The Relationship of Stress Level with Quality of Life in Elderly with Hypertension

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Abstract. Hypertension is a disease that has a very close relationship with the elderly. This study aims to determine. The correlation Between Stress Levels With Elderly Quality Life of Hypertension Patients at Working. The Type of quantitative research with descriptive correlation design with cross sectional approach. The study involved 752 people with sampling techniques using accidental sampling. The Data analysis using the Spearman test, with a confidence level of 95% . The results of the study indicate that there is the correlation Between Stress Levels With Elderly Quality Life of Hypertension Patients at Working Area of Gunung Tua public Health Center 2018 where p = 0,014. Be Expected for respondents to carry out activities such as the elderly posyandu, elderly gymnastics, the activities that trigger brain activity in order to reduce their cognitive impairment, so the stress level can be reduced.

Keywords: Stress Level · Quality of Life · Elderly · Hypertension

1 Introduction

Hypertension is a disease that has a very close relationship with the elderly. This occurs as a result of changes that occur such as a decrease in the body's immune response, thickening and stiffening of the heart valves, decreased cardiac contractility, decreased elasticity of blood vessels, and a lack of effectiveness of peripheral blood vessels for oxygenation. These changes cause an increase in vascular resistance so that the elderly tend to be more susceptible to hypertension (Setiawan et al. 2013).

According to the report of the WHO meeting in Geneva in 2008, the prevalence of hypertension was 15–37% of the adult population in the world. Half of the world's population aged over 60 years suffer from hypertension. The Proportional Mortality Rate due to hypertension worldwide is 13% or about 7.1 million deaths. In accordance with September 2011 data, it is stated that hypertension causes 8 million deaths per year worldwide, 1.5 million deaths per year in the Southeast Asian region (Hermawan 2014).

Hypertension in Indonesia itself is the number 3 cause of death after stroke and tuberculosis, the national prevalence of hypertension in the population aged 18 years and over in Indonesia is 25.8%, so that 1 in 3 elderly people experience hypertension, as

many as 76% of the elderly do not realize that he was already affected by hypertension (Kemenkes 2013).

The results of Riskesdas North Sumatra in 2013 showed the prevalence of hypertension diagnosed by health workers was 5.2%. Meanwhile, according to the results of Riskesdas North Sumatra in 2013, this figure rose to 5.8%. Meanwhile, based on measurements reached 25.1%. This figure is above the North Sumatra hypertension prevalence rate based on measurements of 24.7% (Dian 2017).

The role of nurses in preventing disease and improving health is in providing care, making clinical decisions, as protectors and advocates for case managers, rehabilitators, educators and communicators. Nurses who are always near patients can help maintain quality of life and reduce stress experienced by patients so that the increase in blood pressure in hypertensive patients can decrease (Annisa 2017). Based on a preliminary study conducted, data obtained that the number of elderly people with hypertension in the Gunung Tua Health Center area from 2018 to September was 752 people, with the division of 3 age groups, namely pre-elderly (45–59 years), elderly (60–69 years). And high-risk elderly (over 70 years). Based on data from visits to health centers, it was found that the most disease was hypertension, based on interviews with 10 elderly people, 7 people said they often had sleep disturbances, complained of dizziness, often angry which were signs and symptoms of the stress response and 4 people said they were dizzy about family circumstances, such as school fees for children, and children who have been divorced by their husbands.

As well as the results of short interviews with 10 elderly people who had hypertension during the preliminary study, 6 out of 10 elderly people had poor quality of life. Most of the elderly said that they experienced many changes in themselves, tended to be sensitive, irritable and answered other people's words. Feeling hopeless, lonely and anxious because of the hypertension he suffered and always had. They also feel that they are dependent on drugs.

The purpose of this study was to determine the relationship between stress levels and the quality of life of elderly people with hypertension.

2   Research Methodology

This type of research is quantitative. The design used in this research is descriptive correlational, with a cross sectional approach, namely an observation of the independent and dependent variables which was carried out from August 2018 to March 2019. The population of all elderly people suffering from hypertension in the Gunung Tua Community Health Center is 752 people with a sample of 752 people. 75 people were taken by accidental sampling or randomly. The instruments used were questionnaires and used spearmen statistical tests.

