

Conference Paper

Relationship of Diet and Sports Habits with Blood Pressure Hypertension Patients in Nanggalo Padang Community Health Center Year 2018

Herwati and Wiwi Sartika

Department of Nursing, School of Health Polytechnics, Ministry of Health, Padang

Abstract

Background: Hypertension as the silent killer causes premature death, predicted by 2025 to about 29% of hypertensive adults. Riskesdas 2013, 25.8% of Indonesia's population has hypertension. The prevalence of hypertension in West Sumatra in 2017 includes the 3 most diseases, measurement of population blood pressure ≥ 18 years by sex in 2017 hypertensive sufferers 23.0%. Hypertension that is not within normal limits leads to complications, resulting in extensive organ damage, Rupture of blood vessels to the brain, To Heart, decreased consciousness, coma or stroke. Prevention and control Hypertension with medication adherence and adherence to diet Hypertension, a healthy diet with Dietary Approach to Stop Hypertension (DASH) and regular exercise. The purpose of this research is to know the relationship between diet and exercise habits a blood pressure of hypertension sufferers at Nanggalo Padang Community Health center Year 2018.

Subjects and Method: Analytical descriptive research type, cross-sectional design. The population of the study was all hypertensive patients who came to the Nanggalo Padang Community Health center Year 2018, A sample of 38 Poepel. Data were collected using questionnaires. Accidental sampling technique. Univariate data analysis is presented with frequency distribution table and bivariate analysis using Chi-Square statistical test. 95% confidence degree with $\alpha = 0,05$ if $p \leq \alpha (0,05)$.

Result : Of research (57,9%) diet less good. (52.6%) bad exercise habits, (60,5%) is not within normal blood pressure. There is a significant relationship between a diet a normal blood pressure of hypertension patient and There a significant relationship between exercise habit a normal blood pressure of hypertension patient at Nanggalo Padang Community Health center Year 2018.

Conclusion: Health officers are advised to provide counseling, displaying posters and exercise patterns of hypertension patients waiting room.

Keywords: Relationship Diet, Sports Habits, Blood Pressure Hypertension.

Corresponding Author: Herwati
herwatinurmin@yahoo.com

Received: 23 September 2019

Accepted: 18 November 2019

Published: 22 December 2019

Publishing services provided by
Knowledge E

Herwati and Wiwi
Sartika. This article is distributed
under the terms of the [Creative
Commons Attribution License](#),
which permits unrestricted use
and redistribution provided that
the original author and source
are credited.

Selection and Peer-review under
the responsibility of the ICHP
Conference Committee.

 OPEN ACCESS

1. Introduction

Hypertension is often called the silent killer, because it is asymptomatic so many people do not think that they have hypertension, until complications arise that result in organ damage. (Sylvia A, 2012 and Pusdatin Kemenkes RI, 2015).

Hypertension is the main cause of premature death throughout the world, and it is estimated that by 2020 around 1.56 billion adults will live with hypertension. Hypertension kills nearly 8 billion people every year in the world and about one third of Asian adults suffer from hypertension. This disease continues to increase globally and is predicted in 2025 about 29% of adults worldwide will develop hypertension (WHO, 2015).

Based on data from the National Health Indicator Survey (Sirkesnas) in 2016 hypertension increased to 32.4 percent, and Riskesdas 2013, showed 25.8 percent of the population of Indonesia had hypertension, an increase in the prevalence of hypertension also occurred in 2013 the prevalence of hypertension was 9.5% and in 2007 the prevalence was 7.6%.

Data on hypertension in West Sumatra Province in 2017 includes the 3 most diseases suffered by the community, population blood pressure measurements ≥ 18 years by sex in 2017 the number of hypertensive sufferers 23.0% (West Sumatra Provincial Health Office, 2017)

Hypertension is an incurable disease that can only be controlled so that someone who has hypertension can control blood pressure within normal limits (Hanata, 2011).

The diet is currently dominant in consuming fast food or fast food which is one of the triggers of hypertension because the sodium content in it is quite high. In addition, the diet of people who consume less vegetables and fruit is also one of the triggers for hypertension (Muhammadun, 2010).

Increased physical activity can be an increase in daily physical activity or regular exercise. The benefits of regular exercise have been shown to reduce blood pressure (Dalimarta, 2008).

