Jurnal Keperawatan Suaka Insan (JKSI)
Volume 10, No 2, Juli-Desember 2025
P-ISSN : 2527-5798, E-ISSN : 2580-7633

MEDICATION ADHERENCE AND QUALITY OF LIFE AMONG HYPERTENSIVE PATIENTS: A CROSS-SECTIONAL STUDY IN A PRIMARY HEALTH CARE SETTING IN INDONESIA

Sylvia Maria Sembiring Meliala[1], Tri Widyaningsih[2], Tivani Sesilia Angow[3], Catharina Guinda Diannita[4]*, Gracia Aktri Margaret Manihuruk[5]

[1-5] Faculty of Nursing, Universitas Pelita Harapan

Article Info

Article history:

Received July 07 , 2025
Accepted November 03, 2025

Keywords:

Hypertension
Medication Adherence
Quality of Life

ABSTRACT

Hipertensi adalah kondisi kronis yang memerlukan kepatuhan pengobatan untuk mengontrol tekanan darah secara efektif. Pasien hipertensi yang patuh dalam mengonsumsi obat memiliki kesejahteraan emosional yang lebih tinggi, yang pada gilirannya dapat memengaruhi kualitas hidup. Penelitian ini bertujuan untuk mengidentifikasi korelasi antara kepatuhan pengobatan dan kualitas hidup pada pasien hipertensi. Penelitian kuantitatif dengan desain korelasional dan pendekatan potong lintang (cross-sectional) pada 122 responden yang dipilih sesuai kriteria inklusi dan eksklusi. Instrumen yang digunakan adalah kuesioner MMAS-8 (Morisky Medication Adherence Scale) dan kuesioner WHOQOL-BREF. Data dianalisis menggunakan analisis univariat dan bivariat dengan uji Chi Square. Penelitian ini menemukan bahwa terdapat hubungan signifikan antara kepatuhan pengobatan dan kualitas hidup pada pasien hipertensi (nilai p=0.001). Ditemukan korelasi signifikan antara kepatuhan pengobatan dan kualitas hidup, yang menunjukkan bahwa pasien dengan kepatuhan yang lebih tinggi melaporkan kualitas hidup yang lebih baik. Diharapkan individu dengan hipertensi dapat mengembangkan kesadaran yang lebih besar tentang pentingnya mematuhi pengobatan yang diresepkan sebagai upaya untuk meningkatkan kualitas hidup mereka secara keseluruhan. Selain itu, hasil penelitian ini dapat menjadi referensi bagi tenaga kesehatan dalam upaya meningkatkan kepatuhan pasien dalam mengonsumsi obat melalui edukasi yang tepat dan konsultasi terjadwal.

Hypertension is a chronic condition that necessitates medication adherence for effective blood pressure control. Hypertensive patients who are compliant with their medication regimen often exhibit higher emotional well-being, which significantly influences their quality of life (QoL).The aim of this study was to identify the correlation between medication adherence and quality of life among hypertensive patients. This quantitative correlational study employed a cross-sectional design involving 122 respondents selected based on pre-defined inclusion and exclusion criteria. Data were collected using the MMAS-8 (Morisky Medication Adherence Scale) and the WHOQOL-BREF questionnaire. The data were then subjected to univariate and bivariate analysis using the Chi-Square test.The findings revealed a significant relationship between medication adherence and quality of life among hypertensive patients (*p*-value = 0.001). This significant correlation suggests that patients with higher medication adherence reported a better quality of life. It is anticipated that these results will encourage individuals with hypertension to develop greater awareness of the importance of adhering to prescribed medications as a means of improving their overall quality of life. Furthermore, this study can serve as a valuable reference for healthcare professionals in their efforts to improve patient adherence through appropriate education and scheduled consultations.

Corresponding Author:

Catharina Guinda Diannita
Faculty of Nursing, Universitas Pelita Harapan
Universitas Pelita Harapan, Jl. M.H. Thamrin Boulevard 1100, Lippo Village, Tangerang, Banten 15811, Indonesia
Email: catharina.diannita@uph.edu

Introduction

Non-communicable diseases (NCDs) refer to health conditions that are non-transmissible between individuals, yet represent a leading contributor to global mortality (Rahayu et al., 2021). NCDs can be experienced by all levels of society, and some of the most common types include diabetes, hypertension (Adnyana et al., 2023). Hypertension is a condition when a person experiences an increase in blood pressure above normal (Susanti et al., 2020). Blood pressure that remains high for a long period of time has the potential to damage blood vessels that attack several parts of organs such as the brain, eyes, heart, kidneys, so that this makes hypertension a major cause of high mortality globally (Fauziah & Syahputra, 2021).