Table 1. Frequency Distribution of Respondents Based on the Characteristics of Hypertension Patients in the Working Area of the Gunung Tua Health Center in 2018

Respondent Characteristics	n	%
Age		
40–55 y.o	11	14.7
56–65 y.o	60	80.0
≥65 y.o	4	5.3
Education		
Elementery School	25	33.3
Junior high school	34	45.3
Senior High School	14	18.7
College	2	2.7
Pekerjaan		
Government employees	4	5.3
Self-employed	20	26.7
housewife	24	32.0
Farmer	27	36.0
Total	**75**	**100.0**

Table 2. Stress Levels for Elderly Patients with Hypertension

Stress level	n	%
Light	21	28.0
Currently	47	62.7
Heavy	7	9.3
Total	**75**	**100.0**

3 Results

3.1 Analisa Univariat

From Table 1. it can be seen that of the 75 respondents studied by age, the majority aged 56–65 years were 60 people (80.0%), based on education, namely the majority of junior high school education as many as 34 people (45.3%), and based on the majority work as farmers as many as 27 people (36.0%).

From Table 2. it can be seen that of the 75 respondents who were studied based on the stress level of the elderly with hypertension, the majority were 47 people (62.7%) and the severe minority were 7 (9.3%).

Table 3. Quality of Life for Elderly Patients with Hypertension

Quality of Life	n	%
Well	63	84.0
Bad	12	16.0
Total	**75**	**100.0**

Table 4. The Relationship between Stress Levels and Quality of Life for Elderly Patients with Hypertension

Stres Level	Quality of Life				Total		P value	R
	Baik		Buruk		n	%	0,014	0,283
	n	%	n	%				
Ringan	18	24,0	3	4,0	21	28,0		
Sedang	44	58,7	3	4,0	47	62,7		
Berat	1	1,3	6	8,0	7	9,3		
	63	84,0	12	16,0	75	100,0		

From Table 3 it can be seen that of the 75 respondents who were studied based on the quality of life of the elderly with hypertension, the majority of them had good quality of life as many as 63 people (84.0%) and the minority with poor quality of life as many as 12 people (16.0%).

3.2 Analisa Bivariat

From Table 1. it can be seen that Frequency Distribution of Respondents Based on the Characteristics of Hypertension Patients in the Working Area of the Gunung Tua Health Center in 2018 sedangkan tingkat moderate stress and good quality of life as many as 44 people (58.7%) and moderate stress levels and poor quality of life as many as 3 people (4.0%). As well as the level of severe stress and good quality of life as many as 1 person (1.3%) and the level of severe stress and poor quality of life as many as 6 people (8.0%) (Table 4).

Judging from the results of the Spearmen statistical test, the results were p = 0.014 or (p-value < 0.05), so it can be concluded that there is a relationship between stress levels and the quality of life of hypertensive elderly in the Gunung Tua Health Center work area in 2018 meaning Ha is accepted and Ho is rejected. And obtained a Spearman correlation coefficient assessment of 0.283 which means there is a weak relationship between stress levels and the quality of life of hypertensive elderly in the Gunung Tua Health Center work area in 2018.

4   Discussion

4.1   Characteristics of Respondents in the Working Area of Gunung Tua Health Center

Respondent's Age

Based on the characteristic data of respondents based on age, 11 people (14.7%) aged 40–55 years old, 60–65 years old (60 people (80.0%), and age > 65 years (4.3%)).

Age affects the occurrence of hypertension. With increasing age, the risk of developing hypertension becomes greater. In old age. Hypertension is more often found only in the form of systolic pressure. High hypertension is in line with increasing age, caused by structural changes in large blood vessels, especially causing an increase in systolic blood pressure usually after age 60 years (Mardiana 2014).

The risk of hypertension at the age of 41–60 years is 4 times higher than that of respondents aged 18–40 years. After the age of 45 years, the arterial walls will experience thickening due to the buildup of collagen in the muscle layer, so that the blood vessels will gradually narrow and become stiff (Putri 2013).

