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THE EFFECT OF INCREASED BLOOD PRESSURE ON THE DECREASING QUALITY OF LIFE OF ELDERLY PEOPLE WITH HYPERTENSION

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Abstract

Hypertension is one of the most important risk factors for cardiovascular disease, especially in the elderly. Recent data show that almost half of the patients with hypertension and one-third of the elderly with comorbidities were non-adherent to treatment. This study aims to assess the relationship between blood pressure and the quality of life (QoL) of the elderly with hypertension. This was a quantitative correlation study carried out with a cross-sectional approach and an analytic study. The sampling technique utilized was simple random sampling. This study involved 104 elderly patients with hypertension. The WHOQOL-OLD questionnaire and blood pressure measuring device were used to collect the data. The data were then analyzed using Kendall Tau (p-value 0.000 <0.05). The results showed that 74% of the elderly had uncontrolled blood pressure and 60.6% had a low QoL category. The results of Kendal's analysis showed a relationship between blood pressure and quality of life for the elderly with hypertension (p=0.000; r= -734). In conclusion, there was a relationship between blood pressure and the quality of life of the elderly with hypertension. Moreover, an increase in blood pressure would reduce the QoL level of the elderly.

Keywords: *blood pressure; elderly; quality of life*

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1. Introduction

Aging is a lifelong process which is not only started from a specific period of time but from the beginning of someone's life. Entering old age is associated with physical decline, which is characterized by sagging skin, graying hair, tooth loss, decreased hearing, worsening vision, slow movement, and disproportionate body figure (Nasrullah, 2016). Elderly is the final stage of the human life cycle. This old age is linked with a decrease in the ability to live and sensitivity. The structure of world's population, including Indonesia, is currently going through an aging process which is marked by an increasing number and proportion of the elderly population (Indrayani, Ronoatmojo, 2017).

Data from WHO reveals that there were 901 million people aged 60 years or older, or 12% of the world's population (WHO, 2015). This number is estimated to increase by around 56%, from 901 million in 2015 to 1.4 billion in 2030; and in 2050, the elderly population is estimated to grow to more than double the number of that in 2015, reaching 2.1 billion (United Nations, 2015)**.** Indonesia is one of the countries that will enter an era of an aging population by referring to the population projection data in 2017 which shows that there is 23.66 million elderly in Indonesia (9.03%). The number of elderly is predicted to increase from 27.08 million in 2020 to 33.69 million in 2025. It will continue to grow to 40.95 million in 2030 and 48.19 million in 2035 The Special Region of Yogyakarta has the highest proportion of elderly in Indonesia. In 2018, the number of elderly reached 3,664,669 people, and in 2019 it was projected to reach 552,200 people (Statistics Indonesia, 2019). Meanwhile, the number of elderly in Sleman reached 165,000 people or 15% of the Sleman Regency's total population reached 1.1 million (Health Office of Sleman District, 2019).

The increase in the number of elderly people will affect various aspects of life. The declining process due to aging will also influence their quality

of life (Riyanti P, Ratnawati,2015). The increasing quantity of the elderly must be balanced with the increasing quality of life; apart from longevity, elderly people are expected to be able to live healthy, productive, and independent so that they will not burden their families and the government, and they can even become a valuable asset in the country's development process (Thalib B, Ramadhani K, Asmawati A,2015)**.** The decline in health status will affect their quality of life and they will be more likely to be susceptible to disease.

A quality-of-life model is developed to figure out the causes of the topic or issue being observed (Bakas, 2012, as cited in Endarti, 2015). Regarding the quality of life, this modeling can serve as research guidance and practical application to maximize the improvement of the quality of life of the observed population (Tias Endarti, 2015). In line with the previous study, Kartiningrum (2017) argued that quality of life is an important indicator for assessing the success of health service interventions, both in terms of prevention and treatment, because some elderly people perceive the aging process as a burden since they are mostly considered as a group of individuals who burden their families and society. In general, elderly people experience limitations so that their quality of life decreases (Yuliati A, Baroya N, Ririanty M, 2014)**.** Anbarasan, (2015) described an overview concerning the quality of life of the elderly in general (41.7%), poor physical health quality (71.7%), psychological quality (38.3%), social personal quality that was not very influential (50.0%), and poor environmental quality (73.3%). Furthermore, the quality of life is influenced by several factors.

