

RELATIONSHIPS OF STRESS AND SLEEP PATTERNS ON EVENTS HYPERTENSION IN ELDERLY

Adi Sucipto*

S1 Nursing Study Program, Faculty of Health Sciences, University of Respati Yogyakarta

*corresponding author: Adisucipto@gmail.com

Abstract

In old age, physiological functions decrease due to the aging process so that non-communicable diseases will appear. Most diseases in the elderly are Non-communicable Diseases (PTM) such as sleep patterns, stress and hypertension. The results of a preliminary study conducted on 10 elderly people in Pokoh Hamlet, Wedomartani, Ngemplak, Sleman, Yogyakarta, there are 7 elderly people who have hypertension, 6 elderly people experience stress and 4 elderly people experience disturbed sleep patterns. The aim of this study was to determine the relationship of stress and sleep patterns to the incidence of hypertension in the elderly in Pokoh Hamlet, Wedomartani, Ngemplak, Sleman, Yogyakarta. This study uses descriptive analytical design with cross sectional approach. The population of this study was elderly who had hypertension in Pokoh Hamlet, Wedomartani, Ngemplak, Sleman, Yogyakarta. The sampling technique of this study uses non probability sampling with purposive sampling technique, the total population of all 61 elderly and uses a sample of 45 people after inclusion and exclusion. Showing the stress level of the elderly in the heavy category of 21 people (46.7%), sleep patterns in the heavy category of 18 people (40.0%), and hypertension in the second degree as many as 20 respondents (44.4%) . Comparative analysis of chi square obtained p value = 0.001. There is a significant relationship between stress and sleep patterns on the incidence of hypertension in the elderly in Pokoh Hamlet, Wedomartani, Ngemplak, Sleman, Yogyakarta.

Keywords: Stress, Sleep Patterns, Hypertension

1. INTRODUCTION

Age is someone who has reached the age of sixty and above [1]. Increasing the number of elderly people, requires the attention of all parties in anticipating various problems to improve the welfare of the elderly [2]. Life Expectancy increases by 73.27 per year for DIY according to the results of the Human Development Index (HDI) in 2011. Increasing age, physiological functions experience decrease due to the aging process so that many non-communicable diseases occur in the elderly [3]. Most diseases in the elderly are non-communicable diseases (PTM), one of which is hypertension [4].

NHANES survey results account for about 60-80% prevalence in the United States, hypertension was observed in 67% of patients are over the age of 60 years [5]. Risk factors that cause hypertension, one of which is stress ⁶. Stress prevalence in the population in Indonesia in 2007 amounted to 12.1%, in people who experience stress will affect blood pressure [7]. Increased blood pressure will be greater in individuals who tend to high emotional stress [4]. Besides stress, the risk factor that causes hypertension is sleep patterns [8]. The cause of sleep disturbances in the elderly is a combination of many factors, both physical, psychological influence of drugs, sleep habits, and other morbid diseases suffered [5].

From a preliminary study conducted on January 21, 2017, in Pokoh Hamlet, Wedomartani Village, Ngemplak, Sleman, Yogyakarta. It was found that of all those who had hypertension, seven elderly people with hypertension complained of being irritated, easily irritated, feeling anxious and three elderly people who had hypertension said they experienced poor and not sound sleep patterns. Respondents also said that sleeping at night was less than 5 hours because they felt anxious, besides the respondents also said they often woke up every 2 hours because they wanted to urinate and sometimes it was difficult to start sleeping.

2. MATERIAL AND METHODS

This research is a quantitative study with the type of research that is *descriptive-analytic* with design *cross-sectional*. The purpose of this study is to determine the relationship between stress and sleep patterns in the incidence of hypertension in the elderly. The study was conducted in Pokoh Hamlet, Wedomartani, Ngemplak, Sleman, Yogyakarta in March 2017. The population in this study were all 45 elderly people in Dusun Pokoh, Wedomartani, Ngemplak, Sleman Yogyakarta. The sample selection used in this study is *nonprobability* sampling with a *purposive sampling technique* with test *chi-square*.

