The Dominant Factors Associated with Quality of Life in Hypertension Patients in the Elderly

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KEYWORDS

The Dominant Factors, Quality Of Life, Hypertension

ABSTRACT

Elderly people with hypertension will have reduced social and psychological functioning, which will lower their quality of life. The purpose of this study was to identify the primary factor influencing the elderly with hypertension's quality of life. This study used a cross-sectional, correlative analytical methodology. The elderly with hypertension who did not have any complications made up the study population. A 80-person simple random sample was employed in this study. A scale and meter for assessing obesity, a family history questionnaire, and a gender and education questionnaire for physical activity using the GPAQ (Global Physical Activity Questionnaire) were the instruments utilized in this investigation. WHQOL-BREF was used for quality of life, and DASS (Depression Anxiety Scale) 42 was utilized for stress. In this study, the data were analyzed using logistic regression, rank spearmen, univariate, bivariate, and chi-square statistical tests. The variables of gender, illness, physical activity, stress, and family history were found to have an association with the hypertension patients' quality of life. Education level is one of the variables unrelated to the quality of life of older adults with hypertension. The attributes of physical activity, family history, and obesity status have the greatest effects on the quality of life for older adults with hypertension. The study's conclusions recommend increasing physical activity and reducing stress for obesity prevention. It will be the means by which hypertensive patients can live better lives.

1. Introduction

One of the main causes of death and disability is hypertension (Prastika & Siyam, 2021). The clinical symptoms of hypertension, which include headaches, palpitations, neck pain, weariness, blurred vision, and nosebleeds, are a silent killer that ultimately cause discomfort and lower the quality of life for those who have it (Bota, 2017). Numerous changes occur in the physical, cognitive, and psychological domains of the elderly (Lemay et al., 2020). Fundamental to life are expectations and quality of life, which includes social interactions, mental and physical well-being, and environmental factors (Hulloli et al., 2021). Additional interpretations of quality of life include conduct, existence, perception, and subjective experience. (Manik, 2020). Hypertensive seniors will have decreased social and psychological functioning, which will lower their quality of life. According to World Health Organization (WHO) health data, 1.28 billion adults between the ages of 30 and 79 have hypertension globally, and about 46% of those adults do not realize they have the disease (WHO, 2021). According to Basic Health Research (2018), 31.7% of Indonesians over the age of 18 have hypertension, which translates to nearly one in three of them having the disease. (Riskesdas, 2018). The prevalence of hypertension is rising due to a combination of lifestyle and genetic factors, including eating a diet high in fat and salt, not exercising, and smoking and drinking alcohol. According to the East Java Health Office Medical Records (2021), 36.3% of East Javans have hypertension, and this frequency rises with age. In East Java province, there are an estimated 11,686,430 people over the age of 15 who suffer from hypertension; the percentage of males affected is 48.38%, while the percentage of females affected is 51.62%. Out of this total, 5,806,592 individuals in the province of East Java who had hypertension (49.70%) received medical attention. The number of East Java province residents with hypertension who received standard medical care increased by 14.10% in 2021 compared to 2020. (Dinkes Jawa Timur, 2021) The Surabaya Health Office's data indicate that due to the high prevalence of hypertension in the city, medical facilities are concentrating on treating and preventing hypertension in accordance with guidelines (Sasaki, 2012). That being said, the actual percentage of Surabaya residents with hypertension who received standard medical care in 2020 fell from 89.03% in 2019. To 84.22% (Dinkes Kota Surabaya, 2020). According to a preliminary study conducted in Wonokromo Surabaya, data obtained in 2020 showed that 532 elderly people had hypertension; in 2021, that number had increased from the previous year to 731 elderly people; and in 2022, that number had decreased however remained high at 708 elderly people. Due to their inability to prevent it and ignorance of the

risk factors, the majority of older people do not realize they have severe hypertension.(Weber et al., 2014) Numerous variables contribute to hypertension, including genetics, age, gender, and physical activity levels as well as environmental influences including food and lifestyle choices. (Sopiah et al., 2020). The subjective concept of quality of life in old age encompasses various aspects such as physical and psychological well-being, good physical abilities, feeling self-sufficient and useful, engaging in social activities, and socioeconomic standing. Individual factors affect the elderly with hypertension's quality of life (Samiei Siboni et al., 2021). Environmental variables can also have an impact on hypertension patients' quality of life (Chendra et al., 2020). Elderly hypertension can negatively impact their quality of life by causing symptoms including exhaustion, dizziness, shortness of breath, chest discomfort, and other issues that can shorten their life expectancy and negatively impact their quality of life (Aisyiah et al., 2022). Encouraging those who suffer from hypertension can help prevent hypertension by influencing their behavior to regulate their blood pressure, which in turn allows them to control their behavior to control their hypertension.(Shobriana et al., 2023) There are two main sources of motivation for blood pressure control: internal and external. Experience can serve as a source of motivation (Aydın et al., 2021). These encounters may be internal (with oneself) or outward (with others). Nurses must so attempt to boost motivation in order to control hypertension (Azizah, 2018). The aforementioned situation has piqued the researcher's interest in studying variables pertaining to the quality of life experienced by hypertension patients in the Wonokromo subdistrict of Surabaya.

