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# Relationship between Duration of Illness and Quality of Life in Hypertension Patients

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> No patient does not have the desire to recover in a short time. Apart from assistance from medical drugs, the patient's quality of life is

> another determining factor. Hypertensive patients show different

quality of life. It cannot be confirmed that patients with more extended illness have a worse quality of life. This study aimed to determine the relationship between the length of illness and the quality of life of

hypertensive patients. The research method uses a correlational analytic

cross-sectional approach. The research location is Jatikarya Community

Health Center, Bekasi, Indonesia. Sample selection used a purposive

sampling technique with the criteria of inpatients with a medical

diagnosis of hypertension, totaling 33 samples. The research instrument

used the DQLCTQ quality of life questionnaire and duration of illness

checklist. Analysis was carried out using univariate and bivariate statistics using chi-square. The study results showed that most patients (42.4%) had a prolonged illness category of 1-5 years. The quality of life of the majority of hypertensive patients (51.5%) is in the poor category. The conclusion of the statistical hypothetical test shows a significant relationship between the duration of illness and the quality

of life of hypertensive patients. The contribution of this research is to provide evidence of the importance of maintaining the patient's quality

Keywords: Duration of Illness, Patient Care, Quality of Life,

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of life to speed up the recovery period from the disease.

ABSTRACT

Hypertension

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### **1. INTRODUCTION**

Quality of life is the state of satisfaction or enjoyment in daily life (López-Ruiz et al., 2021). It is related to physical and mental health (Carpi et al., 2022; Jacobs et al., 2020), If someone is physically and mentally healthy, then that person will achieve satisfaction in life. Physical health can be assessed from physical function, physical role limitations, body pain, and perceptions about health (Galvez-Sánchez et al., 2020; O'Neill & Forman, 2020; Shanbehzadeh et al., 2021). Mental health can be assessed from social functioning and emotional role limitations (Viertiö et al., 2021). Hypertension is a condition in which a person experiences an increase in blood pressure above normal, which results in increased morbidity and mortality (Oras et al., 2020; Saiz et al., 2022). It is a degenerative disease that is a major problem in society, especially the elderly (Shibata et al., 2020; Ungvari et al., 2021). Hypertension has a shared risk of complications, especially when associated with degenerative problems (Cheon, 2022). Hypertension, or high blood pressure, is when a person's blood pressure exceeds the average of 120/80 mmHg (Arguedas et al., 2020; R Nur Abdurakhman et al., 2022). The blood pressure limit is 120-140 mmHg, and the systolic pressure is 80-90 mmHg (Kaul, 2020). Hypertension is often found in modern society in both men and women, young and old, and the symptoms are not visible.

Data from the World Health Organization (WHO) in 2021 estimates that 1.28 billion adults aged 30-79 years worldwide suffer from hypertension, most of whom (two-thirds) live in low and middle-income countries. An estimated 46% of adults with hypertension are unaware that they have the condition. Less than half of adults (42%) with hypertension are diagnosed and treated. About 1 in 5 adults (21%) with hypertension can control it. Hypertension is the leading cause of premature death worldwide (Farhadi et al., 2023; Redho et al., 2023; Susanti et al., 2023).

Data in the Indonesian Health Profile in 2021, the prevalence of hypertension based on measurement results in the Indonesian population aged 18 years was 34.1%. Hypertension occurred in the 31-44 year old group (31.6%), 45-54 year olds (45.3%), aged 55-64 years (55.2%). From the prevalence of hypertension of 34.1%, it is known that 8.8% were diagnosed with hypertension, 13.3% of people diagnosed with hypertension did not take medication, and 32.3% did not regularly take medication (Islamy et al., 2023; Manullang & Rosalina, 2021; Triandini, 2022).

Hypertension is also known as a silent disease and is a significant risk factor for the development or cause of heart disease and stroke (Balwan & Kour, 2021; Khan et al., 2021). If it is not controlled, it will cause damage to other body organs, such as the brain, kidneys, and eyes, and paralysis of the movement organs.

Hypertension treatment can be done pharmacologically and non-pharmacologically (Ajeigbe et al., 2021; Dassanayake et al., 2020). Pharmacological treatment is by taking anti-hypertension drugs (Burnier et al., 2020), while non-pharmacological treatments that can be done are exercise, not smoking, not drinking alcohol (Verma et al., 2021), avoiding stress, water therapy, jade stone therapy, cupping therapy, herbal therapy, meditation, and reflexology therapy (Aditya & Khoiriyah, 2021). In contrast to non-pharmacological studies, this research looks at the other side of hypertension cases as a novelty; it looks at it from the perspective of the duration of illness and the patient's quality of life. Based on this, this research aims to analyze the relationship between the length of illness and the quality of life of hypertensive patients.