According to data from the World Health Organization (WHO, 2019), the global prevalence of hypertension is estimated to be around 22% of the world's population. The results of the Basic Health Research (Riskesdas, 2018) stated that the trend of hypertension in Indonesia continues to experience a significant increase so that in 2018 it reached 34.1%, when viewed based on age group, the prevalence of hypertension shows a figure of 13.22% (18-24 years), 20.13% (25-34 years), and 31.61% (35-44 years) (Faisal et al., 2022). According to the data Banten Basic Health Profile on 2019, the prevalence of hypertension in Banten Province was 8.61%, with the highest figures in Tangerang City (28.74%) and Tangerang Regency (23.6%). These data show the high number of hypertension cases, especially in the adult to elderly age groups (Fitrianingsih et al., 2022).

Hypertension is a chronic, lifelong condition that necessitates ongoing therapeutic management to mitigate the symptoms and complications it may cause (Wati, 2021). Adherence to antihypertensive treatment is essential to maintaining blood pressure stability. Conversely, non-adherence to prescribed antihypertensive regimens is a principal contributor to therapeutic failure, potentially leading to severe complications such as heart failure, stroke and renal failure (Latif, 2022). Hypertension treatment is carried out for life so that the patient's quality of life can be maintained by reducing the symptoms that appear in the successful management of the disease. Quality of life (QoL) itself refers to how a person assesses their life conditions according to their expectations, priorities, goals, and standards which are influenced by cultural culture and environmental values. Quality of life is influenced by several factors, such as mental condition, socio-economic, family support and one of them is medication adherence, so it is important to know whether there is a relationship between medication adherence and quality of life in patients (Praska, 2024).

Hypertension in addition to having an impact on the body can also have an impact on quality of life. Hypertension can have a negative effect on mental health or psychological function because sufferers will often experience symptoms such as depression and anxiety, besides that it can affect body vitality and social function because sufferers will often feel headaches and inhibit daily activities. So it is important to maintain health, by keeping blood pressure stable and controlled (Alfian et al., 2017). WHO defines quality of life as a person's perception of the life they live based on the values of the beliefs of the area where they live, and comparing their life with the goals and expectations that the individual has set. Medication adherence affects quality of life, because the efficacy of treatment on the schedule and dosage of medication ensures that the medication has worked effectively, because it causes poor disease control, resulting in long-term complications and can worsen health conditions.

An initial survey of 30 hypertensive patients at one of the Tangerang Regency Primary Health Center (PHC), found that 63.3% of patients sometimes forgot to take their medication, 30% stopped taking their medication when they felt healthy in the medication adherence variable and 63.3% felt that their quality of life was normal when they had hypertension, 36.7% experienced impaired activity due to physical complaints, and 30% were dissatisfied with their sleep patterns in the quality of life variable. While the relationship between medication adherence and QoL is well-documented globally, there is limited research investigating this dynamic within the specific socio-cultural and healthcare context of primary health center in Tangerang Regency, Indonesia. This study aims to address that gap, was conducted to identify the correlation between medication adherence and quality of life among hypertensive patients.

Research Methodology

This study uses a quantitative research type with a correlational method and uses a cross-sectional approach. This study was conducted to find the correlation between medication adherence (independent variable) and quality of life (dependent variable). Data collection in this study was carried out simultaneously for both variables at one of the PHC in Tangerang Regency.

The population of this study were hypertensive patients at Kelapa Dua Primary Health Center (PHC), Tangerang Regency, based on the average number of visits from previous year January to October 2024 to the non-communicable polyclinic, which was 154 people. In this study, the sample was selected based on the inclusion criteria, namely hypertensive patients, registered Kelapa Dua PHC, hypertensive patients who were willing to be research respondents, patients consuming hypertension therapy with pharmacological antihypertensives for the past 2 weeks. This study employed purposive sampling, with the minimum required sample size determined using Slovin's formula, yielding a total of 122 respondents. Data were collected from February to April 2025.