Respondent's Education

Based on the characteristics of respondents based on education, there were 25 elementary school students (33.3%), 34 junior high school students (45.3%), high school education 14 people (18.7%), and PT education 2 people (2.7%).

From the results of the study, it can be seen that most of the elderly complete their education at the junior high school level. According to Mardiana (2014), education is the factor that is most often analyzed, because it can be an approach to various things, such as mindset, intelligence, breadth of knowledge and progress of thinking. Low education is associated with uncontrolled hypertension.

Education is important because it is the basis of people's understanding in terms of receiving information that can be more easily accepted and adopted by people who have higher education than low education. Hypertension tends to be high in low education and decreases according to the increase in education, in its influence on healthy lifestyles and habits which are often risk factors for hypertension (Niati 2013).

Respondent's Job.

Based on the data on the characteristics of the respondents based on occupation, it was found that 4 people worked as civil servants (5.3%) and 20 people worked as entrepreneurs (26.7%), worked as IRT as many as 24 people (32.0%), and worked as farmers. as many as 27 people (36.0%).

Based on the research data, it was found that the majority of respondents worked as farmers. Occupational variables are used to determine the description of the respondents' livelihoods, so that researchers can find out the description of economic status related to stress levels which can be a risk factor for hypertension.

However, according to Ningsih (2017), the type of work affects the pattern of physical activity, where work that does not rely on physical activity affects blood pressure, people who work involving physical activity can be protected from hypertension, and long hours of work can increase the risk of hypertension in several ways. First, long working hours will reduce the time for sleep breaks so that it has an impact on psychological disorders.

Second, long working hours are related to lifestyle and behavior, including smoking, unhealthy diet.

4.2 Stress Level of Elderly Patients with Hypertension

The results of the study of 75 samples about the stress level of elderly people with hypertension in the work area of the Gunung Tua Public Health Center in 2017, that the results of the respondent's research based on stress levels, namely mild stress levels as many as 21 people (28.0%), moderate stress levels as many as 47 people (62, 7%) and the level of severe stress as many as 7 people (9.3%). So it can be seen that most of the elderly in Gunung Tua have a stress level that is included in the moderate category. This is because in that environment there are still some elderly who experience hypertension who do not understand how to deal with their disease problems independently, thus making them think about their disease.

Stress can predispose to cardiovascular disorders by activating the vasomotor centers in the brain, thereby stimulating the release (secretion) of a substance called ACTH (adrenocortical releasing factor). As a result, there is an increase in stimulation of alpha and beta adreno receptors in the adrenal medulla, resulting in an increase in the secretion of catecholamines, plasma renin and corticosteroids. The response of the heart (cardiovascular system) to these substances is an increase in blood pressure (high blood pressure), an increase in heart rate (palpitations), and blood flow, as well as an increase in the heart muscle's need for oxygen (Niati 2013).

Moderate stress is stress that lasts longer, from a few hours to days. This phase is characterized by alertness, focusing on the senses of sight and hearing, increasing tension within tolerance limits, and being able to cope with situations that can affect it. The number of stressors can cause stress in a person and not because of stress caused by the environment but from within the individual. However, the source of stress can change according to its development because it depends on the coping it has (Priharmanto 2017).

4.3 Quality of Life for Elderly Patients with Hypertension

The results of the study of 75 samples on the quality of life of elderly people with hypertension in the working area of the Gunung Tua Health Center in 2018, that the results of the research of respondents based on quality of life, namely the majority of good quality of life as many as 63 people (84.4%), and a minority of poor quality of life as many as 12 people (16.0%).

In essence, the picture of a person's quality of life can only be described by the person himself subjectively and cannot be defined with certainty. Hypertension is a chronic disease caused by multifactorial and has implications for many things in the life of the patient. In addition to the implications for organs, hypertension can have an influence on the socio-economic life and quality of a person's life (Anbarasan 2015).