Indrayani & Ronoatmojo (2017) stated that gender, age, marital status, educational background, and occupation are the factors related to the quality of life in the elderly. In determining a person's well-being which reflects his quality of life, many factors need to be determined as the focus of attention including age, gender, education level, marital status, employment status, income, and chronic diseases suffered by the elderly. These factors are considered risk factors in determining the quality of life of elderly people in the future because these changes or disturbances may reduce their quality of life (Wikananda, 2015)**.** Govindaraju et.al (2018) claimed that the quality of life of the elderly may also be influenced by social aspects including living situations, economic dependence, and physical limitations that are closely related to age and lifestyle factors including physical activity, diet, and nutrition. The elderly people have a higher risk of suffering from various health problems caused by decreased physical function, activity disorders, and metabolic disorders. These problems can reduce their quality of life (Khaje-Bishak Y, Payahoo L, Pourghasem B, Asghari Jafarabadi M, 2016)**.**

In line with the research above, Tias Endarti (2015) stated that a quality life is a life goal that everyone at all age levels wants to achieve. Quality of life is defined as a subjective assessment of physical and mental health which is highly influenced by values and culture in the surrounding environment and the socio-economic aspects of each individual. There are two models of quality of life widely used, namely the Ferans Model of Quality of Life and the WHO International Classification of Functioning, Disability, and Health (WHO ICF). Both models ensure that quality of life is influenced by individual factors and environmental factors.

Another study on the quality of life factors was conducted by Kiik, Sahar, and Permatasari (2018), suggesting that the quality of life in the elderly is influenced by various factors such as physical health, psychological health, social relationships, and the environment. This is in line with research conducted by Jacob and Sandjaya (2018) who stated that quality of life is influenced by various factors including physical factors, psychological factors, social factors, environmental factors, and dominant factors. Uncontrolled factors will leave an impact on elderly people.

Hayulita, Bahasa, and Sari (2018) pointed out that the low quality of life of the elderly will influence their welfare. Elderly's poor quality of life can also be caused by their low financial ability. When an elderly can achieve a good quality of life, it means that his life will lead to an unprosperous state (Nursilmi N, Kusharto CM, Dwiriani, 2017)**.** Moreover, elderly people can experience low quality of life due to poor physical factors. This will cause them to lose their chance to actualize themselves, and this limitation will inhibit them to obtain physical welfare. This is because a well-functioning physique will allow them to achieve good-quality of aging. However, their unpreparedness to face this situation will result in the low achievement of life quality (Nursilmi N, Kusharto CM, Dwiriani, 2017)**.**

Changes in the quality of life experienced by elderly people usually tend to lean in an unfavorable direction. These changes will turn into an obstacle, particularly in determining the level of welfare, considering that the elderly undergo physical and psychosocial decline which will influence their quality of life. Not all elderly, in Indonesia or around the globe, can obtain good quality of life when they get old. Hypertension is often found in the elderly and they usually also experience increased systolic pressure. Currently, it is estimated that 23% of women and 14% of men aged >65 years are suffering from hypertension (Triyanto Endang, 2014)**.**

Research by Zein, 2012, as cited in Jannah et., al (2017) estimated that there will be around 80% of increase in hypertension cases from 639 million cases in 2000 to 1.15 billion cases in 2025, especially in developing countries. In 2011, the prevalence of

elderly suffering from hypertension in Indonesia was 4.02% in the age group of 45-64 years and 5.16% in the age group of >65 years (24)**.** According to a survey conducted on Indonesian people, the prevalence of hypertension ranged from 6-15% of the entire population. Meanwhile, based on the data of the Sample Registration System (SRS) in Indonesia in 2014, hypertension with complications (5.3%) was the fifth largest cause of death at all ages, most of whom are unaware of this. Furthermore, hypertension in the elderly is, more often than not, comorbid. This disease has become a major problem in public health in Indonesia as well as in several countries in the world. The health profile of the Special Region of Yogyakarta (2019) found that the prevalence of hypertension in this region reached 16.02%. Likewise, Statistics Indonesia (2017) describes that the prevalence of elderly suffering from hypertension in Sleman Regency in 2017 in the age group of 60-69 years was 24,574 (24.79%). The increasing rate of hypertension in the community is caused by several factors.

