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The Relationship of Lifestyle with Hypertension Incidence in Antang Public Health Center of Makassar City

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The Relationship of Lifestyle with Hypertension Incidence in Antang Public Health Center of Makassar City

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CLINICAL STUDY

The Relationship of Lifestyle with Hypertension Incidence in Antang Public Health Center of Makassar City

Agussalim ^a , Gutit Enny Susanti ^b, Azikin Muhammad ^a, I Podding Takko ^a, Harliani ^a, M Natsir ^b^a School of Nursing, Health Polytechnic of Makassar, Pare-pare Nursing Program, South Sulawesi Province, Indonesia.^b School of Nutrition, Health Polytechnic of Jayapura, Papua, Indonesia, Jalan Padang Bulan Hedam, Heram, Papua, Indonesia.**ABSTRACT**

Hypertension is a disease that usually occurs in the circulatory system which can cause an increase in blood pressure above the normal value, which exceeds 140/90 mmHg. The intention of this study aims to understand the relationship between lifestyle and the incidence of hypertension in Antang Makassar Public Health Center in 2018. This research method uses quantitative analytic motives using a cross sectional approach with a population of 46 people and a sample of 36 respondents. This research was conducted on July 14-16 June. The method used is simple *random sampling and the tool used to obtain data is a questionnaire. The scale used is Liker and Guttman scale with univariate, bivariate analysis and chi-square test* with significant $\alpha = 0,05$. The results of this study indicate there is a relationship between lifestyle and the incidence of hypertension in the Makassar Antang Health Center with $P = 0,01$ smaller than the value of $\alpha = 0,05$. Suggestions are for hypertensive patients, namely the need to check their health routinely to health workers in order to know the development of blood pressure and obtain information from health workers.

KEYWORDS: Hypertension; Blood Pressure; Public Health Center; Lifestyle.**Correspondence :** Dr Agussalim, School of Nursing, Makassar Health Polytechnic, Parepare Nursing Program, South Sulawesi Province, Indonesia. Email : salim170878@gmail.com.**Copyright © 2020 Agussalim et al.** This is an open access article distributed under the [Creative Commons Attribution 4.0 International](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.**INTRODUCTION**

Health is the right of all people who need attention from all parties. Healthy is an important requirement of physical and psychological conditions that allow a person to live more productive. For this reason, it is necessary to make efforts to realize optimal health status for the community, namely by increasing awareness of healthy living, efforts to prevent and cure diseases, and to treat according to the advice of professional health workers.

Decreasing number of community health status in public health within the framework of Community Health Nursing (PHN) resulting from increased morbidity in the target families' especially vulnerable families, families that are prone to health problems. This is due to several factors including the rise of a disease in the community, lack of maintenance activities of public health officers, lack of accuracy of data available and the environment healthy and clean.

Nowadays, many diseases occur in the community and have a fairly high mortality rate and affect the quality of life and productivity of a person, one of which is hypertension. According to Marliani (2007) that hypertension or high blood pressure is disorders of the circulatory system which can cause an increase in blood pressure above normal values, i.e. exceeding 140/90 mmHg.

The prevalence of hypertension in the world in 2014 according to WHO around the world there are 972 million people or 26,4 % of the earth's inhabitants experience hypertension. This figure is likely to rise to 29,2 % in 2015. Of the 972 million people with hypertension, 333 million are in the developed countries and the remaining 639 million are in developing countries, including the Indonesia (Paramount, 2015).

Based on the results of the Basic Health Research (Riskedas) year 2015 the prevalence of

hypertension in Indonesia reached 31,7 % of the total adult population. Hypertension is the third leading cause of death in Indonesia for all ages (6,8 %), after stroke (15.4%) and tuberculosis (7.5%). The prevalence of hypertension in Java and Sumatra has a higher prevalence than the national prevalence. The incidence of hypertension in Indonesia is most prevalent in West Java which reached 47,8 % (Ministry of Health, 2015).