2. Methods

This type of research is descriptive analytic to see the description of the relationship between diet and exercise habits with blood pressure in hypertensive patients in Nanggalo Padang health center, with a cross sectional approach. The population in this study were all hypertensive patients who came to the Nanggalo Padang health center, the study sample was hypertensive patients who came to the Nanggalo Padang Health Center. Sampling techniques Accidental Sampling, Samples amounted to 38 people. Blood pressure data collection is carried out by measuring using a tension meter. Diet and exercise habits using questionnaires. Univariate analysis with s in the

form of frequency distribution and percentage. Bivariate Analysis of Chi-Square Test (X²). Degree of confidence 95% with $\alpha = 0.05$ if $p \leq \alpha$ (0.05)

3. Results

The research location at the Nanggalo Padang Health Center is a health care unit under the Padang City Health Office, West Sumatra Province. Univariate Analysis: More than half (57.9%) of hypertensive patients have poor diet. More than half (52.6%) sufferers have poor exercise habits. More than half (60.5%) of hypertensive patients have abnormal blood pressure.

3.1. Bivariate Analysis

TABLE 1: Distribution of Eating Patterns with Blood Pressure Hypertension Patients at Nanggalo Padang Health Center in 2018.

Normal Diet	Normal Diet Pattern Blood Pressure Hypertension				Total		p-value
	Not Normal		Normal		F	%	
	F	%	F	%			
Not good	17	77,3	5	22,7	22	100.0	0.032
good	6	37,5	10	62,5	16	100.0	
Total	23	60,5	15	39,5	38	100.0	

Abnormal blood pressure has a higher percentage in respondents who have a poor diet that is as many as 17 people from 22 people (77.3%) compared to respondents who have a good diet that is as many as 6 people from 16 people (37.5%)

The statistical test results obtained p value = 0.032 which means $p < \alpha$ (0.05), it can be concluded that there is a significant relationship between diet and normal blood pressure in patients with hypertension at the Nanggalo Padang Health Center.

TABLE 2: Distribusi Kebiasaan Olah Raga dengan Tekanan Darah Penderita Hipertensi di Puskesmas Nanggalo Padang Tahun 2018.

Sports	Normal Diet Pattern Blood Pressure Hypertension				Total		p-value
	Not Normal		Normal		F	%	
	F	%	F	%			
Not good	16	80,0	4	20,0	20	100.0	0.024
good	7	38,9	11	61,1	18	100.0	
Total	23	60,5	15	39,5	38	100.0	

Abnormal blood pressure has a higher percentage in respondents who have poor exercise habits, namely as many as 16 people from 20 people (80%) compared to respondents who have good exercise habits as many as 7 people from 18 people (38.9%). The statistical test results obtained $p = 0.024$ means that $p < \alpha$ (0.05), it can be concluded that there is a significant relationship between exercise habits and normal blood pressure in hypertensive patients at the Nanggalo Padang Health Center.

4. Discussion

Limiting consumption of carbohydrates, proteins and fats, so that blood cholesterol levels are not high, high blood cholesterol can cause cholesterol deposits, narrowing of blood vessels is called atherosclerosis, if narrowing of the heart arteries can aggravate the heart's work and aggravate hypertension (Almatsier S, 2005).

Prevention of hypertension can be done through eating arrangements. One way to manage your diet is to limit salt consumption. Salt is found in preserved foods or canned foods, MSG. (Almatsier, S. 2013 and Kompas, L. 2015).

Limitation of salt consumption results in a reduction in sodium which causes an increase in potassium intake. This will reduce intracellular sodium which will reduce the effects of hypertension. High consumption of salt for many years will increase blood pressure because the levels of sodium in the smooth muscle cells in the arteriole wall also increase. This high sodium level facilitates the entry of calcium into these cells. This then causes the arterioles to contract and narrow on the inner circumference (Beevers, 2010).

if salt is consumed in excess, the kidneys responsible for processing salt will hold more fluids than they should in the body. The amount of retained fluid causes an increase in a person's blood volume or in other words blood vessels carry more fluid. This extra load carried by blood vessels causes blood vessels to work extra, namely the increase in blood pressure in the walls of blood vessels (Corwin, 2011).

