



The Relationship Between Adherence to Antihypertensive Medication and Quality of Life Among Hypertensive Patients in the Service Area of the Tlogosari Kulon Community Health Center

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Abstract

Hypertension is a chronic condition requiring long-term pharmacological management, yet patients' quality of life may be influenced by multiple physical, psychological, social, and environmental factors beyond medication adherence. This study aimed to determine the relationship between antihypertensive medication adherence and quality of life among hypertensive patients in the service area of Tlogosari Kulon Community Health Center. A quantitative analytical correlational study with a cross-sectional design was conducted among 83 hypertensive patients selected according to predetermined inclusion and exclusion criteria. Data were collected using the 8-item Morisky Medication Adherence Scale (MMAS-8) and the WHOQOL-BREF questionnaire and analyzed using univariate and bivariate analyses with the Pearson Chi-Square and Contingency Coefficient tests. The results showed that 39 respondents (47.0%) had high medication adherence, 29 (34.9%) had moderate adherence, and 15 (18.0%) had low adherence. Regarding quality of life, 48 respondents (57.8%) had good quality of life, 35 (42.1%) had moderate quality of life, and none had poor quality of life. The Pearson Chi-Square test yielded $\chi^2 = 1.480$ with $p = 0.236$ (>0.05), indicating no significant relationship between antihypertensive medication adherence and quality of life. The Contingency Coefficient of 0.132 indicated a very weak association. These findings suggest that quality of life among hypertensive patients is influenced by factors beyond medication adherence.

Keywords: Antihypertensive Medication, Hypertension, Medication Adherence, Quality of Life, WHOQOL-BREF.



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INTRODUCTION

Hypertension remains a major global health challenge because its long-term consequences extend beyond elevated blood pressure to cardiovascular disease, stroke, kidney failure, and premature mortality, while its often asymptomatic course makes sustained treatment particularly difficult. The global burden is especially substantial in low- and middle-income countries, where 1.28 billion adults are estimated to have hypertension, approximately 46% are unaware of their condition, and only 21% have achieved blood pressure control (World Health Organization, 2023). In Indonesia, hypertension is likewise a major public health concern, with a prevalence of 30.8% reported in the 2023 Indonesian Health Survey and a substantial contribution to mortality risk (Badan Kebijakan Pembangunan Kesehatan, 2023). The burden increases with age, making older adults an important population for long-term management and quality-of-life assessment (Kementerian Kesehatan Republik Indonesia, 2023). Hypertension is clinically defined by persistently elevated systolic and diastolic blood pressure, although its clinical significance lies not only in the numerical measurement but also in the cumulative damage associated with inadequate control (Prameswari, 2021). Its designation as a “silent killer” captures the central challenge of managing a condition that may progress without conspicuous symptoms while requiring continuous preventive treatment (World Health Organization, 2023). Within this context, effective hypertension care must be evaluated not only through clinical control but also through patients' ability to sustain treatment and maintain their everyday functioning.

Long-term antihypertensive medication is a central component of hypertension management because regular use supports blood pressure control and reduces the consequences of inadequate treatment (Wahyuni et al., 2024). Yet the effectiveness of pharmacological treatment depends partly on whether patients can maintain the prescribed regimen in everyday life, making medication adherence a

behavioral and healthcare-practice concern rather than merely a matter of prescription availability. Indonesian evidence has identified substantial non-adherence, with 53.5% of patients reported as either not taking medication regularly or not taking it at all (Saputri, 2021). Studies among patients receiving hypertension care have also examined adherence in relation to knowledge, attitudes, treatment duration, and family support, indicating that medication-taking behavior is shaped by multiple interacting factors rather than a single patient characteristic (Lestari & Santik, 2022). Family support is particularly relevant because it may influence patients' knowledge, attitudes, and ability to sustain treatment routines (Susanto & Purwantiningrum, 2022). More recent evidence has also emphasized the role of self-efficacy in treatment adherence and quality-of-life improvement, suggesting that patients' confidence in managing their treatment may be an important mechanism linking adherence with broader health outcomes (Dewi & Maliya, 2025). These findings position adherence as a potentially modifiable determinant of hypertension outcomes, while also indicating that its relationship with patients' lived experience requires closer examination.

