledge of the results of the counseling he can find out whether he is hypertensive or not and know the risk factors as well as how to prevent hypertension itself.

One of the efforts made to increase understanding of hypertension is by conducting health education. Health education is an effort that is planned to spread messages, instill confidence, so that people are not only aware, know and understand, but are also willing and able to make recommendations that are expected to improve health status, prevent disease, improve health status, maximize function and function. the role of patients during illness, helping sufferers and their families overcome health problems (Purwati, 2014).

There are still respondents who have poor knowledge about hypertension, of course, it becomes a problem in itself because they will always be at risk of hypertension because they do not know about preventing behavior that is at risk of hypertension.

Conclusion

Based on the results of the research that the researcher has done along with the discussion in the village of Pond, District Percut Sei Tuan, the researchers can draw the conclusion that:

1. Of the 150 respondents the average age of the research respondents was 47 years with a minimum age of 18 years and a maximum age of 68 years. It is known that there are 105 more female respondents (70%) than 45 male respondents (30%). Then, based on occupation, 69 respondents (46%) did not work. As for the characteristics of education, there are 63 respondents (42%) who

have high school education. For the results of the greatest hypertension experienced by (housewives, not working) with a total of 63 respondents (55,8%).

2. When statistical tests were carried out at 5% alpha, the P-Value was 0.000, which indicates that the P-Value <0.05. This means that there is a relationship between genetic history and the incidence of hypertension. In addition, there is no relationship between smoking behavior and the incidence of hypertension, this is based on a statistical test at 5% alpha, obtained a P-Value of 0.451, indicating that the P-Value> 0.05.
3. Then when the statistical test was carried out again it could be concluded that regular exercise 3 times a week had no relationship with the occurrence of hypertension, then there was also no relationship between sleep behavior and the incidence of hypertension, but there was a relationship between work activity behavior and the incidence of hypertension.
4. Suggestions for the Pond Village is that it is expected to often conduct socialization to the community at least once a month regarding counseling on hypertension which is often experienced by the community, both young and elderly. So that the community of Pond Village can independently make efforts to prevent hypertension.
5. For the people of Pond Village, especially the elderly and housewives, to gradually reduce salt consumption, then arrange a good diet, carry out balanced physical activation so as to avoid hypertension. For the Head of the Pond Village, if he gives an appeal to the elderly to take part in the Posyandu program for the elderly, which is run by the Integrated Community Health Center (Puskesmas) of Pond Village.

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