The incidence of hypertension with increasing age always experiences an increase so it needs to be watched out and handled appropriately because of the risks that can cause death. According to Sustrani (2015), hypertension causes the heart to work harder so that the process of damaging the walls of blood vessels takes place more quickly. Hypertension increases the risk of heart disease twice and increases the risk of stroke eight times compared to people without hypertension. Besides hypertension also causes heart failure, disorders of the kidneys and blindness and the most severe is the long-term effects in the form of sudden death.

According to Crea (2015) states that in general, people with hypertension are people aged 45 years and over, but at this time there are many possibilities suffered by young people. Some things that can trigger hypertension are tension, anxiety, social status, noise, disturbance and anxiety. Control of negative influences and emotions also depends on the personality of each individual. Hypertension can be influenced by lifestyle (smoking, drinking coffee, drinking alcohol, sports) and also personality.

Data from the Makassar City Health Office in 2015 showed 45,187 hypertension events consisting of 41,981 (92,9 %) primary hypertension and 3,206 (7.1%) secondary hypertension. While the incidence of hypertension in Antang Public Health Center from 2016 based on preliminary data the number of patients there are 178 people with total cases as much as 62 people. The highest incidence of hypertension occurs at ages 25-44 and most are women.

The high incidence of hypertension in the midst of the community needs to be studied in depth and known the factors that influence it. This will contribute positively to community nursing in exploring and knowing the phenomenon of community behavior that directly impacts the increasing incidence of hypertension. At the time of the survey at the Antang Health Center, it was found that patients with hypertension aged 20-45 years based on the survey, the researchers continued to conduct research on the relationship between lifestyle and the incidence of hypertension.

PURPOSE OF STUDY

It is known a lifestyle description of the incidence of hypertension as well as the relationship between lifestyle and the incidence of hypertension in the Antang Raya Makassar Health Center in 2018.

STUDY LITERATURE

Several definitions of hypertension have been revealed by several experts or authors of books about hypertension, according to Marliani (2007), stating that hypertension or high blood pressure is a disorder in the circulatory system

that can cause an increase in blood pressure above normal values, which exceeds 140/90 mmHg.

According to Crea (2008), hypertension is a medical term for high blood pressure and is one of the many public health problems suffered in the world including in Indonesia. Hypertension including common diseases, without specific symptoms and usually can be handled easily, but if left untreated can lead to be r like complications more severe form of heart disease and blood vessels such as atherosclerosis, myocardial infarction, heart failure, renal dysfunction and death early.

According to Shanty (2011) states that hypertension or high blood pressure is a disease that is common in our society. This situation occurs when the blood pressure in the main arteries in the body is too high. Hypertension is now increasingly common in older people.

Based on some of these definitions of hypertension, it can be concluded that hypertension is a disease that usually occurs in the circulatory system which can cause an increase in blood pressure above normal values, which exceeds 140/90 mmHg.

Etiology

Based on the etiology, hypertension is divided into essential (primary) hypertension and secondary hypertension as follows (Setiawati and Bustami, 2005) :

- 1) Essential (primary) hypertension, also idiopathic, is hypertension whose etiology is unclear. More than 90% of cases of hypertension are included in this group. The main hemodynamic disorder in essential hypertension is an increase in peripheral resistance. The cause of essential hypertension is multifactor, consisting of genetic and the environment factors. Factors are polygenic and visible descent of their family history of cardiovascular disease. Genetic predisposing factor k may include sensitivity to sodium, sensitivity to stress, increased reactivity vase c snake (against a vasoconstrictor), and insulin resistance. There are at least 3 environmental factors that can cause hypertension, namely, eating excessive salt (sodium), psychological stress, and obesity.
- 2) Secondary hypertension, the prevalence is only about 5-8% of all patients with hypertension. This hypertension can be caused by kidney disease (renal hypertension), endocrine disease (endocrine hypertension), drugs, and others. Renal hypertension can be (1) Reno vascular hypertension is hypertension due to lesions in the renal arteries causing renal hypo perfusion, (2) Hypertension due to lesions in the renal parenchyma cause renal function impairment.