## 2. METHOD

This research is quantitative. Analytical survey research design is a survey or research that tries to explore how and why health phenomena occur. The approach used in this research design is cross-sectional, where the researcher attempts to study the dynamics of the correlation between risk factors and effects, where data collection is carried out simultaneously (point time approach). Researchers used this research design because they wanted to know the relationship between the independent variable and the dependent variable where the measurements of both variables were carried out at the same time.

The research location is Jatikarya Community Health Center, Bekasi, Indonesia. Sample selection used a purposive sampling technique with the criteria of inpatients with a medical diagnosis of hypertension, totaling 33 samples. The research instrument used the DQLCTQ quality of life questionnaire and duration of illness checklist. Analysis was carried out using univariate and bivariate statistics using chi-square.

# 3. RESULTS AND DISCUSSION

### 3.1. Results

Table 1 shows the research results regarding the characteristics of respondents based on age, gender and education.

Characteristics of Respondents							
Characteristics	Categories	Frequencies	cies Percentage				
Age	Adult	16	48.5				
	Elderly	17	51.5				
Gender	Female	13	39.4				
	Male	20	60.6				
Education	Elementary/Middle School	11	33.3				
	Senior High School	18	54.5				
	Diploma/Bachelor's degree	4	12.1				

### Table 1

Table 1 shows the characteristics of respondents based on age. The majority of the 33 respondents were in the elderly category, 17 respondents (51.5%), and 16 respondents (48.5%) in the adult category. Based on gender, the majority were male, with 20 respondents (60.6%), and female, with 13 respondents (39.4%). The majority of respondents' education was high school, with 18 people (54.5%), elementary/middle school, 11 people (33.3%), and diploma/bachelor's degree, 4 people (12.1%). Table 2 shows the frequency distribution of hypertensive patients based on disease duration categories.

Categories	Frequencies	Percentage
1-5 years	14	42.4
More than 5 years	19	57.6

Table 2 shows the frequency distribution of respondents based on the length of illness of hypertension patients from 33 respondents. The majority in the category of duration of illness 1-5 years amounted to 14 people (42.4%), duration of illness more than 5 years amounted to 19 people (57.6%). Table 3 below shows the distribution of hypertension patients based on the patient's quality of life.

### Table 3

Distribution Quality of Life of Patients					
Categories	Frequencies	Percentage			
Bad	17	51.5			
Good	16	48.5			

Table 3 shows the results of the frequency distribution of respondents based on the quality of life of hypertension patients from 33 respondents, the majority in the bad category amounting to 17 people (51.5%) and the remaining 16 people in the good category (48.5%). Table 4 below shows the results of the bivariate analysis in this study to determine the significance of the relationship between length of illness and quality of life in hypertension patients.

### Table 4

Results of Bivariate Tests on the Relationship between Length of Illness and Quality of Life

		Quality of Life			Total		D	$X^2$
Duration of Illness	Ba	Bad		Good		Total		
	f	%	f	%	f	%	value	
1-5 years	3	21.4	11	78.6	14	100		
More than 5 years	14	73.7	5	26.3	19	100	0.003	8.812
Total	17	51.5	16	48.5	33	100		

Table 4 shows the results that the majority of respondents with an illness duration of 1-5 years have a good quality of life, but the majority of respondents with an illness duration of more than 5 years have a poor quality of life. Based on the chi square output, the p-value is 0.003, less than 0.05. This output means that there is a significant relationship between the duration of illness and the quality of life of hypertensive patients.

### 3.2. Discussion

The research results showed that based on the length of illness of the 33 respondents, the majority of hypertensive patients with a duration of disease of 1-5 years were 14 people (42.4%). This shows that the disease duration category is at most 1-5 years, meaning the patient has not suffered from hypertension for a long time. The researchers' analysis revealed that the length of time one suffers from hypertension is associated with the risk of several complications that arise afterward. This will affect the patient's quality of life. Mannan et al. (2022) stated that decreased quality of life has a relationship with morbidity and mortality rates and affects the life expectancy of hypertensive patients.