Suhadak (2010) identified factors that play a part in causing the occurrence of hypertension including risks that cannot be controlled (major) and those that can be controlled (minor). The uncontrollable risk factors are heredity, gender, race, and age; while controllable risk factors are obesity, lack of exercise or activity, smoking, drinking coffee, sodium sensitivity, low potassium levels, alcoholism, stress, work, education, and diet. Similarly, Jannah et al., (2017) explained that hypertension is a condition where there is an increase in blood pressure which gives continuing symptoms to a target body organ, leading to more severe damage. According to the researcher, the risk factors for hypertension include age, gender, stress, smoking habit, and caffeine consumption. The incidence of hypertension increases with age, and men possess a higher risk of developing hypertension earlier than women. Moreover, smoking habits increase the risk of hypertension.

Another study on the causing factors of hypertension was carried out by Jundapri et.al (2020), emphasizing that hypertension is a non-communicable disease which frequently arises due to several risk factors that are actually changeable. Those risk factors include sodium intake, excessive consumption of fat, smoking, heredity, lack of exercise, and obesity. If these factors are not controlled, hypertension can lead to complications.

A previous study found that there were 3,896 men and 4,492 women of elderly, 430 of whom suffered from hypertension. Meanwhile, there were 450 elderly in Gayamharjo Village, 140 of whom suffered from hypertension. There were 75 elderly with comorbid hypertension and 65 elderly with non-comorbid hypertension. During the interview carried out to a health worker in Gayamharjo Village, he said that thus far there has been no specific treatment to address the quality of life of the elderly. In addition, the measurement of the life quality scale of the elderly has never been carried out. Furthermore, interviews with random technique regarding the quality of life were conducted to 10 elderly people in Gayamharjo Village. The result revealed that physically they tended to be weaker and got tired faster; psychologically, they were easily feeling anxious; and socially, they had not participated in social activities because the environment did not support them in carrying out activities. The description of the research background underlies the formulation of the purpose of this study in order to determine the relationship between blood pressure and the quality of life in the elderly with hypertension.

2. Metode

This qualitative correlative research was carried out using the cross-sectional design in which both variables are collected at the same time or at one time (Dharma KK,2011). The research was conducted in the Gayamharjo Village, Prambanan, Sleman. The population in this study was the elderly people in Gayamharjo who suffer from hypertension, and 104 people were taken as samples. The sampling technique utilized in this study was simple random sampling. The inclusion criteria of the sample was elderly people living in Gayamharjo diagnosed with hypertension. The blood pressure in this study was the result of systolic and diastolic measurements using a sphygmomanometer. Those results were then categorized into controlled and uncontrolled hypertension. The quality of life of elderly people in this research was the respondents' assessment in the form of statements regarding physical health, psychology, social relationships, and the living environment where they perform their daily activities. The results were categorized into three qualities of life: low, medium, and high.

3. Results

As can be Table 1, most respondents were dominated by female (65.4%). According to marital status, 56% were widowed, while based on their occupation, 49% were farmers. Furthermore, Table 1 also exhibits that the majority of the respondents had an Elementary level of education with 44.2%, while 65.4% were living with their family. Meanwhile, based on the blood pressure category, most respondents had uncontrolled blood pressure with 74%, and according to the quality of life, 60.6% were classified under the poor category.

The Kendal Tau correlation analysis obtained a correlation coefficient of -0.734 with a significance value of 0.000 < 0.05 (Table 2), indicating that there is a relationship between blood pressure and the quality of life of elderly people. Based on the

negative value of the correlation coefficient, it can be concluded that there is an inverse relationship. This means that the higher or the more uncontrolled blood pressure, the lower the quality of life of the elderly people who suffer from hypertension in Gayamharjo Village, Prambanan, Sleman. The test result of r = -0.734** indicates a strong relationship, meaning that the better the blood pressure, the better the quality of life of elderly people with hypertension.