2. Methodology

Materials

This study used a cross-sectional, correlative analytical methodology. In this study, the dependent variables included comorbidities, gender, stress, and physical activity. The standard of living served as the independent variable. This gathering consisted of hypertension patients from Surabaya's Wonokromo Subdistrict, and simple random sampling was employed for the sample. The study was conducted during April and May of 2023.

Data collection procedures

The instruments utilized in this investigation included a scale and meter for measuring obesity, a questionnaire for comorbidities, a questionnaire on gender and education, and a Global Physical Activity Questionnaire (GPAQ) for measuring physical activity. WHQOL-BREF was used for quality of life, and DASS (Depression Anxiety Scale) 42 was utilized for stress. Informed consent was obtained before any data was collected, and respondents' names were kept confidential. The Google form was used to get the data. The research obtains ethical authorization before providing data to the respondent. The Health Research Ethics Committee of Universitas Nahdlatul Ulama Surabaya, with certificate number No.0174/020/EC/KEPK/UNUSA/2023, deemed it to be ethically feasible. Data gathering started with a door.

Data analysis

In this study, the data were analyzed using the following methods: univariate, bivariate with chi square statistical test, rank spearmen test, and multivariable analysis using logistic regression test.

3. Results and discussion

Table 1. Features of Respondents According to the Elements Affecting the Equality of Life for Seniors with Hypertension

Characteristics	Number of respondents (n=80)	Percentage (%)
Gender		
Male	15	18,75
Female	65	81,25
Obesity		
Obesity 1	45	56,3
Obesity 2	35	43,8

Physical Activity		
Heavy	4	5
Middle	59	73,8
Low	17	21,3%
Education		
Base	14	17,5%
Intermediate	66	82,5%
stress		
Normal	60	75%
Light Stress	18	22,5%
Moderate Stress	2	2,5%
Family History		
Yes	49	61,2%
No	31	38,8%
Quality of Life		
Not Good	52	65%
Good	28	35%

With a percentage of 65%, Table 1 shows that women made up the majority of respondents. The distribution of respondents based on obesity status revealed that 45% of respondents were obese, while 59% of respondents engaged in moderate-to-intense physical activity, and 60% of respondents completed secondary education. Sixty percent of respondents do not feel stressed, sixty-two percent have a family history of hypertension, and sixty-five percent have an inferior quality of life.

Tabel 2. Examine bivariate data for variables influencing the hypertension patient's quality of life.

Variables	**The Qualiy of life**		∑	**p**
	Not Good	**Good**		
Gender				
Male	6 (40%)	9 (60%)	15 (100%)	0.024
Female	46 (70%)	19 (30%)	65 (100%)	
Obesity				
Obesity 1	34 (75,5%)	11 (24,5%)	45 (100%)	0.025
Obesity 2	18 (51,5%)	17 (48,5%)	35 (100%)	
Physical Activity				
Heavy	2 (50%)	2 (50%)	4 (100%)	0.025
Middle	35 (59,4%)	24 (40,6%)	59 (100%)	
Low	15 (88,2%)	2 (11,7%)	17 (100%)	
Education				
Base	7 (50%)	7 (50%)	14 (100%)	0.318
Intermediate	45 (68,2%)	21 (31,8%)	66 (100%)	
stress				
Normal	43 (71,6%)	17 (28,4%)	60 (100%)	0.032
Light Stress	8 (44,4%)	10 (55,6%)	18 (100%)	
Moderate Stress	1 (50%)	1 (50%)	2 (100%)	
Family History				
Yes	35 (71,5%)	14 (28,5%)	49 (100%)	0.033
No	17 (54,8%)	14 (45,2%)	31 (100%)	

Table 2 demonstrates that there is no correlation between life quality and schooling (p = 0.318), while there is a relationship between gender (0.024), obesity (p = 0.025), physical activity (p = 0.025), stress (p = 0.032) and family history of hypertension with quality (p = 0.033).

Table 3. Analysis Multivariat

Variables	**P value**	**RP**	**95% CI**

Obesity	0,007	4,933	1,545-15,744
Physical Activity	0,011	4,304	1,393-13,298
Stress	0,024	3,619	1,181-11,095