According to Sutanto (2009), the cause of hypertension in people with advanced age is the occurrence of changes in:

- a. The elasticity of the aortic wall decreases.
- b. The heart valve thickens and stiffens.
- c. The ability of the heart to pump blood decreases by 1% every year after age > 20 years, the ability of the heart to pump blood decreases causing a decrease in contractions and volume.
- d. Loss of elasticity of blood vessels. This happens because of the lack of effectiveness of peripheral blood vessels for oxygenation.

Classification of Hypertension

Classification of hypertension according to the JNC (*Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure*), which was reviewed by 33 national hypertension experts in the United States. Recent data shows that blood pressure values that were previously considered normal can actually cause an increased risk of cardiovascular complications. Thus encouraging the making of a new classification on JNC 7, namely there is pre hypertension where systolic blood pressure in the range of 120-139 mmHg, and diastolic blood pressure in the range of 80-89 mmHg. Hypertension levels 2 and 3 are integrated into level 2. The purpose of the JNC 7 classification is to identify individuals who, with initial treatment in the form of lifestyle changes, can help lower their blood pressure to hypertension levels according to age.

Table 1: Classification of Hypertension According to JNC VII

Classification of Blood Pressure	Systolic Blood Pressure (mmHg)	Diastole Blood Pressure (mmHg)
Normal	<120	And <80
Prehypertension	120-139	Or 80-89
Stage 1 hypertension	140-159	Or 90-99
Stage 2 hypertension	> 160	Or > 100

WHO (World Health Organization) and ISHWG (*International Society Of Hypertension Working Group*) classify hypertension into optimal classification, normal, normal-high, mild hypertension, moderate hypertension, and severe hypertension, as follows:

Table 2: Classification of Hypertension According to WHO

Category	Systole	Diastole
Optimal	<120	<80
Normal	<130	<85
Normal - high	130 - 139	85-89
Level 1 (mild hypertension)	140 - 159	90 - 99
Subgroup: border	140 - 149	90 - 94
Level 2 (moderate hypertension)	160 - 179	100 - 109
Level 3 (severe hypertension)	≥ 180	≥ 110

The Indonesian Hypertension Association in January 2007 launched guidelines on managing hypertension in Indonesia, which were taken from the guidelines of developed countries and neighboring countries. And the classification of hypertension is determined based on systolic and diastolic blood pressure measurements by referring to the results of JNC 7 and WHO, as follows:

Table 3 : Hypertension Classification Results of the Consensus of the Indonesian Hypertension Association.

Blood pressure category	Systole blood pressure (mmHg)	Diastole blood pressure (mmHg)
Normal	< 120	And < 80
Prehypertension	120 - 139	Or 80-89
Stage 1 hypertension	140 - 159	Or 90-99
Stage 2 hypertension	> 160	Or > 110
Isolated systolic hypertension	≥ 140	<90

Lifestyle Overview

Lifestyle is a lifestyle of someone in the world expressed in their activities, interests and opinions. Lifestyle describes the whole person who interacts with their environment (Sakinah, 2002). According to Lisnawati (2006) , a healthy lifestyle describes daily behavior patterns that lead to efforts to maintain physical, mental and social conditions in a positive state. A healthy lifestyle includes sleeping, eating, and weight control, not smoking or drinking alcoholic beverages, exercising regularly and skillfully in managing the stress experienced.

METHODS

This research method uses quantitative analytical research methods with *Cross Sectional* approach, which is a non-experimental study in order to study the dynamics of the correlation between risk factors and effects in the form of a particular disease or health status, where the effect (disease or health status) is defined at the time the same with risk factors. Where this study is aims to determine the relationship of lifestyle with the incidence of hypertension. In this study is to look at the relationship of lifestyle (physical activity, smoking habits, rest habits and eating patterns) with the incidence of hypertension.

The population is the whole subject of research (Arikunto, 2006). The populations in this study were 36 hypertensive patients at the Antang Raya Public Health Center in Makassar. The sample is part of the number and characteristics possessed by the population (Arikunto, 2006). The sample in this study was determined by 36 respondents.