The research instruments used were MMAS-8 (Morisky Medication Adherence Scale 2008) and WHOQOL – BREF 2004. The MMAS-8 questionnaire, a validated and reliable instrument for assessing medication adherence among hypertensive patients, was administered to 30 respondents at the Binong PHC who met the established inclusion criteria. Validity test using the Product Moment Correlation Test obtained a value of r = 0.022 - 0.789, Reliability test using Kuder-Richardson 20 with a Cronbach's Alpha α value = 0.634. The MMAS-8 questionnaire consists of eight questions with the responses "yes" and "no" on questions number 1-7 and on question number 8 if the answer is never/rarely then "no" and if the answer is several times, sometimes, often, and always then "yes". The total MMAS-8 score is categorized into 3 levels of adherence, namely 8 = high, 6-7 = moderate, <6 = low. The WHOQOL-BREF questionnaire is used to identify the quality level of hypertensive patients. WHOQOL-BREF consists of 26 question items that have been translated into Indonesian containing 5 domains, namely physical health (7 questions), psychological (6 questions), social relationships (3 questions), environment (8 questions), general health (2 questions). The results of this instrument use a 5-point likert-type scale. WHOQOL-BREF has been tested for validity and reliability at one of the Tangerang Regency PHC with 30 respondents who were considered to meet the inclusion criteria using statistical applications, the validity test obtained a value of r = 0.098 - 0.672, the reliability test obtained a value of Cronbach's Alpha α = 0.819.

This study applies the ethical principle of respect for persons by providing informed consent before distributing the questionnaire, explaining the purpose of the study, and ensuring that participation is carried out voluntarily without coercion. The principle of beneficence is applied by maximizing benefits through explanations about medication adherence and quality of life before respondents fill out the questionnaire. The principle of justice is realized by giving the same souvenir to all respondents who have completed the research questionnaire as a form of appreciation. The principle of confidentiality is maintained by keeping the identity of the respondents confidential and only writing initials on personal data in the informed consent. The ethics committee of the Faculty of Medicine, Universitas Pelita Harapan gave permission to conduct the research (No: 096/K LKJ/ETIK/II/2025). The Tangerang Regency Health Office has given permission (No. B/400.7.27/99/II/Dinkes/2025) for PHC to participate in this research. Respondents were given informed consent. Researchers did not force respondents to fill out the questionnaire and also maintained confidentiality.

This study uses univariate and bivariate analysis. Univariate analysis to find out the description of each variable found from data collection. Bivariate analysis to prove the relationship between the two variables, medication adherence (independent) and quality of life (dependent) in ensuring accurate results.

Result

This study focuses on the correlation between medication adherence and quality of life. Quality of life can be influenced by physical health, psychological health, social relationships, environment, and general health factors. The following demographic data are the results of the analysis obtained from the study.

Table 1 Data Distribution Based on Respondent Characteristics

Characteristics	Frequency	Percentage (%)
Gender		
Woman	77	63.11
Man	45	36.89
Age		
< 45 Years	10	8.20
46-60 Years	50	40.98
> 60 Years	62	50.82
Duration of illness suffered		
<1 Year	6	4.92
1-9 Years	67	54.92
≥ 10 Years	49	40.16
Medications Consumed		
Amlodipine 5 mg	54	44.26
Amlodipine 10 mg	51	41.80
Candesartan 8 mg	10	8.20
Bisoprolol 5 mg	3	2.46
Ramipril 5 mg	2	1.64
The Oros	1	0.82
Captopril 12.5 mg	1	0.82

Most of the respondents in this study were women, as many as 77 respondents (63.11%), most of them were over 60 years old (50.82%) and most of the respondents had suffered from the disease for 1-9 years (54.92%), and the most commonly consumed drug was amlodipine 5 mg (44.26%).

Table 2 Distribution of Medication Adherence Data (N=122)

Category	Frequency	Percentage (%)
Low	29	23.8
Moderate	40	32.8
High	53	43.4
Total	122	100.0

The results of this study show that the majority of respondents have a high level of medication adherence, namely 53 respondents (43.4%).