The study results showed that the majority of patients' quality of life from the 33 respondents was in the poor category, 17 people (51.5%), and the remainder in the good category, 16 people (48.5%). The poor quality of life that occurs in hypertensive patients can be seen from various domains according to the questionnaire, where the physical health of some respondents is limited in carrying out daily activities or work. In the energy domain, the patient feels tired/sleepy and less energetic and enthusiastic. In the health pressure domain, respondents tend to accept the situation where they are proud to take their health condition in the sense of not being discouraged, not afraid, and not giving up hope in facing illness. In the mental health domain, respondents stated that they felt anxious and sad about facing hypertension. Olsson et al. (2021) emphasized this that mental health influences the quality of life in hypertensive patients.

According to theory, the quality of life in hypertension sufferers can also be influenced by internal factors, such as education level, socio-economics, and parents' lifestyle (Dany et al., 2020). Sufferers require an extended stay in the hospital so that they feel as if they are different from ordinary people their age. Another point of view that influences the patient's personal quality of life is the duration of suffering (Maromi et al., 2021; Samiei Siboni et al., 2021; Snarska et al., 2020).

with an illness duration of 6-10 years have a poor quality of life, and the majority of respondents with an age of more than 10 years have a poor quality of life. This is because the longer you suffer from hypertension, the greater the complications you experience, which can reduce the patient's quality of life. Sarzyńska et al., (2021) emphasized that the longer duration of suffering from hypertension can cause the quality of life to decrease, characterized by insomnia, stress, and depression.

### 4. CONCLUSION

There is a significant relationship between the duration of illness and the quality of life of hypertensive patients. Physical limitations in carrying out daily activities can reduce the quality of life. Feelings of anxiety and sadness in dealing with hypertension are also factors in lowering the quality of life of hypertension sufferers. The longer you suffer from hypertension, the greater the complications you experience, which can reduce the patient's quality of life. The contribution of this research is to provide evidence of the importance of maintaining patients' quality of life to speed up the recovery period from their illness.

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## REFERENCES

- Aditya, R., & Khoiriyah, K. (2021). Aplikasi Terapi Pijat Refleksi Kaki terhadap Penurunan Tekanan Darah pada Pasien Hipertensi di Kecamatan Lowokwaru Kota Malang. *Holistic Nursing Care Approach*, 1(1), 33. https://doi.org/10.26714/hnca.v1i1.8264
- Ajeigbe, O. F., Ademosun, A. O., & Oboh, G. (2021). Relieving the tension in hypertension: Food-drug interactions and anti-hypertensive mechanisms of food bioactive compounds. *Journal of Food Biochemistry*, 45(3). https://doi.org/10.1111/jfbc.13317
- Arguedas, J. A., Leiva, V., & Wright, J. M. (2020). Blood pressure targets in adults with hypertension. *Cochrane* Database of Systematic Reviews, 2020(12). https://doi.org/10.1002/14651858.CD004349.pub3
- Balwan, W. K., & Kour, S. (2021). A Systematic Review of Hypertension and Stress The Silent Killers. *Scholars Academic Journal of Biosciences*, 9(6), 154–158. https://doi.org/10.36347/sajb.2021.v09i06.002
- Burnier, M., Polychronopoulou, E., & Wuerzner, G. (2020). Hypertension and Drug Adherence in the Elderly. *Frontiers in Cardiovascular Medicine*, 7. https://doi.org/10.3389/fcvm.2020.00049
- Carpi, M., Cianfarani, C., & Vestri, A. (2022). Sleep Quality and Its Associations with Physical and Mental Health-Related Quality of Life among University Students: A Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 19(5), 2874. https://doi.org/10.3390/ijerph19052874
- Cheon, E.-J. (2022). Hypertension and cognitive dysfunction: a narrative review. *Journal of Yeungnam Medical Science*. https://doi.org/10.12701/jyms.2022.00605
- Dany, F., Dewi, R. M., Tjandrarini, D. H., Pradono, J., Delima, D., Sariadji, K., Handayani, S., & Kusumawardani, N. (2020). Urban-rural distinction of potential determinants for prediabetes in Indonesian population aged ≥15 years: a cross-sectional analysis of Indonesian Basic Health Research 2018 among normoglycemic and prediabetic individuals. *BMC Public Health*, 20(1), 1509. https://doi.org/10.1186/s12889-020-09592-7
- Dassanayake, S., Sole, G., Wilkins, G., & Skinner, M. (2020). Exercise: a therapeutic modality to treat blood pressure in resistant hypertension. *Physical Therapy Reviews*, 25(3), 149–158. https://doi.org/10.1080/10833196.2020.1733781
- Farhadi, F., Aliyari, R., Ebrahimi, H., Hashemi, H., Emamian, M. H., & Fotouhi, A. (2023). Prevalence of uncontrolled hypertension and its associated factors in 50–74 years old Iranian adults: a populationbased study. *BMC Cardiovascular Disorders*, 23(1), 318. https://doi.org/10.1186/s12872-023-03357-x
- Galvez-Sánchez, C. M., Montoro, C. I., Duschek, S., & del Paso, G. A. R. (2020). Pain catastrophizing mediates the negative influence of pain and trait-anxiety on health-related quality of life in fibromyalgia. *Quality of Life Research*, 29(7), 1871–1881. https://doi.org/10.1007/s11136-020-02457-x
- Islamy, I. El, Simamora, L., Syahri, A., Zaini, N., Sagala, N. A., & Dwi, A. (2023). Faktor Determinan Kejadian Hipertensi di Desa Sikeben Kecamatan Sibolangit Kabupaten Deli Serdang. *Jurnal Ilmiah*