Instruments in this study using observation and questioner of life style were according to:

a. According to JNC VII.

On this observation sheet blood pressure is grouped / classified into four categories:

No	classification	Blood pressure	Scale
1	Normal	<120/80 mmHg	
2	Prehypertension	120-139 / 80-89 mmHg	
3	Stage 1 hypertension	140-159 / 90-99 mmHg	
4	Stage 2 hypertension	> 160 /> 100 mmHg	

b. Lifestyle.

In this questionnaire using a measuring tool using a scale with the number of 10 questions the highest score 4 and the lowest score 1, with a score of Strongly Agree = 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1.

Data Processing and Analysis Techniques

The steps in data processing according to Notoatmodjo (2010) are as follows:

a. *Editing* (data checking), this step is intended to check data completeness, data continuity and data uniformity.

b. *Coding* (coding), this stage makes it easy to enter data and processing the provision of data, and then the questions that have been asked are marked / coded.

c. *Transferring* (moving data), move data into the research master table.

d. Data tabulation, done by grouping data according to the variables studied, in order to facilitate the analysis.

e. Issue the information needed.

In this study the study used data analysis as follows:

a. Univariate analysis, performed on variables, from the results obtained in the study, in general, from the analysis, resulting in the distribution and the percentage of each of the variables that exist, in this study using univariate analyzes distribution proportion (Sugiyono, 2009). The results of this analysis produce the distribution of each variable that aims to obtain the distribution of each variable by using the formula (Arikunto, 2006).

Note: P = Proportion ; n = Number of sample categories taken ; N = Number of population.

b. Analyst is bivariate; this analysis aims to look at the relationship of lifestyle (independent variable) with the incidence of hypertension (dependent variable). The test used was *chi-square* $\alpha = 0, 05$. With the limit of the significance of determining the reliability test of the relationship by comparing the value with the value of $\alpha = 0.05$ at a confidence level of 95% with the following decision rules (Sugiyono, 2009): (1) Value (value) $<0, 05$ then H_0 is rejected, which means there is a meaningful relationship between the independent variable with the dependent variable, (2) Value (value) $\geq 0, 05$, then H_0 failed rejected, which means there is no significant relationship between independent variables with the dependent variable.

In addition to determining the significance test, the *Odds Ratio* (OR) value is also determined which is the odds ratio between the case and control groups.

RESULTS

The research was conducted at Antang Raya Public Health in 2018 began on 14 June until 13 July 2016. The number of samples in this study sample of 36 respondents composed of 18 cases and 18 control samples. In this study, discuss lifestyle relations with hypertensive events in patients at Antang Health Center in Makassar. Where this research was used questionnaire aids that are filled by respondents. The results of this study are presented in a sequence that is by analysts is univariate and bivariate then performed discussion of the results of research that has been done can be seen in the following description:

Descriptive Research Site

The research was conducted in the Public Health of Antang Makassar which began on the 14 of June until 13 July. Samples in this research are 36 respondents who visit Public Health Centers of Antang Raya.

Characteristics of Respondents

Characteristics of respondents are possessed by respondents consisting of, age, education, occupation, and marital status.

1) Characteristics of Respondents

a) Age

Table 4 : Life characteristics of respondents indicated that out of 36 respondents surveyed found that age at most that the age of 30 years as many as five people (16.7%).

b) Gender

Table 5 reveals that a 36 respondent’s sexes most are male 21 respondents (58.3%).

Table 4 : Frequency Distribution Based on Age.

Age	n	Percent
20	4	11.1
21	2	5.5
22	4	11.1
23	5	13.8
24	2	5.5
25	3	8.3
26	1	2.8
27	2	5.5
29	4	11.1
30	6	16.7
36	1	2.8
38	1	2.8
41	1	2.8
Total	36	100%

Table 5 :Frequency Distribution Based on Gender.