Table 3 Distribution of Quality of Life Data (N=122)

Category	Frequency	Percentage (%)
Low	25	20.5
Moderate	70	57.4
High	27	22.1
Total	122	100.0

The results of this study show that the majority of respondents have a moderate quality of life, namely 70 respondents (57.4%)

Table 4 Relationship between Medication Adherence and Quality of Life of Hypertension Patients (N=122)

Adherence	Quality						Total		*P-Value*
	Low		Moderate		High				
	F	%	F	%	F	%	F	%	
Low	12	9.8	17	13.9	0	0.0	29	23.8	0.001
Moderate	12	9.8	21	17.2	7	5.7	40	32.8	
High	1	0.8	32	26.2	20	16.4	53	43.4	
Total	25	20.5	70	57.4	27	22.1	122	100.0	

Based on the data presented in the table, 27 respondents (22.1%) demonstrated a high quality-of-life, of whom 20 respondents (16.4%) also exhibited high medication adherence. In contrast, among the 29 respondents (23.8%) with low medication adherence, none reported a high quality-of-life. These findings reveal a statistically significant association between medication adherence and quality of life among hypertensive patients at the Kelapa Dua PHC, Tangerang Regency (p-value = 0.001).

Discussion

Demographic Data

The findings of the present study indicate that the prevalence of hypertension was higher among female respondents compared to their male counterparts. Men are typically diagnosed with hypertension at an earlier age; however, lower awareness and sensitivity towards their hypertensive condition result in fewer man seeking medical care (Joo et al., 2023). Consequently, female patients are more frequently encountered in healthcare settings. Furthermore, postmenopausal woman have increased risk of developing hypertension due to a decline in estrogen levels, a hormone essential for maintaining optimal cholesterol balance. The reduction in estrogen is associated with elevated low-density lipoprotein (LDL) and decreased high-level lipoprotein (HDL) concentrations, which triggers blockage and narrowing of blood vessels (Joo et al., 2023).

In this study, the majority of people with hypertension were aged >60 years. According to Benetos et al. (2019) as age increases, the body's sensors that regulate blood pressure, namely baroceptors in the blood vessels, will decrease or become insensitive to stimuli from changes in pressure so that the body's response becomes slow and the body fails to adjust properly.

This study found that the majority of respondents experienced hypertension for 1-9 years. According to Zheng et al.(2022) showed that the duration of a person suffering from hypertension has a significant effect on the increased risk of cardiovascular complications. The results of a study conducted by studies by Setiawan (2020), Simanjuntak & Amazihono (2023) found that the majority of sufferers had hypertension for more than five years. The duration of a person's illness also plays a role in influencing the level of compliance in taking medication and quality of life.

Based on the study, it was found that the antihypertensive drug that is often consumed is amlodipine 5mg. Amlodipine is a type of calcium channel blocker drug. Amlodipine is an agent of choice in first-line hypertension therapy recommended by JNC VIII (Eighth Joint National Committee), therefore amlodipine is a drug that is often used in the management of hypertension (Unger et al., 2020). Amlodipine belongs to the class of dihydropyridine drugs that work by inhibiting calcium. In addition, amlodipine also has anti-inflammatory, antioxidant effects, inhibits atherosclerosis, and increases the production of nitric oxide (NO) which plays a role in relaxing vascular smooth muscles, thus supporting the vasodilation process (Mancia et al., 2023).

Level of Medication Adherence

The study result shows that the majority of respondents demonstrated a high level of medication adherence. The antihypertensive drug that is often consumed is amlodipine 5mg. The primary goal of antihypertensive drugs aims to block the Angiotensin-Converting Enzyme (ACE) inhibitor mechanism or inhibit the Renin-Angiotensin-Aldosterone (RAAS) system, as this hormonal pathway plays a crucial role in regulating blood pressure. Sustained adherence to antihypertensive therapy is essential because hypertension is a chronic condition requiring continuous suppression of pathophysiological mechanisms that elevated blood pressure. In this study, high medication adherence appeared to be supported by multiple factors, including the patient's awareness of the chronic nature of hypertension, consistent family and social support, as well as encouragement and monitoring by healthcare professionals, which collectively enhance patient motivation to follow prescribed treatment regimens (Nuratiqa et al., 2020). Previous studies have found high medication adherence on hypertensive patients (Indriana et al., 2020; Nade & Rantung., 2020). This study found that some patients with long-term high blood pressure have a high level of medication adherence, because patients already know and are used to the disease they are experiencing. A high level of medication adherence among older adults reflects their strong motivation to attain recovery (Nade & Rantung, 2020).