Bivariate analysis results indicated a significant correlation (p 0.024) between gender and the quality of life of older adults with hypertension. According to the study's findings, respondents with hypertension's quality of life and gender were related (p value 0.013) (Akbar et al., 2020). Because the hormone estrogen, which helps to raise levels of HDL (high-density lipoprotein), protects women who are not yet menopausal, women are particularly vulnerable to developing hypertension as they age. High LDL (low density lipoprotein) cholesterol and low HDL levels influence the development of atherosclerotic processes, which in turn cause elevated blood pressure. Compared to men, elderly women are more likely to have a lower quality of life. This disease is caused by hormonal changes that occur after menopause and greater expectation rates in women. (Sofia & Sawitri, 2023). The researchers found that women make up the majority of those who are at risk of acquiring hypertension because, preceding menopause, women's risk of developing hypertension is still considered low. The bivariate analysis' findings indicated a connection between older adults with hypertension's quality of life and obesity (p 0.025). This is consistent with research by Fadhilah (2019), which demonstrates that a small percentage (30%) of obese persons have a good quality of life while the majority (70.8%) have a low quality of life (Fadhilah et al., 2019) Morbid obesity has been seen to rise quickly, making obesity a major global health issue. Increased cardiovascular risk and the incidence of cardiovascular morbidity before heart attack are linked to being overweight. Obesity is one of the factors that lowers the quality of human resources since it can lead to a number of degenerative diseases. In addition, obesity can have psychosocial effects that lower elderly people's quality of life.(Asari & Helda, 2021). Researchers have found that older adults who are overweight or obese are six times more likely to develop hypertension than older adults who are not obese. Because obesity makes it difficult to move about daily, obese seniors will have a lower quality of life. Bivariate analysis results indicated that quality of life and physical activity were related in older adults with hypertension (p 0.025). Sports are a type of physical activity that can be done consistently. HDL levels are naturally raised by capacity-based exercise on a regular basis, and this is especially true for older adults. Exercise can reduce blood pressure by regulating blood pressure in addition to helping people lose weight.(Noventi et al., 2022). Sufficient physical exercise has been shown to enhance the quality of life for older adults with hypertension and to indirectly lower blood pressure. A correlation between physical activity and the quality of life of older adults with hypertension has been found by Rati's (2016) research, with a p value of 0.007 indicating that the senior gathering with high activity has a better quality of life than the elderly gathering with low activity. Because the average old person just exercises for around 10 minutes a day, the researchers in this study concluded that practically all elderly people engaged in modest physical activity. The bivariate analysis' findings indicated that there was no correlation between an elderly person's quality of life and their educational attainment (p 0.318). The study's findings are consistent with those of Chendra et al. (2020), who found no evidence of a significant link (p-value of 0.063) between education level and quality of life in hypertension patients with experience (Chendra et al., 2020) Certain respondents in this study had an elevated degree of education, however the extent of profoundly educated respondents to respondents with a good quality of life was also directly proportionate. Bivariate analysis results indicated a correlation between stress (p 0.032) and the quality of life in older adults with hypertension. Stress triggers a nerve cell reaction that leads to anomalies in the sodium expenditure or transport process. It is believed that the sympathetic nervous system, which is activated during activity, plays a role in the link between stress and hypertension by progressively raising blood pressure (Herawati et al., 2020). With an emphasis on medication adherence and self-care, the effects of stress on the quality of life and overall wellbeing of the elderly with non-communicable diseases are significant. Body abnormalities resulting from an ongoing stress reaction include: psychological disorders, anxiety disorders, anxiety, psychosis, and anxiety; physical disorders, such as heart disease, stroke, obesity, and ulcers; and anxiety. Seniors with elevated degrees of stress sleep with low quality. ((Ranieri et al., 2022). Researchers have found that stress on the elderly lowers

the quality of life for those who have hypertension because it can emotionally upset the elderly, resulting in headaches and other symptoms that raise blood pressure and interfere with daily activities. The quality of life of senior individuals with hypertension in the Wonokromo, Sub-district workspace is significantly impacted by obesity, physical activity, and stress, as indicated by the findings of the logistic regression analysis displayed in Table 3. For each variable after that, the Prevalence Ratio (RP) value is 4,933, 4,304, and 3,619, respectively. It is well established that obesity significantly affects the quality of life for older adults with hypertension in the obesity variable. Compared to hypertension individuals who are not fat, obese patients have a 4.304-fold increased risk of having a low quality of life. Hypertension can result from obesity through a number of different pathways, both directly and indirectly. Elevated cardiac output can be a direct consequence of obesity. This is due to the fact that increased body mass results in increased blood circulation, which raises cardiac output. (Ranieri et al., 2022). The Renin Angiotensin Aldosterone System (RAAS) and the sympathetic nervous system are activated in obesity through the action of mediators such as adipokines, hormones, and cytokines. Aldosterone is a hormone that can cause an increase in blood volume since it is directly linked to the retention of water and sodium. (Kamalumpundi et al., 2022). The degree of hypertension in obese individuals will dictate how severe their condition is. More blood is required to carry nutrients and oxygen to different tissues and muscles in a larger person's body. This is due to the fact that fat lengthens blood vessels, which raises vascular resistance and allows blood to stream over longer distances. blood pressure rising as a result of greater resistance. Fat cells will make matters worse by releasing substances that are harmful to the heart and blood arteries (Hu et al., 2021).

4. Conclusion and future scope

The study findings indicate that the following variables were found to be related to the quality of life of hypertensive patients in the workspace of the Wonokeomo Sub district, Surabaya City: gender, disease, physical activity, stress, and family history. Education level is not associated with the quality of life of elderly people with hypertension. The variables that have the greatest influence on the quality of life of elderly people with hypertension are obesity status, physical activity, and family history, with a dependency value of 94%.

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Conflict of interest

There is no conflict of interest in this study.

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