Table 1. Characteristics of the Elderly (n=104)

Variables	Frequency (n=104)	Percentage %
Gender		
1. Man	36	34.6
2. Woman	68	65.4
Marital Status		
1. Married	45	43.3
2. Widowed	59	56.7
Occupation		
1.Unemployed	23	22.1
2. Farmer	51	49.0
3. Entrepreneur	9	8.7
4. Housewife	21	20.2
Education Level		
1. Never went to school	43	41.3
2. Elementary school	46	44.2
3. Middle School	10	9.6
4. High school	5	4.8
Living Status		
1. Living alone	36	34.6
2. Living with family	68	65.4
Blood Pressure Category		
1. Controlled	27	26.0
2. Uncontrolled	77	74.0
Quality of Life Category		
1. Low	63	60.6
2. Medium	31	29.8
3. High	10	9.6

4. Discussion

This study recorded that most respondents were female (65.4%) and there were a smaller number of males (34.6%). This is in accordance with Tamher and Noorkasiani (2009) who propose that gender difference is one of the factors affecting the psychology of the elderly so that it will influence the form of adaptation utilized. Women are better prepared to deal with problems than men because they tend to be less emotional.

The current study identified respondents' marital status and the result revealed that there were 56.7% of widows and 43.3% of married status. Respondents with divorced status tended to have uncontrolled blood pressure (53.8%), resulting in a lower quality of life (52.9%). This result is in accordance to that of Septiana (2020) who found that most respondents in the working area of the Jogonalan 1 Community Health Center were widows (59.4%). This is because a spouse plays a pivotal role as a support in various ways, such as emotions, problem-solving, finance, and parenting.

Based on the employment status, the majority of respondents were classified into the working category (77.9%), consisting of farmers (49%), entrepreneurs (8.7%), and housewives (20.2%). Respondents who work as farmers generally had uncontrolled blood pressure (39.4%), causing a decrease in the quality of life which was classified into the low category (29.8%.). Likewise, another study (21) also reveals that the low quality of life in the elderly is caused by the poor physical factor which can lead them to lose the opportunity to actualize themselves. Their limitation will inhibit them in achieving physical well-being.

The respondents' educational status was dominated by the elementary school level (44.2%). Those who never went to school showed uncontrollable blood pressure (33.7%). They also tend to have a low quality of life (26.9%). This implies that education is very influential in determining the quality of life and blood pressure. The higher a person's level of education, the more life experiences he will possess, and the better his

readiness in facing the occurring problems. Generally, elderly people with a higher level of education can still be productive. They prefer to fill their free time and give their contribution. Higher education is associated with a good quality of life in the elderly, while lower education will also lead to less or poor quality of life (Wikananda, 2015).

In the present study, most respondents lived with their family (65.4%), consisting of 49% with uncontrolled blood pressure, 16.3% with controlled blood pressure, 40.4% with low quality of life, and 19.2% with moderate quality of life. On average, elderly people with hypertension who live with their family had uncontrollable blood pressure and low quality of life because their family does not support them in carrying out blood pressure control. The majority of the family does not remind them to do physical activities. They also do not remind and aid them in selecting foods that are healthy to be eaten or those which should be avoided. Moreover, the family even do not give them a reminder about their regular doctor visits and treatment. Thus, the more uncontrolled the blood pressure, the lower the quality of life of the elderly.

According to blood pressure data, most elderly people had uncontrollable blood pressure (77 respondents or 74%). Respondents who were still carrying out strenuous activities in their old age had a greater chance to have uncontrolled blood pressure compared to those who were not working. The Elderly's physical activities heavily influence their blood pressure; the greater their physical activities, the higher their blood pressure (Makawekes, Suling, and Kallo, 2020). This research obtained 27 respondents (26%) with controlled blood pressure. Observation and interview to respondents with controlled blood pressure were carried out and the results showed that usually respondents rarely perform strenuous activities, adopt a healthy lifestyle, and regularly take medication. The elderly with controlled blood pressure visit the community health center once a week for regular check-ups.

Meanwhile, regarding the quality of life, this research identified that the majority of respondents were categorized under the low category (63 people or 60.6%), consisting of those who carry out strenuous activities as farmers and those who have never had recreational activities. The elderly who possess uncontrolled blood pressure tend to have a lower quality of life compared to those of controlled blood pressure.