However, these findings contrast with other research, such as study by Wirakhmia and Purnawan, which reported that the majority of hypertensive patients exhibited only moderate medication adherence. In some cases, common barriers to adherence include irregularity in taking medication, inconsistent blood pressure monitoring and the psychological challenge of maintaining motivation for lifelong treatment. Indeed, as hypertension requires ongoing therapy, sustaining long-term compliance remains a significant challenge, particularly when symptoms are not overtly felt (Wirakhmia & Purnawan, 2021). Additional factors contributing to non-adherence, including patients perception of being healthy, infrequent perception in routine health check-ups, and forget to do routine health checks, and forget to take medication (Mardianto et al., 2022).

Quality of Life Level

The findings indicate that most individuals with hypertension exhibit a moderate quality-of-life. Several factors including gender, age, lifestyle behaviors, physical activity, emotional-well being, and social support, have been identified as determinants of quality of life among hypertensive patients (Xiao et al., 2019). Hypertension may also interfere with patient psychological health, leading to concerns or anxiety about hypertension, long-term complications, lifelong treatment. Previous studies have found that the majority of hypertension sufferers have a moderate level of quality-of-life (Handayani., 2023; Rohana et al., 2023). Quality of life can decrease if the disease is not treated properly, such as from individual habits and lifestyles. In addition, treatment must be carried out immediately so that there is no worsening (Rohana et al., 2023).

This study is not in line with research that found that the majority of hypertension sufferers have a good quality-of-life (Anjarsari et al., 2023). This is because the study respondents were in their productive 30s. At this age, sufferers are better able to maintain a healthy lifestyle, comply with treatment and adapt to disease conditions, so that patients have a better quality of life. On the other hand, hypertension sufferers of non-productive or elderly age tend to experience a decrease in quality of life due to decreased body function and limited activity.

Correlation between Medication Compliance and Quality of Life

The results of this study demonstrate a significant correlation between medication adherence and quality of life among elderly patients in one of the Tangerang Regency PHC. Hypertension is a chronic, lifelong condition that cannot be cured; therefore, adherence to prescribed medications is a crucial strategy for maintaining optimal blood pressure and preventing severe complications, including cardiovascular events and stroke, which may lead to mortality. Consistent medication use not only contributes to physiological stability but also enhances patients' perceived control over their illness, which positively influences mental well-being and fosters motivation to adopt a healthier lifestyle. This shows a reciprocal correlation between the physical and psychological aspects in managing hypertension (Samudra in Simanjuntak & Amazihono, 2023, page.2-3).

Hypertension sufferers who are compliant in taking medication have higher emotional well-being, feel calmer, and more confident because they feel their condition is under control. This shows that compliance not only

affects the physical aspect, but also strengthens psychological well-being. In addition, the patient's social aspect also benefits from medication adherence, because reduced symptoms and complications allow patients to remain productive in social and work life. This condition can increase the social support received by patients, which indirectly plays a role in strengthening compliance and overall quality of life (Ghayadh & Bahlol, 2023).

Several research results by Ariani (2023); Handayani (2023); Jamtoputri et al. (2024) found that there is a significant relationship between medication adherence and quality of life in hypertensive patients. In this study, hypertensive patients with other diseases had higher compliance and quality of life compared to those without comorbidities (Handayani, 2023). Non-compliance of patients in taking medication has a risk of recurrence of blood pressure from 15% to 29%. This shows that if patients are well educated, compliance with medication consumption will increase, so the quality of life will also improve (Ariani, 2023).

Moreover, Jamtoputri et al. (2024) highlighted that medication adherence in hypertensive patients with coexisting dyslipidemia is fundamental for treatment success; however, polypharmacy and the chronicity of hypertension often serve as barriers to adherence. In addition, hypertension with dyslipidemia can easily affect a person's quality of life, a high level of compliance in taking medication contributes to improving their quality of life. Given that the coexistence of hypertension and dyslipidemia can significantly reduce quality of life, maintaining a high level of adherence is essential for mitigating these negative effects. Therefore, interventions such as patient-centered education programs, regimen simplification, and continuous monitoring are recommended to enhance adherence, achieve optimal blood pressure control, and ultimately improve the quality of life of hypertensive patients. Efforts are required to enhance medication adherence in order to achieve optimal blood pressure control and ensure an improved quality of life for individuals with hypertension(Jamtoputri et al., 2024).