Quality of life provides an important patient-centered perspective because successful hypertension management should preserve not only physiological stability but also physical, psychological, and social functioning. The World Health Organization defines quality of life as an individual's perception of their position in life within the context of their culture, values, goals, expectations, and concerns, making it a multidimensional outcome rather than a simple indicator of disease severity. Among hypertensive patients, symptoms, treatment demands, anxiety, and the consequences of comorbidities may affect daily activities and subjective well-being, while poor quality of life may also complicate sustained self-management. Research in Indonesia has reported a substantial proportion of hypertensive patients with poor quality of life, particularly among those with accompanying diseases, indicating that the burden of hypertension cannot be fully captured by blood pressure measurements alone (Alfian et al., 2017). Evidence from primary healthcare settings has also demonstrated that quality of life varies across patient populations, reinforcing the importance of assessing it within the context of specific healthcare services rather than assuming that findings are uniform across settings (Desy et al., 2023). The relationship between adherence and quality of life is therefore theoretically plausible, but it must be examined empirically because treatment behavior and patient well-being may influence one another in ways that are not reducible to a single causal direction.

Previous studies have generally supported an association between antihypertensive medication adherence and quality of life, although the strength and interpretation of that relationship remain context-dependent. A study in Banyumas reported a positive relationship between medication adherence and quality of life among hypertensive patients, suggesting that more consistent treatment may be associated with better patient-reported well-being (Printinasari, 2023). Similar findings were reported in a study at the Ranomuut Community Health Center, where medication adherence and family support were examined together in relation to quality of life, highlighting the importance of considering adherence within the patient's social environment (Mala et al., 2022). Evidence from Prolanis patients in Semarang has also examined patient characteristics in relation to both medication adherence and quality of life, indicating that the relationship may vary according to the characteristics of the population receiving care (Prasetyo et al., 2023). International evidence further suggests that adverse drug reactions may be associated with both medication adherence and quality of life, demonstrating that treatment-related experiences can complicate the assumption that adherence is uniformly beneficial from the patient's perspective (Insani et al., 2025). These findings suggest that adherence should be understood as part of a broader treatment experience in which clinical benefits, treatment burdens, and patient perceptions may interact. The literature therefore supports the relevance of studying adherence and quality of life together, while leaving open the question of how consistently this relationship is observed among patients receiving routine primary healthcare.

Despite these contributions, important limitations remain in the available evidence, particularly regarding the consistency of findings across different primary healthcare populations and the extent to which adherence is associated with quality of life independently of other patient-related factors. Existing studies have examined diverse populations, including patients with comorbidities, elderly patients, and participants in chronic disease management programs, but their findings cannot automatically be generalized to all hypertensive patients receiving care at community health centers. Differences in measurement instruments, patient characteristics, treatment duration, and healthcare contexts may contribute to variation in reported quality-of-life outcomes and adherence patterns.

Research examining knowledge and medication adherence in relation to quality of life has also suggested that these variables should be considered together, rather than treating adherence as an isolated behavioral outcome (Aini et al., 2023). Similarly, evidence from patients participating in Prolanis indicates that adherence and quality of life may be related to patient characteristics, but such findings do not establish whether the relationship is consistent in other service areas (Prasetyo et al., 2023). The conceptual gap is therefore not simply the absence of studies on adherence or quality of life, but the need for more context-specific evidence concerning their relationship among patients receiving routine hypertension care. Addressing this gap is important because healthcare providers require locally relevant evidence to determine whether improving medication adherence should be regarded as a meaningful strategy for supporting patients' quality of life.

The unresolved relationship has both scientific and practical significance because hypertension management increasingly requires attention to sustained patient engagement rather than short-term clinical encounters. From a scientific perspective, examining adherence and quality of life together can clarify whether a behavioral aspect of treatment is associated with a broader patient-centered outcome, thereby extending the interpretation of hypertension management beyond blood pressure control alone. From a practical perspective, identifying an association may support the development of more responsive counseling, medication-monitoring, and patient-support strategies within primary healthcare services. Recent international work has emphasized that improving adherence may have implications for clinical outcomes, healthcare costs, and patient quality of life, reinforcing the relevance of adherence as a healthcare-practice concern (Religioni et al., 2025). Indonesian research has also examined the relationship between medication adherence and quality of life among hypertensive patients, indicating that the issue is relevant within the national healthcare context (Wahyuni et al., 2024). However, evidence from other settings cannot substitute for findings from the specific service area in which patients receive treatment, particularly when patient characteristics and healthcare practices may differ. The present study is therefore positioned within the empirical literature on hypertension self-management and patient-reported outcomes, with a specific focus on the relationship between antihypertensive medication adherence and quality of life among patients in the service area of the Tlogosari Kulon Community Health Center. This positioning allows the study to address a practical local question while contributing to the broader understanding of how treatment behavior relates to the lived experience of chronic disease.