When cholesterol levels in high blood vessels this will make the diameter of the blood vessels narrow. In severe conditions where there is total blockage of blood vessels, organ damage will occur. HDL will carry cholesterol free from blood vessels to the liver so that the vessel diameter will widen, whereas if VLDL and LDL levels are high then the opposite will occur which will aggravate the arteries (Southeast, 2012). Sports is also one way to control hypertension. Some good exercise can be done, namely brisk walking, jogging, cycling for 30 minutes with a frequency of 3-5 times per week (Prasetyo, Y. 2007 and Kusmana, D. 2006).

Arteriosclerosis is the main cause of hypertension associated with one's diet. The age factor also influences because in old age the blood vessels tend to become stiff and their elasticity decreases. Factors that can be controlled, such as unhealthy lifestyles, obesity (hyperlipidemia), lack of exercise, excessive salt consumption and lack of fiber intake, a healthy diet. The diet is currently dominant in consuming fast food or fast food which is one of the triggers of hypertension because the sodium content in it is quite high. In addition, the diet of people who consume less vegetables and fruit is also one of the triggers for hypertension (Muhammadun, 2010).

One of the causes of high blood pressure is because people who lack physical activity and overeating. Too much fat in the body can cause the body to need more oxygen. So, the heart must work harder (Prasetyo Y, 2014) The frequency of exercise is 3-5 times a week, with 30 to 60 minutes of practice every time. Exercise can reduce blood pressure because it can relax blood vessels. Over time, exercise can relax blood vessels, so that blood pressure decreases (Bompa, 1994 and Prasetyo Y, 2014).

5. Conclusions

1. More than half (57.9%) have poor diet
2. More than half (52.6%) have poor exercise habits
3. More than half (60.5%) of blood pressure is not normal
4. There is a significant relationship between diet with blood pressure in patients with hypertension with a value of $p = 0.032$, which means $p < \alpha (0.05)$
5. There is a significant relationship between exercise habits and blood pressure in patients with hypertension p value = 0.024 means $p < \alpha (0.05)$

References

- [1] Almatier, S 2013. Prinsip dasar ilmu gizi, PT. Gramedia Pustaka Utama, Jakarta
- [2] Almatier. (2005). Penuntun Diet. Jakarta: PT Gramedia Utama, Jakarta
- [3] Beevers,2010. Tekanan Darah Hipertensi. Jakarta: Dian Rakyat.
- [4] Bompa.O, Tudor. (1994) Terjemahan Buku Theory And Methodology Of Training. Bandung: Program Pasca Sarjana Universitas Padjadjaran.
- [5] Corwin, Elizabeth.2011. *Buku Saku Patofisiologi*. EGC:Jakarta
- [6] Dalimarta, Dkk.2008. *Care Your Self*. Penebar Plus:Jakarta
- [7] Dinas Kesehatan Prop Sumbar, 2017. Profil Kesehatan Prop Sumbar.

- [8] Dinas Kesehatan Kota Padang, 2017. Data sepuluh penyakit terbanyak kota Padang
- [9] Hananta, Y dan Freitag, H. 2011. Deteksi Dini dan Pencegahan Hipertensi dan Stroke. Media Pressindo. Yogyakarta.
- [10] Kementerian Kesehatan RI, 2013 Pusat data dan informasi kementerian Kesehatan RI (Infodati) Hipertensi.
- [11] Kompas, 2015. <https://lifestyle.kompas.com2015/panduan-berolahraga-yang-aman-untuk-orang-hipertensi>
- [12] Muhammadun. (2010). Pola Makan. Untuk Hipertensi. Jakarta: PT. Agromedia Pustaka.
- [13] Prasetyo, Y. 2014. Olahraga Bagi Penderita Hipertensi. Fakultas Ilmu Keolahragaan Universitas Negeri Yogyakarta.
- [14] Pusat Data dan Informasi, 2015. Kementerian Kesehatan Republik Indonesia
- [15] Price, A. Sylvia, Lorraine Mc. Carty Wilson, 2012, Patofisiologi: Konsep Klinis Proses-proses Penyakit, EGC, Jakarta.
- [16] Tenggara, 2012. Proporsi LDL, HDL abnormal menurut karakteristik, Indonesia.
- [17] WHO, 2015. Hipertensi, komplikasi, penyakit tidak menular penyebab utama kematian.