Study Limitations

This study has certain limitations that should be acknowledged. First, the MMAS-8 instrument demonstrated a relatively low level of internal consistency in this study, with a Cronbach's alpha value of 0.634. Such a coefficient indicates that the reliability of the instrument was below the generally accepted threshold, which may have implications for the validity and precision of the adherence measurements obtained. Consequently, the findings related to medication adherence should be interpreted with caution. Second, the research was conducted in a single primary health center, thereby limiting the diversity of the sample. This geographical and institutional constraint may reduce the external validity of the results and restrict their applicability to broader populations, whether in other regions of Indonesia or in different international contexts. Future research should consider employing measurement tools with higher reliability and recruiting participants from multiple and diverse healthcare settings to enhance both the accuracy and generalizability of the findings.

Conclusion

Based on the results of the study conducted on 122 respondents of hypertension patients, the researcher concluded that the characteristics of the respondents were mostly female as many as 77 (63.11%), the most age was >60 years as many as 62 (50.82%) respondents, the duration of the disease suffered 1-9 years as many as 67 (54.92%), and the drug often consumed was amlodipine 5 mg as many as 54 (44.26%). The results of the study showed that the majority of respondents had a high level of medication adherence, namely 53 respondents (43.4%), and the majority of respondents had a moderate quality-of-life as many as 70 respondents (57.4%). Based on the study showing that the majority of hypertension sufferers with high medication adherence have a moderate quality-of-life as many as 32 respondents (26.2%), there is a significant correlation between medication adherence and quality of life in hypertension patients in one of the PHC in Tangerang Regency.

Based on these findings, it is recommended that nurses in the PHC setting prioritize interventions aimed at improving medication adherence, such as patient education and regular follow-up

consultations, as a direct strategy to enhance the quality of life of hypertensive patients. For other researchers, it is expected that the results of this study can provide more detailed information about the relationship between medication adherence and quality of life in hypertensive patients for further researchers and can be used for further research on medication adherence and quality of life using qualitative methods.

Acknowledgment
The researcher would like to thank all parties who have supported this research, namely the Faculty of Nursing, Universitas Pelita Harapan, who have guided during the research. The researcher also thanks one of the Tangerang Regency Health Office who allowed the researcher to conduct the research and were willing to be research respondents.

Conflict of Interest
The authors declare that there is no conflict of interest in this research.

Credit Author Statement
Sylvia Maria Sembiring Meliala: Conceptualization, Methodology, Software, Formal analysis, Resources, Writing – Original Draft, Writing – Review & Editing, Visualization, Supervision, Project administration. **Tri Widyaningsih:** Conceptualization, Methodology, Validation, Resources, Data Curation, Writing – Original Draft, Writing – Review & Editing, Visualization, Supervision, Project administration. **Tivani Sesilia Angow:** Conceptualization, Methodology, Investigation, Resources, Data Curation, Writing – Original Draft, Writing – Review & Editing, Visualization, Supervision, Project administration. **Catharina Guinda Diannita:** Conceptualization, Methodology, Supervision, Writing – Review & Editing. **Gracia Aktri Margaret Manihuruk:** Supervision, Writing – Review & Editing.

References

Adnyana, I. M. D. M., Sari, N. W., Arifin, Z., Prihatin, K., Ilham, Wahyudi, G., Fatmawati, B. R., Oktaviana, E., & Febrianti, T. (2023). *Epidemologi Penyakit Tidak Menular*. Bandung : Media Sains Indonesia

Alfian, R., Susanto, Y., & Khadizah, S. (2017). Kualitas Hidup Pasien Hipertensi Dengan Penyakit Penyerta Di Poli Jantung RSUD Ratu Zalecha Martapura. *Jurnal Pharmascience*, *4*(2). https://doi.org/10.20527/jps.v4i2.5774

Anjarsari, R., Padoli, P., & W, K. O. (2023). Kepatuhan Minum Obat Dan Kualitas Hidup Pasien Hipertensi Di Wilayah Puskesmas Kenjeran Surabaya. *Jurnal Keperawatan*, *17*(1), 66–73. https://doi.org/10.36568/nersbaya.v17i2. 31

Ariani, S. N. (2023). *Hubungan antara kepatuhan konsumsi obat dengan kontrol teknan darah dan kualitas hidup pasien hipertensi.*http://repository.unissula.ac.id/id/eprint/33587