Gender	n	Percent
Male	21	58.3 %
Female	15	41.7 %
Total	36	100 %

c) Marital Status

Table 6 : Frequency Distribution Based on Marital Status.

Status Married	n	Percent
Not married yet	16	44.4%
Marry	20	55.6%
Total	36	100 %

Table 6 above shows that out of 36 respondents most marital status is unmarried 20 respondents (55.6%).

d) Work

Table. 7 : Frequency Distribution Based on Work

Profession	n	Percent
Does not work	20	55.6%
Work	16	44.4%
Total	36	100.0%

The table 7 above shows that from 36 respondents the most work is not working 20 respondents (55.5%) And the fewest work is to work 16 respondents (44.4%).

e) Education

Table 8 Frequency Distribution Based on Education.

Education	n	Percent
No school	0	0.0%
Elementary school	0	0.0%
Middle School	1	2.8
High school	26	72.2%
College	9	25.5%
Total	36	100%

The 8 table above shows that of the 36 respondents the most education is 26 respondents high school (72.2%) And the fewest education is not school and SD 0 (zero).

Univariate Analysis

1) Blood Pressure

Table 9 : Distribution of frequency based on blood pressure with Sex

Blood pressure	Child Gender				amount	
	Male		Female		n	%
	n	%	n	%		
Stage 1	16	76.2	5	23.8	21	66.7
Stage 2	8	53.3	7	46.7	15	33.3
Total	24	100	12	100	36	100

Table 9 shows that the distribution of respondents based on blood pressure in the most widely challenged health center is hypertension Stage 1 for male respondents 16 respondents (76.2%).

2) Lifestyle

Table 10: Distribution of frequency based on lifestyle with Sex.

Lifestyle	Child Gender				amount	
	Male		Female		n %	
Healthy	6	28.6	3	20.0	9	25.0
Not healthy	15	71.4	12	80.0	27	75.0
Total	21	100	15	100	36	100

Table 10 shows that the distribution of respondents based on the lifestyle in Antang Public Health is the most widely unhealthy for male respondents 15 respondents (71.4%), and unhealthy 15 respondents (71.4%) For women.

Bivariate Analysis

Table 11 : Distribution of Respondents Based on Lifestyle Relationships with the Occurrence of Hypertension.

Lifestyle	Blood pressure				Total	P	
	Stage 1		Stage 2				
	n	%	n	%	n	%	
Healthy	3	33.3	6	66.7	9	100.0	0.0
Not healthy	21	77.8	6	22.2	27	100.0	14
Total	24	100	12	100	36	100	

DISCUSSION

Lifestyle

Based on lifestyle with the incidence of hypertension in the Antang Makassar Health Center that respondents with a lifestyle at risk as much as 21 (77, 8 %). The cause of hypertension is not only due to hereditary factors but hypertension can also be caused by a bad lifestyle such as consuming alcohol, consuming coffee for a long time, smoking, and rarely exercising.

Smoking is associated with an increase in blood pressure; this is in accordance with the results of research in Deli Serdang District, stating that people who smoke have a greater relationship to hypertension than people who don't smoke. According to some research results, it was revealed that smoking can increase blood pressure. The compound in cigarettes that is thought to increase blood pressure is nicotine. Nicotine can increase blood clotting and cause calcification in the walls of blood vessels (Purwati et al. 2002).

Most of the research respondents have smoking and alcoholic beverages at risk of hypertension because in cigarettes and alcohol contains many nicotine and caffeine which can trigger heart work faster and Increase blood pressure.

As stated by the Ministry of Health (2007) that smoking with hypertension is not yet clear, but according to the nicotine and carbon dioxide contained in cigarettes will damage the endothelial lining of arteries, elastic blood vessels are reduced, causing blood pressure to increase. As for the theory that supports the statement, among others, the statement of hull (1996), namely people who drink alcohol too often or who have too much blood pressure higher than individuals who do not drink alcohol. Modern lifestyles that glorify success, work hard, in stressful situations, and prolonged stress are the most

common and lack of exercise, and try to cope with stress by smoking, drinking alcohol and coffee, even though all are included in the list of causes that increase the risk of hypertension (Muhammadun, 2010).