Universitas Batanghari Jambi, 23(1), 601. https://doi.org/10.33087/jiubj.v23i1.2808

- Jacobs, L. G., Gourna Paleoudis, E., Lesky-Di Bari, D., Nyirenda, T., Friedman, T., Gupta, A., Rasouli, L., Zetkulic, M., Balani, B., Ogedegbe, C., Bawa, H., Berrol, L., Qureshi, N., & Aschner, J. L. (2020). Persistence of symptoms and quality of life at 35 days after hospitalization for COVID-19 infection. *PLOS ONE*, 15(12), e0243882. https://doi.org/10.1371/journal.pone.0243882
- Kaul, S. (2020). Evidence for the Universal Blood Pressure Goal of <130/80 mm Hg Is Strong. *Hypertension*, 76(5), 1391–1399. https://doi.org/10.1161/HYPERTENSIONAHA.120.14648
- Khan, S. A., Pervaiz, F., Afridi, S., Babar, A., & Hafeez, A. (2021). Hypertension: A Sufficient Risk Factor for Cardiovascular Diseases. *Pakistan Armed Forces Medical Journal*, 71(3), 1100–1103. https://doi.org/10.51253/pafmj.v71i3.4021
- López-Ruiz, V.-R., Huete-Alcocer, N., Alfaro-Navarro, J.-L., & Nevado-Peña, D. (2021). The relationship between happiness and quality of life: A model for Spanish society. *PLOS ONE*, 16(11), e0259528. https://doi.org/10.1371/journal.pone.0259528
- Mannan, A., Akter, K. M., Akter, F., Chy, N. U. H. A., Alam, N., Pinky, S. D., Chowdhury, A. F. M. N., Biswas, P., Chowdhury, A. S., Hossain, M. A., & Rana, M. M. (2022). Association between comorbidity and health-related quality of life in a hypertensive population: a hospital-based study in Bangladesh. *BMC Public Health*, 22(1), 181. https://doi.org/10.1186/s12889-022-12562-w
- Manullang, C. E., & Rosalina, E. (2021). Pengaruh Promosi Kesehatan dengan Media Leaflet terhadap Peningkatan Pengetahuan Pencegahan Hipertensi pada Lansia di Kampung Sawah Jakarta Utara. *Carolus Journal of Nursing*, 4(1), 1–12. https://doi.org/10.37480/cjon.v4i1.67
- Maromi, K. A., Rochmah, N., & Hermanto, B. (2021). Hubungan Antara Lama Sakit dengan Kualitas Hidup Anak Penderita DMT1 Saat Pandemi Covid-19 di RSUD Soetomo Surabaya. Jurnal Ilmiah Universitas Batanghari Jambi, 21(3), 1021. https://doi.org/10.33087/jiubj.v21i3.1694
- O'Neill, D., & Forman, D. E. (2020). The importance of physical function as a clinical outcome: Assessment and enhancement. *Clinical Cardiology*, 43(2), 108–117. https://doi.org/10.1002/clc.23311
- Olsson, K. M., Meltendorf, T., Fuge, J., Kamp, J. C., Park, D.-H., Richter, M. J., Gall, H., Ghofrani, H. A., Ferrari, P., Schmiedel, R., Kulla, H.-D., Heitland, I., Lepsy, N., Dering, M.-R., Hoeper, M. M., & Kahl, K. G. (2021). Prevalence of Mental Disorders and Impact on Quality of Life in Patients With Pulmonary Arterial Hypertension. *Frontiers in Psychiatry*, 12. https://doi.org/10.3389/fpsyt.2021.667602
- Oras, P., Häbel, H., Skoglund, P. H., & Svensson, P. (2020). Elevated Blood Pressure in the Emergency Department. *Hypertension*, 75(1), 229–236. https://doi.org/10.1161/HYPERTENSIONAHA.119.14002
- R Nur Abdurakhman, Abas Hidayat, Didi Taswidi, & Alifa Romadoni. (2022). Effect of hypertension exercise on blood pressure in the elderly. *World Journal of Advanced Research and Reviews*, *13*(3), 491–495. https://doi.org/10.30574/wjarr.2022.13.3.0269
- Redho, A., Isni Yuli Lestari, T., & Safitri, N. (2023). Pengaruh Massage Teknik Effluage terhadap Penurunan Tekanan Darah pada Lansia dengan Hipertensi. Al-Asalmiya Nursing: Jurnal Ilmu Keperawatan (Journal of Nursing Sciences), 12(1), 9–14. https://doi.org/10.35328/keperawatan.v12i1.2410
- Saiz, L. C., Gorricho, J., Garjón, J., Celaya, M. C., Erviti, J., & Leache, L. (2022). Blood pressure targets for the treatment of people with hypertension and cardiovascular disease. *Cochrane Database of Systematic Reviews*, 2022(11). https://doi.org/10.1002/14651858.CD010315.pub5
- Samiei Siboni, F., Alimoradi, Z., & Atashi, V. (2021). Health-Promoting Lifestyle: A Considerable Contributing Factor to Quality of Life in Patients With Hypertension. *American Journal of Lifestyle Medicine*, 15(2), 191–199. https://doi.org/10.1177/1559827618803853
- Sarzyńska, K., Świątoniowska-Lonc, N., Dudek, K., Jonas, K., Kopeć, G., Gajek, J., & Jankowska-Polańska, B. (2021). Quality of life of patients with pulmonary arterial hypertension: a metaanalysis. *Eur Rev Med Pharmacol Sci*, 25(15), 4983–4998.
- Shanbehzadeh, S., Tavahomi, M., Zanjari, N., Ebrahimi-Takamjani, I., & Amiri-arimi, S. (2021). Physical and mental health complications post-COVID-19: Scoping review. *Journal of Psychosomatic Research*, 147, 110525. https://doi.org/10.1016/j.jpsychores.2021.110525
- Shibata, S., Arima, H., Asayama, K., Hoshide, S., Ichihara, A., Ishimitsu, T., Kario, K., Kishi, T., Mogi, M., Nishiyama, A., Ohishi, M., Ohkubo, T., Tamura, K., Tanaka, M., Yamamoto, E., Yamamoto, K., & Itoh, H. (2020). Hypertension and related diseases in the era of COVID-19: a report from the Japanese Society of Hypertension Task Force on COVID-19. *Hypertension Research*, 43(10), 1028–1046. https://doi.org/10.1038/s41440-020-0515-0
- Snarska, K., Chorąży, M., Szczepański, M., Wojewódzka-Żelezniakowicz, M., & Ładny, J. R. (2020). Quality of Life of Patients with Arterial Hypertension. *Medicina*, 56(9), 459. https://doi.org/10.3390/medicina56090459
- Susanti, R., Renggana, H., Sadino, A., Rikardo, R., Sujana, D., & Farhan, Z. (2023). Kajian Interaksi