This study aims to determine the relationship between adherence to antihypertensive medication and quality of life among hypertensive patients in the service area of the Tlogosari Kulon Community Health Center. The study is designed to provide empirical evidence concerning the association between these two variables within a defined primary healthcare population, thereby contributing to the evidence base for patient-centered hypertension management. Its theoretical contribution lies in examining medication adherence as a behavioral factor that may be associated with a multidimensional patient-reported outcome, while its methodological contribution lies in applying a systematic quantitative approach to the measurement and analysis of the relationship. The findings are expected to provide a basis for interpreting adherence and quality of life as interconnected aspects of hypertension care, without assuming that an observed association establishes causality. At the practical level, the study may inform the development of more targeted patient education, adherence-support, and quality-of-life-oriented interventions in primary healthcare. By focusing on the Tlogosari Kulon Community Health Center, the research also seeks to generate contextually relevant evidence that can support the evaluation and improvement of hypertension services in the local setting.

RESEARCH METHODS

This study employed an empirical quantitative approach with an analytical correlational design and a cross-sectional framework to examine the relationship between adherence to antihypertensive medication and quality of life among hypertensive patients in the service area of the Tlogosari Kulon Community Health Center, Semarang City, Indonesia. The cross-sectional design was selected because the independent and dependent variables were measured simultaneously without treatment or follow-up, allowing the study to assess their statistical association within a defined primary healthcare population (Sugiyono, 2022). The study population was derived from the average number of hypertensive patient visits recorded over approximately three months at the health center, with a population of 486 patients and a sample of 83 respondents determined using the Slovin formula at a

10% margin of error. Participants were selected based on the inclusion criteria of being at least 18 years old, receiving pharmacological treatment for hypertension, and providing informed consent to participate, while patients with complications, incomplete questionnaires, or unwillingness to continue participation were excluded from the analysis. Data collection was conducted in the outpatient service area of the Tlogosari Kulon Community Health Center during April–August 2026, with respondents completing the study instruments under the supervision of the research team. The selection of medication adherence as the principal behavioral variable was consistent with previous hypertension research identifying treatment adherence as an important factor in the management of chronic disease and its patient-reported outcomes (Aini et al., 2023).

Medication adherence was assessed using the Morisky Medication Adherence Scale-8 (MMAS-8), while quality of life was measured using the WHOQOL-BREF, a multidimensional instrument covering physical health, psychological well-being, social relationships, and environmental conditions. The MMAS-8 scores were categorized into high adherence (≥ 15), moderate adherence (11–14), and low adherence (≤ 10), while the WHOQOL-BREF was used to characterize quality of life across its four domains, consistent with the multidimensional assessment of hypertensive patients' well-being (Nurmalita et al., 2019). Data processing involved editing, coding, tabulating, and cleaning before statistical analysis was performed. Univariate analysis was used to describe respondent characteristics, medication adherence, and quality-of-life categories through frequency distributions and percentages, whereas bivariate analysis was conducted to examine the relationship between antihypertensive medication adherence and quality of life. The Pearson Chi-Square test was used to determine the statistical significance of the association, and the Coefficient Contingency was calculated to assess the strength of the relationship, with statistical significance established at $p < 0.05$. This analytical approach was selected to align with previous studies examining the association between medication adherence and quality of life among hypertensive patients in primary healthcare settings (Mala et al., 2022). The study was conducted in accordance with the principles of informed consent, voluntary participation, confidentiality, and the right to withdraw, and ethical approval was obtained from the relevant institutional ethics committee before data collection commenced.

RESULTS AND DISCUSSION

Respondent Sociodemographic Characteristics

The sociodemographic characteristics of the 83 respondents provide an important descriptive context for understanding the population of hypertensive patients receiving outpatient care at Tlogosari Kulon Community Health Center. The distribution of respondents indicates that hypertension in this study was more frequently represented by women, particularly those in the older adult age groups. Age, gender, smoking status, education, disease history, occupation, and duration of hypertension were examined to describe the background characteristics of the respondents. These characteristics are relevant because demographic and social conditions may shape patients' health behaviors, access to health information, medication-taking routines, and perceptions of quality of life. However, these variables were presented descriptively and were not included as the primary variables tested in the relationship analysis between medication adherence and quality of life. The detailed distribution of respondents is presented in Table 1.