This research also showed that there were 10 respondents with high quality of life (9.6%). This is because these respondents possessed a high value of life quality, particularly in several domains such as the past, current, and future activities domain, social participation domain, and closeness domain. The high quality of life in the elderly can be seen from the blood pressure measurement results under the controlled blood pressure category. Previous studies found a decrease in health status, especially concerning physical health (Kiik SM, Sahar J, Permatasari H. 2018). Numerous theories regarding the aging process show similar results. The health status of elderly people which decreases with age will influence their quality of life. The increasing age will be accompanied by the occurrence of various diseases, decreased body function, body decreasing balance, and the risk of falling. The decline in health status is contrary to the wishes of the elderly to remain healthy, independent, and able to carry out their usual activities.

Correlation analysis obtained a p-value of 0.000 <0.05. Statistically, there was a significant relationship between blood pressure and the quality of life of elderly people suffering from hypertension in Gayamharjo Village. Thus, Ha was accepted and Ho was rejected. The correlation value between variables obtained in this research was r = -0.734**, indicating that any increase in blood pressure will reduce the quality of life of elderly people who suffer from hypertension.

The results of the current study show that there were 1% of patients suffering from uncontrolled hypertension with a high quality of life. This can be seen from the high value obtained in the domain of the past, present, and future activities, the domain of social participation, and the domain of closeness. This study also revealed that there were 63 respondents (60.0%) with uncontrolled hypertension who possessed a low quality of life. This can be identified from the low value of the quality of life in the domain of sensory abilities, death, and autonomy.

In accordance to the research above, Rohmah et.al (2012) examined the quality of life in the elderly and argued that physical, psychological, social, and environmental conditions can affect the quality of life. The elderly who are suffering from hypertension will leave a negative impact on their quality of life because the symptoms induced by hypertension can prevent the elderly from carrying out their usual activities. In addition, psychological, social, and environmental conditions can also influence their quality of life. The better the psychological, social, and environmental conditions, the better the elderly's quality of life.

Likewise, Poljicanin, Tamara, et al (2010) also claimed that individuals with hypertension can have a negative impact on their quality of life. They underwent a decrease in their quality of life in almost all dimensions measured based on WHO's questionnaire where physical health and social relations are mostly affected.

In addition, Sofiana, 2011, as cited in Anbarasan (2015), concluded that there was a relationship between hypertension and decreased quality of life; elderly people with hypertension were

4.6 times of having less quality of life than those without hypertension.

5. Conclusion

There is a relationship between blood pressure and the quality of life of elderly people who suffer from hypertension. An increase in blood pressure will reduce their quality of life.

6. References

Anbarasan, S. (2015). Gambaran Kualitas Hidup Lansia Dengan Hipertensi Di Wilayah Kerja Puskesmas Rendang Pada Periode 27 Februari Sampai 14 Maret 2015. *intisari Sains Medis*, 113-124.

Artini NM, S. P. (2017). Hubungan Fungsi Keluarga dengan Kualitas Hidup Lanjut Usia di Desa Jimbaran Kecamatan Kuta Selatan. *J Cent Res Publ Midwifery Nurs*, 84-90.

Cahya E, H. H. (2017). Hubungan Dukungan Sosial Dengan Kualitas Hidup Lansia Di Posyandu Lansia Wiguna Karya Kebonsari Surabaya. *J Keprawatan dan Kebidanan*, 36.

Diah, K. E. (2019). Kualitas Hidup Lansia Di Dusun Glonggongan Desa Sumber Tebu Kecamatan Bangsal Mojokerto. *Hospital Majapahit*, 42-47.

Endang, T. (2014). *Pelayanan Keperawatan Bagi Penderita Hipertensi Secara Terpadu* . Yogyakarta: Graha Ilmu Yogyakarta.

Endarti, T. (2015). Kualitas Hidup Kesehatan: Konsep, Model, dan Penggunaan. *Jurnal Ilmu Kesehehatan*, 1–12.

Govindaraju T, S. B. (2018). Dietary patterns and quality of life in older adults: A systematic review. *Nutrients*, 1-18.

Hayulita S, B. A. (2018). Faktor Dominan Yang Berhubungan Dengan Kualitas Hidup Lansia. *Jurnal ilmu Kesehatan "afiyah*, 42-46.