Benetos, A., Petrovic, M., & Strandberg, T. (2019). *Compendium on the Pathophysiology and Treatment of Hypertension : Hypertension Management in Older and Frail Older Patients*. 1045–1060. https://doi.org/10.1161/CIRCRESAHA.118.313236

Faisal, D. R., Lazuana, T., Ichwansyah, F., Fitria, E., Kesehatan, R., Riset, B., Penelitian, B., & Aceh, K. (2022). Faktor Risiko Hipertensi Pada Usia Produktif Di Indonesia Dan Upaya Penanggulangannya. *Buletin Penelitian Sistem Kesehatan* 25(1):32-41. DOI: 10.22435/hsr.v25i1.5124

Fauziah, Y., & Syahputra, R. (2021). Hubungan Antara Efikasi Diri Dengan Manajemen Perawatan Diri Pada Penderita Hipertensi Di Puskesmas Indrapura Kabupaten Batubara Tahun 2019 . *Jurnal of Midwifery Senior*, *4*(2), 26–37. https://midwifery.jurnalsenior.com/index.php/ms/article/view/68

Fitrianingsih, D., Winahyu, K. M., Wibisana, E., & Ahmad, S. N. A. (2022). Efikasi Diri Dan Gaya Hidup Lansia Dengan Hipertensi Dinda. *Jurnal JKFT*, *7*(1). http://dx.doi.org/10.31000/jkft.v7i2.6945 .g3954.

Ghayadh, A. A., & Bahlol, A. (2023). Treatment Adherence and its Association to Quality of Life among Patients with Hypertension. *Pakistan Heart Journal*, *56*(2), 44–49.

Handayani, M. P. (2023). *Hubungan Kepatuhan Minum Obat Terhadap Kualitas Hidup Penyandang Hipertensi Dengan Penyakit Penyerta Dan Tanpa Penyakit Penyerta*.

Indriana, N., Swandari, M. T. K., & Pertiwi, Y. (2020). Hubungan Tingkat Pengetahuan Dengan Kepatuhan Minum Obat Pada Pasien Hipertensi Di Rumah Sakit X Cilacap. *Jurnal Ilmiah Jophus : Journal of Pharmacy UMUS*, *2*(01). https://doi.org/10.46772/jophus.v2i01.266

Jamtoputri, J. A., Permanasari, I. M., & Pramestyani, E. D. (2024). Hubungan Kepatuhan Minum Obat Terhadap Kualitas Hidup Pasien Hipertensi Dengan Penyerta Dislipidemia Di Puskesmas Mekarmukti Kabupaten Bekasi. *Pharmamedica Journal*, *9*(1), 63–70. https://doi.org/10.47219/ath.v9i1.32 3

Joo, H. J., Yum, Y., Kim, Y. H., Son, J., Kim, S. H., Choi, S., Han, S., & Shin, M. (2023). *Gender Difference of Blood Pressure Control Rate and Clinical Prognosis in Patients With Resistant Hypertension : Real-World Observation Study*. *38*(16), 1–12 https://doi.org/10.3346/jkms.2023.38.e124

Latif, A. (2022). Hubungan Kepatuhan Minum Obat dengan Kualitas Hidup pada Pasien Hipertensi di Puskesmas Mantrijeron. *Jurnal Kefarmasian Indonesia*, *2*(1), 1–13.

Mancia, G., Kreutz, R., Brunström, M., Burnier, M., Grassi, G., Januszewicz, A., Muiesan, M. L., Tsioufis, K., Agabiti-Rosei, E., Algharably, E. A. E., Azizi, M., Benetos, A., Borghi, C., Hitij, J. B., Cifkova, R., Coca, A., Cornelissen, V., Cruickshank, J. K., Cunha, P. G., … Kjeldsen, S. E. (2023). *Journal of Hypertension* (Vol. 41, Issue 12). https://doi.org/10.1097/HJH.0000000000003480

Mardianto, R., Sekti, B. H., & Higantara, G. R. (2022). Pengaruh Kepatuhan Minum Obat Antihipertensi terhadap Kualitas Hidup Pasien di Puskesmas Beji Batu. *PHARMADEMICA : Jurnal Kefarmasian Dan Gizi*, *2*(1), 21–30. https://doi.org/10.54445/pharmademica.v2i1.21

