



Relationship Between Sleep Quality and Blood Pressure in Elderly Hypertension in the Hutaimbaru Public Health Center, Padangsidempuan 2018

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Abstract. Sleep is an important factor for quality of life. Every individual has different sleep needs with good quality. Sleep well when the sleep a person is living produces freshness and when awakened from sleep. This study tried to analyze the quality of sleep with blood pressure in elderly hypertension at the Hutaimbaru Health Center in Padangsidempuan City. The research method used is a quantitative *cross sectional design*. The population is all elderly hypertension in the Hutaimbaru Community Health Center, as many as 72 people. The research sample used cluster sampling technique, experiment 42 samples. Data analysis using fisher test to determine the relationship of independent variables with the dependent variable. Elderly people who suffer from hypertension are 28 people (66.7%) and poor sleep quality is 25 people (59.5%). Hypertension in the Hutaimbaru Health Center in Padangsidempuan City (p value = 0.001) Officers at the Hutaimbaru Health Center in Padangsidempuan City need joint assistance for matters relating to education, education of landscape with blood pressure in elderly hypertension.

Keywords: Sleep Quality · Blood Pressure in elderly hypertension

1 Introduction

High blood pressure cannot be ignored because it can cause complications. The higher the pressure in the blood vessels, the harder the heart has to work to pump blood. If left uncontrolled, hypertension can lead to heart attacks, heart enlargement and heart failure. In the blood vessels can form a bulge (aneurysm) and can form a thrombus that can block blood flow. Pressure in the blood vessels can also cause blood to leak out into the brain causing a stroke (WHO, 2013).

According to WHO the elderly (elderly) are a population group aged 60 years or more. Globally in 2013 the proportion of the population aged over 60 years was 11.7% of the total world population and it is estimated that this number will continue to increase along with the increase in life expectancy. WHO data show that in 2000 the life expectancy of people in the world was 66 years, in 2012 it rose to 70 years and in 2013 it became 71 years (WHO, 2010, 2015).

The proportion of elderly people in Indonesia also increases every year. WHO data in 2009 showed the elderly amounted to 7.49% of the total population, in 2011 it became 7.69% and in 2013 the proportion of elderly people was 8.1% of the total population (WHO, 2015).

Hypertension in North Sumatra is one of the provinces in Indonesia that has a fairly high prevalence of hypertension obtained through measurements at the age of 18 years, which is 24.7%. The highest prevalence is in the age group 75 years and over, which is 63.8%. Indonesian Ministry of Health (2013).

Based on data obtained from the Hutaimbaru Health Center from January to December 2017, there were 417 elderly people. Checking blood pressure in patients with hypertension needs to be done with the aim of creating the health status of hypertension sufferers that arise and are caused by lack of sleep can cause blood pressure to increase (Hutaimbaru Health Center, 2017).

The need for sleep is an important factor for a person's quality of life. Sleep is a repetitive state where there is a change in the state of consciousness that occurs over a certain period. Sleep involves a series of sequences governed by physiological activities that Highly integrated with the central nervous system Humans need sleep for various reasons such as to cope with daily stress, to prevent fatigue, to gather energy, to restore the mind and body, and to enjoy life to the fullest (Kozier, 2011).

Sleep disturbances have psychosocial consequences that affect the quality of life of the elderly. Changes in sleep patterns have an overall impact on the quality of sleep in the elderly, sleep problems are like sleeping no more than 5 hours a day. Complaints about sleep problems rank high among problems related to the natural aging process, but are also common as a combination of changes in risk factors in old age (Hidayati, 2012).

Based on the initial survey conducted at the Hutaimbaru Health Center, Padangsidempuan City, 10 people were interviewed. The elderly who seek treatment at the Hutaimbaru Health Center with blood pressure of 140/90 mmHg as many as 5 people who say there are disturbances at bedtime, and blood pressure of 120/80 mmHg as many as 4 who say 2 people who have no sleep disorders and 2 people who have sleep disorders, and blood pressure of 90/70 mmHg as many as 1 person said there was a disturbance at bedtime. Based on the problems mentioned above, the researchers were encouraged to conduct research on "The Relationship between Sleep Quality and Blood Pressure in the Elderly with Hypertension in Indonesia". Puskesmas Hutaimbaru Kota Padangsidempuan Tahun 2018.

2 Method

This type of research is an analytical survey with a cross sectional approach. The research was carried out at the Hutaimbaru Health Center.

Padangsidempuan August 2018. The research variables are the independent variable (sleep quality) and the dependent variable (blood pressure in the elderly). Data was collected using a questionnaire.

The population in this study was elderly with hypertension at the Hutaimbaru Health Center and the number of samples was 42 people. The sampling method in this research is to use the Simple Random Sampling technique.

Data were analyzed using univariate and bivariate analysis with chi-square test with a degree of confidence ($\alpha = 0.01$).

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Based on Table 1 univariate analysis, it was found that respondents were greater than 59.5% poor sleep quality and 40.5% good sleep quality.

Based on Table 2, it was found that the bivariate analysis found that there was a relationship between sleep quality and blood pressure in the elderly with hypertension at the Hutaimbaru Public Health Center, Padangsidempuan City.

Table 1. Univariate Test Results

relation	amount	Persentase
Sleep Quality		
Right	17	40.5
Bad	25	59.5
Total	42	100.0

Table 2. Sleep Quality

relation	Yes		No		P value
	f	%	f	%	
Sleep Quality					
Right	11	65	6	35	0.001
Bad	3	12	22	88	

4 Discussion

Relationship between sleep quality and blood pressure in hypertensive elderly.

There is a relationship between sleep quality and blood pressure in the elderly with hypertension at the Hutaimbaru City Health Center Padangsidempuan 2018 with a p value of 0.001.

This study is in line with the results of research conducted by Asmarita (2014) respondents with the relationship between sleep quality and blood pressure in the elderly with hypertension at the Karanganyar Regional General Hospital with the fisher test result $p \text{ value} = 0.005$ ($p > 0.05$). This study is in line with the results of research conducted by Budiono (2014) respondents with a relationship between sleep quality and blood pressure in the elderly with hypertension in Ngabean Village.

Poor sleep quality can result in hormones that regulate blood pressure balance or the hormone aldosterone does not work optimally, so losing sleep can make the nervous system hyperactive which then affects the entire body system including the heart and blood vessels. This research is also reinforced by the opinion of Zharfan (2013) that sleep will make the heart rate slow and lower blood pressure significantly. So that someone whose sleep duration is classified as less will make the cardiovascular system work at high pressure and make blood pressure and heart rate rise.

5 CLOSING

Based on the results of the study, it can be concluded that there is a relationship between sleep quality and blood pressure in the elderly with hypertension at the Hutaimbaru Public Health Center, Padangsidempuan City in 2018.

It is recommended that people, especially hypertensive patients, should be able to change bad sleep habits by reducing maximum caffeine consumption 3 glasses a day, changing smoking habits, doing steady light exercise every day to help deepen sleep.

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