Table 1. Respondent Sociodemographic Characteristics (n = 83)

Characteristic	Category	n	%
Gender	Male	24	28.9
	Female	59	71.0
	Total	83	100
Age	18–35 years	0	0
	36–45 years	2	2.4
	46–55 years	32	38.5
	56–65 years	39	46.9
	>65 years	10	12.0
	Total	83	100

Smoking status	Smoker	17	20.4
	Non-smoker	66	79.5
	Total	83	100
Education	No formal education	0	0
	Elementary school	6	7.2
	Junior high school	21	25.3
	Senior high school/Vocational school	53	63.8
	Higher education	3	3.6
	Total	83	100
Disease history/comorbidity	None	81	97.6
	Diabetes mellitus	2	2.4
	Heart disease	0	0
	Stroke	0	0
	Total	83	100
Occupation	Not working	0	0
	Housewife	44	53.0
	Laborer	12	14.4
	Entrepreneur	24	28.9
	Private employee	0	0
	Civil servant	3	3.6
	Total	83	100
Duration of hypertension	5 years	2	2.4
	Total	83	100
Characteristic	Category	n	%
Gender	Male	24	28.9
	Female	59	71.0
	Total	83	100
Age	18–35 years	0	0
	36–45 years	2	2.4

As shown in Table 1, women constituted the largest proportion of respondents, with 59 individuals (71.0%), whereas men accounted for 24 respondents (28.9%). The age distribution was concentrated among respondents aged 56–65 years, comprising 39 individuals (46.9%), followed by those aged 46–55 years at 32 individuals (38.5%). Only two respondents (2.4%) were aged 36–45 years, while no respondents were aged 18–35 years, and 10 respondents (12.0%) were older than 65 years. This pattern indicates that the study population was predominantly composed of middle-aged and older adults, a demographic profile that is relevant to the chronic nature of hypertension and the need for continuous pharmacological management. The predominance of women may also reflect differences in healthcare utilization, health-seeking behavior, and participation in outpatient services, although these possible explanations were not directly tested in the present study.

The smoking profile further shows that 66 respondents (79.5%) were non-smokers, compared with 17 respondents (20.4%) who reported smoking. From an educational perspective, most respondents had completed senior high school or vocational school, accounting for 53 individuals (63.8%), while 21 respondents (25.3%) had completed junior high school and only three (3.6%) had higher education. Six respondents (7.2%) had completed elementary school, and none reported having no formal education. The relatively concentrated educational distribution suggests that most respondents had received a basic-to-secondary level of formal education, which may influence their capacity to receive and understand information related to hypertension treatment. Health literacy remains relevant in chronic disease management because patients' ability to understand treatment instructions can affect their engagement with medication regimens and other self-management practices (Mala et al., 2022).

With respect to disease history, 81 respondents (97.6%) reported no comorbid disease, while only two respondents (2.4%) had diabetes mellitus, and no respondents reported heart disease or stroke. This relatively low prevalence of documented comorbidity distinguishes the study population from hypertensive populations in which multiple chronic conditions frequently coexist. The absence of

substantial comorbidity may be relevant when interpreting the quality-of-life findings because additional chronic diseases can impose further physical, psychological, and social burdens on patients. In terms of occupation, housewives represented the largest occupational group, comprising 44 respondents (53.0%), followed by entrepreneurs at 24 respondents (28.9%) and laborers at 12 respondents (14.4%). Three respondents (3.6%) were civil servants, while no respondents were categorized as not working or private employees. The predominance of housewives indicates that many respondents had daily routines centered on household activities, which may shape their opportunities to access health services, organize medication schedules, and receive support from family members.

The duration of hypertension was also considered as part of the respondent profile, although the reported distribution in the available data indicates only two respondents (2.4%) categorized as having a five-year history of hypertension. The sociodemographic profile therefore describes a study population dominated by women aged 46–65 years, non-smokers, respondents with senior high school or vocational education, individuals without documented comorbidities, and housewives. These characteristics provide contextual information for interpreting subsequent findings concerning antihypertensive medication adherence and quality of life. They also illustrate that the study population was largely composed of older adults managing hypertension within relatively stable social and health circumstances. Nevertheless, the descriptive distribution should not be interpreted as evidence that these characteristics independently determine medication adherence or quality of life because such causal or associative relationships were not tested in this subsection. The subsequent analysis therefore focuses specifically on the distribution of medication adherence and quality of life before examining the statistical relationship between the two variables.