In addition, busy people also do not have time to exercise. As a result, more and more fat is stored in the body which can inhibit blood flow. Vessels that are squeezed by a pile of fat make high blood pressure. This is what causes hypertension. In addition, people usually realize that they have hypertension when it is severe and have caused serious complications (Wulandari & Susilo 2011).

Hypertension can be caused by factors other than salt intake, for example, modern life, intense competition, a fast rhythm of life, all can cause stress. Stress itself is defined as the tense conditions of our body and mind because of the presence of problems caused by various demands that come, both from within and from outside (the environment). Life pressure and the accumulation of problems can result in uncomfortable conditions in the body (Khomsan, 2006).

Researchers assume that the style of an unhealthy life causes an increase in blood pressure not only occurs in old age alone at a young age even at risk of hypertension due to an unhealthy lifestyle. Young people are also mostly lazy to exercise also due to many factors that influence it such as stress, work that is piling up. Not only is that, most respondents of these study men who consume alcohol, cigarettes and coffee for a long time.

Hypertension

The results of this study indicate that from 36 respondents found the incidence of hypertension that has a risky lifestyle that is 21 (77 , 8 %) people, it turns out that in this study it can be seen that hypertension occurs to someone is one of those whose lifestyles are at risk such as smokers drinking alcohol.

According to Aditama (1997), if smoking starts at a young age, the risk of getting coronary heart disease is two times greater than nonsmokers and increases the risk of heart attack before the age of 50 years.

This is thought to be caused by, if the younger a person smokes, the content of harmful substances such as nicotine and CO will accumulate more than someone who smokes at an older age. Nicotine in cigarettes can also accelerate the process of narrowing and blockage of blood vessels. This blockage and narrowing can occur in coronary arteries, which are responsible for carrying oxygen to the heart (Sani 2006).

This shows that people who are accustomed to smoking will increase total cholesterol and LDL levels in the blood. This is caused by the nicotine in cigarettes that can lower the levels of 75 HDL and LDL cholesterol that increases fat metabolism and transport of fats to the liver impaired (Sani 2006).

This study is also in line with research conducted on the people of Nagari Bungo Tanjung, West Sumatra, he found that smoking behavior is a risk factor for the incidence of hypertension with a risk of 6 , 9 times greater for the occurrence of hypertension .

In this study, researchers can conclude that the occurrence of hypertension in a person is because the person has a bad lifestyle such as smoking and drinking alcoholic beverages. Besides that, it is also influenced by the lack of knowledge and low education of a person.

Relationship between Lifestyle and Hypertension in Antang Health Center

Results of the analysis of the relationship of lifestyle with the occurrence of hypertension in patients in the puskesmas of 36 respondents and divided into two namely responder in control 18 (50, 0 %) and respondents in the case of 18 (50.0%) people. After the *chi square* test with a significant number ($\alpha = 0,05$), the results obtained *P value* = 0.01. From the results of these studies prove that there is a lifestyle relationship with the occurrence of hypertension in patients at the Antang Raya Health Center Makassar. This proves that the better the lifestyle of a person, the better the health improvement, otherwise a bad lifestyle will lead to the risk of hypertension. The results of this study indicate that patients whose lifestyles such as smoking, drinking coffee and less regular exercise are more likely to experience hypertension.

The results of this study are in line with the *Health Belief Model* (HBM) theory in M Aulana (2009) stating that the degree of public health is determined by the healthy behavior of the community influenced by several factors, namely demographic variables such as age, sex, cultural background, *socio- variable psychology*, namely personality, social class (lifestyle), social pressure, and structural variables, namely knowledge and previous experience.

Based on the HBM theory, a person's lifestyle in hypertension is one of the factors that can cause a person to experience hypertension. In this case the sick behavior (*illness behavior*) and *the sick role behavior* (*the sick role behavior*) someone causes a person suffering from an illness. People who have the habit of smoking, drinking alcoholic beverages, coffee and irregular in sport will experience greater hypertension disease than people who do not have the habit of smoking, drinking alcoholic beverages, coffee and regular exercise.