Nade, M. S., & Rantung, J. (2020). Dukungan Keluarga Dan Kepatuhan Minum Obat Terhadap Lansia Dengan Hipertensi Di Wilayah Kerja Puskesmas Parongpong Kabupaten Bandung Barat. *Chmk Nursing Scientific Journal*, *4*(1). https://cyber-chmk.net/ojs/index.php/ners/article/view/762

Nuratiqa, N., Risnah, R., Hafid, M. A., Paharani, A., & Irwan, M. (2020). Faktor Yang Berhubungan Dengan Kepatuhan Minum Obat Anti Hipertensi. *BIMIKI (Berkala Ilmiah Mahasiswa Ilmu Keperawatan Indonesia)*, *8*(1), 16–24. https://doi.org/10.53345/bimiki.v8i1.122

Praska, Y. A. (2024). Hubungan Kepatuhan Minum Obat Antihipertensi Dengan Kualitas Hidup Pasien Hipertensi. *Jurnal Penelitian Perawat Profesional*, *6*, 2533–2538 https://doi.org/10.37287/jppp.v6i6.3633

Rahayu, D., Irawan, H., Santoso, P., Susilowati, E., Atmojo, D. S., & Kristanto. (2021). Deteksi Dini Penyakit Tidak Menular Pada Lansia. *Jurnal Peduli Masyarakat*, *3*, 91– 96. https://doi.org/10.37287/jpm.v3i1.449.

Rohana, I. G. A. P. D., Pome, G., & Ulfa, M. H. (2023). Gambaran Tingkat Kualitas Hidup Pasien Hipertensi di Wilayah Binaan UPTD Puskesmas Sukaraya. Lentera P*erawat*, *4*(1), 53–61. https://doi.org/10.52235/lp.v4i1.198

Setiawan, D. (2020). *Hubungan kepatuhan minum obat terhadap kualitas hidup pasien hipertensi*. *8*(1), 15–18.

Simanjuntak, E. Y., & Amazihono, E. (2023). Kepatuhan Pengobatan Dengan Kualitas Hidup Pasien Hipertensi Komorbid Diabetes Melitus. *JURNALKEPERAWATAN*, *6*(3)). https://doi.org/10.46233/jk.v6i3.10 08

Susanti, L., Murtaqib, M., & Kushariyadi, K. (2020). Hubungan antara Efikasi Diri dengan Kualitas Hidup Pasien Hipertensi di wilayah kerja Puskesmas Silo Jember. *Pustaka Kesehatan*, *8*(1), 17. https://doi.org/10.19184/pk.v8i1.10891

Unger, T., Borghi, C., Charchar, F., Khan, N. A., Poulter, N. R., Prabhakaran, D., Ramirez, A., Schlaich, M., Stergiou, G. S., Tomaszewski, M., Wainford, R. D., Williams, B., & Schutte, A. E. (2020). 2020 International Society of Hypertension Global Hypertension Practice Guidelines. *Hypertension*, *75*(6), 1334–1357. https://doi.org/10.1161/HYPERTENSIONAHA.120.15026

Wati, F. R. (2021). *Hubungan Kepatuhan Konsumsi Obat Anti-Hipertensi Dengan Kualitas Hidup Pada Pasien Hipertensi Dengan Penyakit Penyerta Diabetes Mellitus Di Puskesmas Dinoyo Malang*. https://doi.org/10.33475/mhjns.v2i2.46

Wirakhmia, I. N., & Purnawan, I. (2021). Hubungan Kepatuhan Minum Obat Dengan Tekanan Darah Pada Penderita Hipertensi. *Jurnal Ilmu Keperawatan Dan Kebidanan*, *12*(2), 327–333. 10.26751/jikk.v12i2.1079

Xiao, M., Zhang, F., Xiao, N., Bu, X., Tang, X., & Long, Q. (2019). *Health-Related Quality of Life of Hypertension Patients : A Population-Based Cross-Sectional Study in Chongqing , China*. 10.3390/ijerph16132348

Zheng, Y., Gao, X., Jia, H. Y., Li, F. R., & Ye, H. (2022). Influence of hypertension duration and blood pressure levels on cardiovascular disease and all-cause mortality: A large prospective cohort study. *Frontiers in Cardiovascular Medicine*, *9*(October), 1–10. https://doi.org/10.3389/fcvm.2022.948707