5 <

- Triandini, R. (2022). Faktor-faktor yang Berhubungan dengan Kejadian Hipertensi Di Puskesmas Dua Puluh Tiga Ilir Kota Palembang Tahun 2021. *Jurnal Ilmiah Universitas Batanghari Jambi*, 22(1), 308. https://doi.org/10.33087/jiubj.v22i1.1805
- Ungvari, Z., Toth, P., Tarantini, S., Prodan, C. I., Sorond, F., Merkely, B., & Csiszar, A. (2021). Hypertension-induced cognitive impairment: from pathophysiology to public health. *Nature Reviews Nephrology*, *17*(10), 639–654. https://doi.org/10.1038/s41581-021-00430-6
- Verma, N., Rastogi, S., Chia, Y., Siddique, S., Turana, Y., Cheng, H., Sogunuru, G. P., Tay, J. C., Teo, B. W., Wang, T., TSOI, K. K. F., & Kario, K. (2021). Non-pharmacological management of hypertension. *The Journal of Clinical Hypertension*, 23(7), 1275–1283. https://doi.org/10.1111/jch.14236
- Viertiö, S., Kiviruusu, O., Piirtola, M., Kaprio, J., Korhonen, T., Marttunen, M., & Suvisaari, J. (2021). Factors contributing to psychological distress in the working population, with a special reference to gender difference. *BMC Public Health*, 21(1), 611. https://doi.org/10.1186/s12889-021-10560-y