Indrayani, Ronoatmojo S. Faktor-faktor yang berhubungan dengan kualitas hidup lansia di Desa Cipasung Kabupaten Kuningan Tahun 2017. J Kesehat Reproduksi. 2018;9(1):69–78.

Jacob DE, S. (2018). Faktor faktor yang mempengaruhi kualitas hidup masyarakat Karubaga district sub district Tolikara propinsi Papua. *Jurnal Naional ilmu kesehatan*, 1-16.

Jannah M, A. N. (2016). Analisa Faktor penyebab Kejadian Hipertensi di Wilayah kerja Puskesmas Mangasa kecamatan Temalate Makassar. *Jurnal PENA*, 410-417.

Kelana, D. (2011). *Metodologi Penelitian Keperawatan : Panduan Melaksanakan dan Menerapkan Hasil Penelitia.* Jakarta: Trans Info Media.

Kementrian Kesehatan. RI (2017). Profil Kesehatan Indonesia 2017.

Kementrian Kesehatan. RI (2013). Riset Kesehatan Dasar 2013.

Khaje-Bishak Y, P. L. (2014). Assessing the quality of life in elderly people and related factors in tabriz, iran. *J Caring Sci*, 257–263.

Kiik, S. Sahar. J. Permatasari H(2018). Peningkatan Kualitas Hidup Lanjut Usia (Lansia) Di Kota Depok Dengan Latihan Keseimbangan. *Journal Keperawatan Indones*, 109-16.

Lily seftiani, H. M. (2019). Hubungan Kualitas hidup lansia dengan hipertensi di wilayah Kerja Puskesmas Perumnas II Kelurahan Sungai Beliung Kecamatan Pontianak. *ProNers*.

Nasrullah.D. (2016). *Buku Ajar Keperawatan Gerontik Jilid 1 Dengan Pendekatan Asuhan Keperawatan Nanda, NIC,NOC.* Jakarta Timur.

Nations, U. (2015). Word Population Ageing. hal. https://population.un.org/wpp/publications/files/key_findings_wpp_2015.

Nursilmi N, K. C. (2017). Hubungan Status Gizi Dan Kesehatan Dengan Kualitas Hidup Lansia Di Dua Lokasi Berbeda. *Media Kesehat Masyarakat Indonesia*, 369.

Rohmah AIN, P. B. (2012). Quality of Life Elderly. *Jurnal Keperawatan*, 125.

Statistik, B. P. (2019). *Stat Pendud Lanjut Usia di Indones 2019.* Jakarta: Badan Pusat Statistik .

Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif dan R&D.* Bandung: PT Alfabet .

Suhadak, A. a. (2011). Pengaruh Pemberian The Rosella Terhadap Penurunan Tekanan Darah Tinggi Pada Lansia Di Desa Windu Kecamatan Karangbinaan Kabupaten Lamongan. *SURYA*, 40-44.

Suharto Suharto, K. J. (2020). Faktor Risiko Hipertensi pada lansia di desa Limau Manis Kecamatan Tanjung Morawa. *Jurnal Kesehatan Global*, 41-46.

Tias Endarti A. Kualitas Hidup Kesehatan: Konsep, Model, dan Penggunaan. J Ilm Kesehat [Internet]. 2015;7(2):1–12. Available from: http://lp3m.thamrin.ac.id/upload/jurnal/JURNAL-1519375940.pdf

Thalib B, R. K. (2015). Status Gizi Dan Kualitas Hidup Pada Lansia Pengguna Gigitiruan Penuh Di Kota Makassar. *Media Kesehat Masy Indones Univ Hasanuddin* , 44-9.

WHO. (2015.). World Health Statistics.

Wikananda, G. (2017). Hubungan Kualitas Hidup dan Faktor Resiko pada Usia Lanjut di Wilayah Kerja Puskesmas Tampaksiring 1 Kabupaten Gianyar Bali. *Intisari Sains Medis*, 1-12.

Yuliati A, Baroya N, Ririanty M. Perbedaan kualitas hidup lansia yang tinggal di komunitas dengan di pelayanan sosial lanjut usia. J Pustaka Kesehat. 2014;2(1):87–94.