Many studies are stating that smoking is associated with elevated blood pressure. In a prospective cohort study by Dr. Thomas S Bowman of Brigham and Women's Hospital, Massachusetts in Rahyani (2007) of 28,236 subjects with no prior history of hypertension, 51% of subjects smoked 1-14 cigarettes per day and 8% of subjects who smoked more than 15 sticks per day. The subject continues to be studied and in the media took 9,8 years. The conclusion in this research is the highest incidence of hypertension in the group of subjects with smoking habits of more than 15 cigarettes per day.

The effect of alcohol on rising blood pressure has been proven. According to Sustrani (2006) that people who drink alcohol too often or too much, will tend to have high blood pressure than individuals who do not consume alcohol. Over consuming alcohol (> 2 cups) is a risk factor for hypertension.

Excessive consumption of coffee in the long run and long amounts are known to increase the risk of hypertension. Several studies in Crea (2008) show that people who consume caffeine (coffee) regularly throughout the day have higher average blood pressure compared to 2-3 cups of coffee (200-250 mg) shown to increase systolic pressure by 3- 14 mmHg diastolic pressure of 4-13 mmHg in people who do not have hypertension.

According to Rohaendi (2008) that lack of physical activity can raise the risk of high blood pressure because it increases the risk of becoming obese. Rised in the Oregon Health Science Group of men and women lacking physical activity with groups of physical activities may decrease around 6.5% of LDL (Low Density Lipoprotein) cholesterol factors that are important causes of arterial shifts.

The results of research on the relationship of lifestyle with the incidence of hypertension in students in the health sphere (FK, FKG, FKM, Pharmacy) 2010-2012 at Hasanuddin University, it can be concluded that the prevalence of hypertension by 33.5% was 111 people. There is a correlation between smoking behavior, exercise habits, coffee consumption, alcohol consumption, and the incidence of hypertension in the health sphere (FK, FKG, FKM, Pharmacy) Hasanuddin University class of 2010-2012.

The results are consistent with the opinion Notoatmodjo (2005) states that healthy behaviors (*healthy behavior*) are behaviors or activities related to efforts to maintain and improve health. To achieve the style of healthy living takes a good defense to avoid the advantages and disadvantages that lead to imbalances that lower immunity and all of them bring in diseases. This is also supported by the opinion of Maulan (2009) which states that to get excellent health the best way is to change the lifestyle that is seen from its activities in maintaining health. activities in maintaining health.

In this study, based on the results of data analysis it turns out there are still patients with lifestyles not at risk but experiencing hypertension. This can be due to other factors that can influence the incidence of hypertension. Besides lifestyle, other factors that can influence the incidence of hypertension include age, gender, race, social pressure, knowledge and experience. Knowledge is one of the factors that can affect hypertension even though a person does not have the habit of smoking, drinking alcohol, drinking coffee, and regularly in sports. Good habits are apparently not enough if the knowledge of hypertension is low because it causes someone not to understand well about hypertension so they do not know how to deal with hypertension.

Based on the results of previous studies of the theory that has been stated above, the results of this study have no gaps. Therefore, for hypertension sufferers who have the habit of smoking, drinking alcohol, drinking coffee irregularly exercising need to get guidance from health workers and family support in order to change the lifestyle that is not good towards a healthy lifestyle so as to reduce the danger of disease more severe hypertension.

CONCLUSION

There are 27 unhealthy lifestyles at the Antang health center in 2016, namely 27 respondents (100 %) unhealthy lifestyles, and 9 respondents (100%) healthy lifestyles.

The occurrence of hypertension in Antang health centers in 2016 out of 36 respondents was stage 1 hypertension as many as 21 people (66.7%). There is a lifestyle relationship with the incidence of hypertension with a value of $p = 0.001$.

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AUTHORS' CONTRIBUTIONS

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COMPETING INTERESTS

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