3. RESULTS AND DISCUSSIONS

Table 1 Distribution Characteristics by Age, Gender, Level of Education, Employment, History, and Sports Disease

Characteristics of Respondents	Frequency	Percentage (%)
Age		
Seniors (60-74)	38	84.4
Seniors (75-90)	6	13.3
Very Old (above 90)	1	2.2
Gender		
Male	6	13.3
Female	39	86.7
Education Level		
Not School	15	33.3
Elementary School	10	22.2
Middle School	11	24.4
High School	8	17.8
DIPLOMA	1	2.2
Employment		
Not Working	15	33.3
Traders	5	11.1
Retired	5	11.1
Farmers	13	28.9
Massager	1	2.2
Entrepreneur	6	13.3
History of Disease		
No	12	26.7
Hypertension	14	31.1
Acidic	6	13.3
Cholesterol	8	17.8
Magh	4	8.9
Vertigo	1	2.2
Sports		
No	33	73.3
Yes	12	26.7

Table 2 Frequency Distribution of Respondent Characteristics Based on Stress Levels Sleeps Patterns and Degrees of Hypertension in the Elderly in Pokoh Hamlet, Wedomartani, Ngemplak, Sleman, Yogyakarta.

Characteristics of Respondents	Frequency	Percentage (%)
Stress		
Normal	7	15.6
Moderate	18	40.0
Weight	20	44.4
Sleep Pattern		
Normal	5	11.1
Mild	17	37.8
Weight	23	51,1
Hypertension degree		
Hypertension of Pre	10	22.2
Hypertension of Grade First	16	35.6
Hypertension Dr. II	19	42.2

Table 3 Distribution of Relationships Between Stress and Sleep Patterns Against Hypertension in the Elderly in Pokoh Hamlet, Wedomartani, Ngemplak, Sleman, Yogyakarta

	Degree of Hypertension								P value
	Prehypertension		grade I		grade II		Total		
	f	%	f	%	f	%	f	%	
Stres									
Normal	4	8,9	2	4,4	1	2,2	7	15,6	0,001
Moderate	5	11,1	10	22,2	3	6,7	18	40,0	
Weight	1	2,2	4	8,9	15	33,3	20	44,4	
Sleep Pattern									
Normal	3	6,7	1	2,2	1	2,2	5	11,1	0,001
Light	5	11,1	10	22,2	2	4,4	17	37,8	
Weight	2	4,4	5	11,1	16	35,6	23	51,1	

4. CONCLUSION

The most level of stress in the elderly is the heavy category with a total of 20 people (44.4%). Most sleep patterns in the elderly were the heavy category of 23 respondents (51.1%). There is a significant relationship between stress levels and sleep patterns the incidence of hypertension in the elderly in Pokoh Hamlet, Wedomartani, Ngemplak, Sleman, Yogyakarta with a p-value of 0.001 <0.05.

REFERENCES

- [1] Law No. 13 of 1998. *Elderly Welfare*. Downloaded on February 18, 2017.
- [2] Ministry of the Republic of Indonesia. 2010. report *from the Central Statistics Agency (BPS)*. Downloaded on February 18, 2017.
- [3] Information on Data and Information of the Republic of Indonesia Ministry. 2016 *Human Development Index*. Downloaded on February 18, 2017.
- [4] Riskesdas. 2013. *Basic Health Research*. Downloaded on February 19, 2017.
- [5] Darmojo. (2015). *Geriatrics (Advanced Health Sciences)*. Jakarta: Indonesian Medical Faculty Publishing Agency.
- [6] Infodatin. 2014. *Hypertension*. Downloaded on February 19, 2017.
- [7] Kozier. 2010. *The book Ajr Fundamental of Nursing: Concepts, Processes, and Practices*. Jakarta. EGC
- [8] Potter and Perry. (2006). *Textbook for Fundamental Nursing*. Issue 4. Jakarta: EGC.
- [9] Friedman, M, Bowden, R, Jones, G. (2010). *Family Nursing Textbook*. Jakarta: EGC.
- [10] Anggara, Prayitno. (2012). *Level of Education with Blood Pressure at the Puskesmas*. Surakarta Muhammadiyah University.
- [11] Nasir, Abdul and, Muhith. 2011. *Basics of Soul Nursing, Introduction and Theory*. Jakarta: Salemba Medika
- [12] Asmadi. 2008. *Basic concepts of nursing*. Jakarta: EGC
- [13] Udjianti, WJ, 2011. *Cardiovascular Nursing*. Salemba Medika, Jakarta
- [14] Notoatmodjo, S. (2012). *Health Research Methodology*. Jakarta: PT Rineka Cipta.

ACKNOWLEDGMENTS

The author would like to thank the head of the Pokoh hamlet for permitting this research and also to the health cadres who have helped retrieve research data at the elderly Posyandu in the hamlet of Pokoh