According to Anbarasan (2015) suggesting that people with hypertension who have optimism can reduce negative feelings and views of problems according to a more positive perspective, giving rise to feelings of being able to deal with physical and psychological health problems experienced to achieve a better quality of life. Patients with

hypertension, increased blood pressure to the brain will cause a decrease in vascularization in the brain area which makes it difficult for the patient to concentrate, irritable, feels uncomfortable, and also has an impact on the social aspect where the patient does not want to socialize because he feels his condition is uncomfortable. This causes a decrease in the quality of personal social life.

In this study, elderly respondents with hypertension who have a good quality of life description, this may be due to the availability of the A well-executed health center program for the elderly is like the posyandu for the elderly so that the elderly can gather and communicate with each other. in addition, neighbors in rural areas make it easier for the elderly to meet and exchange ideas.

5 Relationship between Stress Levels and Quality of Life for Elderly Patients with Hypertension in the Working Area of Gunung Tua Health Center in 2018

The results revealed that of the 75 respondents studied the quality of life of elderly people with hypertension, where the majority of moderate stress levels and good quality of life were 44 people (58.7%) and the minority had severe stress levels and good quality of life as many as 1 person (1.3%).

Judging from the results of the Spearmen statistical test, it was found that $p = 0.014$ (p-value < 0.05), so it can be concluded that there is a relationship between stress levels and the quality of life of elderly people with hypertension in the Gunung Tua Health Center work area in 2018 meaning Ha is accepted and Ho is rejected. The correlation coefficient value of 0.283 can be interpreted that the strength of the relationship between stress levels and the quality of life of elderly people with hypertension in the work area of the Gunung Tua Health Center in 2018 is weak.

Individuals who are unable to deal with the tension that occurs or stress is an important factor that will affect the quality of life in hypertensive patients (Santoso 2013). The effects of tension can be in the form of changes in emotional conditions, moods and behavior. Physical tension and even emotional or mental strain can cause physical illness in a patient.

The heart is one of the important organs in experiencing the effects of a stress, and this will cause heart disease and hypertension which are associated with stress accumulation. Stress can have physical, emotional, intellectual, social and spiritual consequences. Usually the effects are mixed, because the effects caused by stress affect the whole individual. Physically, stress can threaten individual physiological homeostasis. Emotionally stress can lead to negative or constructive feelings about yourself. Intellectually stress can affect perception and problem solving ability. Socially, stress can change a person's relationship with others. Spiritually, stress can affect individual values and beliefs (Putri 2013).

In general, it can be concluded that stressful conditions will have both intrapersonal and interpersonal impacts. Stress can change a person's view and perception of the meaning of life, purpose of life, life satisfaction and impact on quality of life. Stress in patients with hypertension can arise due to stressors that are continuously faced by the sufferers themselves, either due to changes in lifestyle, medication, treatment,

complications as well as environmental conditions and lack of support for people with hypertension.

In essence, the picture of a person's quality of life can only be described by the person himself subjectively and cannot be defined with certainty. Hypertension is a chronic disease caused by multifactorial and has implications for many things in the life of the patient. In addition to the implications for organs, hypertension can have an influence on the socio-economic life and quality of a person's life (Gonibata 2017).

6   Conclusion

Based on the results of the research on the characteristics of respondents in this study, the majority aged 56–65 years were 60 people (80.0%), based on education, namely the majority of junior high school education as many as 34 people (45.3%), and based on occupation the majority worked as farmers as many as 27 people. (36.0%). The level of stress in the elderly with hypertension is the majority of moderate stress levels as many as 47 people (62.7%). Quality of life in the elderly penderita hipertensi mayoritas baik sebanyak 63 orang (84,4%). Ada hubungan between stress levels and the quality of life of elderly people with hypertension in the work area of the Gunung Tua Health Center in 2018 where p = 0.014 ($<\alpha = 0.05$).

7   Suggestion

1. Respondents: It is expected that the elderly will carry out positive activities such as the Elderly Posyandu, Elderly gymnastics, activities that trigger brain activity in order to reduce their cognitive disorders, so that stress levels can be reduced.
2. Research Sites: It is hoped that the Gunung Tua Health Center staff can provide interventions on techniques that can reduce stress in hypertensive patients such as stress management, relaxation techniques to reduce stress and also to be able to provide counseling about hypertension and stress.

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