Antihypertensive Medication Adherence

Antihypertensive medication adherence represents an important component of long-term hypertension management because pharmacological treatment generally requires patients to follow prescribed regimens consistently over an extended period. In this study, adherence was assessed among 83 hypertensive patients receiving outpatient care at Tlogosari Kulon Community Health Center using the Medication Adherence Rating Scale (MMAS-8). The assessment focused on the extent to which respondents followed their prescribed antihypertensive medication regimen, including consistency in taking medication according to medical recommendations. Adherence is particularly important in hypertension because the condition may remain asymptomatic even when blood pressure is inadequately controlled, potentially reducing patients' perceived need to take medication regularly. Patient behavior, understanding of treatment, duration of therapy, and support from healthcare providers and family members may contribute to differences in adherence levels (Shoaliha et al., 2025). The distribution of antihypertensive medication adherence among respondents is presented in Table 2.

A high level of adherence was identified among 39 respondents (47.0%), representing the largest proportion of the study population. Meanwhile, 29 respondents (34.9%) demonstrated moderate adherence, whereas 15 respondents (18.0%) were categorized as having low adherence. These findings indicate that adherence in the study population was generally favorable, although more than half of the respondents remained outside the high-adherence category. The presence of moderate and low adherence suggests that some patients may still experience difficulties maintaining medication-taking routines consistently. Such difficulties can involve forgetting to take medication, intentionally missing doses, or experiencing interruptions in medication use as part of everyday routines. The detailed distribution is shown in Table 2.

Table 2. Distribution of Antihypertensive Medication Adherence

Medication Adherence Category	Score	n	%
High	≥ 15	39	47.0
Moderate	11–14	29	34.9
Low	≤ 10	15	18.0
Total		83	100

The findings in Table 2 demonstrate that nearly half of the respondents were classified as having high adherence, while approximately one-third exhibited moderate adherence. This pattern is consistent

with the findings reported by Shoaliha et al. (2025), who identified a relatively favorable level of medication adherence among patients with hypertension. Several factors may contribute to adequate adherence, including repeated health education, patients' familiarity with long-term treatment, and assistance from family members in remembering medication schedules. Patients who receive clear explanations regarding the purpose and benefits of antihypertensive therapy may develop greater awareness of the importance of maintaining treatment even when symptoms are not apparent. Family support may also provide practical reminders and encouragement, particularly for patients who require medication as part of a long-term daily routine. However, the presence of 15 respondents with low adherence indicates that educational and supportive interventions remain necessary to address individual barriers to consistent medication use.

Medication adherence should also be understood as a behavioral process rather than merely a measure of whether medication has been taken. Patients may possess adequate knowledge about hypertension while still experiencing difficulties translating that knowledge into consistent daily behavior. Forgetfulness, changes in daily activities, perceptions of feeling well, and intentional decisions to skip medication may interfere with adherence. These factors are particularly relevant in chronic diseases such as hypertension, where the absence of noticeable symptoms can reduce patients' perception of immediate treatment necessity. Continuous communication between healthcare professionals and patients can help identify barriers to adherence and reinforce the importance of following prescribed treatment schedules. Family involvement can provide an additional layer of support by helping patients establish routines that make medication-taking more consistent.

The predominance of high adherence in this study provides a favorable basis for hypertension management at the community health center level. Nevertheless, the proportion of respondents with moderate and low adherence remains clinically relevant because inconsistent medication use may compromise the intended effectiveness of pharmacological therapy. Healthcare providers therefore need to maintain regular medication counseling rather than assuming that patients who have previously received treatment will automatically remain adherent. Counseling can be strengthened by discussing medication schedules, addressing patients' concerns, identifying reasons for missed doses, and involving family members when appropriate. A patient-centered approach is particularly useful because barriers to adherence may differ between individuals even when they receive similar antihypertensive regimens. Continued monitoring of adherence can consequently support more consistent treatment behavior and improve the overall management of hypertension.

Quality of Life Among Hypertensive Patients

Quality of life is an important outcome in hypertension management because the effects of the disease extend beyond physiological blood pressure control to physical functioning, psychological well-being, social relationships, and environmental conditions. In this study, quality of life was assessed among 83 hypertensive patients using the WHOQOL-BREF, which evaluates four major domains consisting of physical health, psychological well-being, social relationships, and environment. This multidimensional approach allows quality of life to be examined from broader aspects of patients' daily lives rather than being limited to disease symptoms or treatment outcomes. Hypertension may influence physical functioning through fatigue, discomfort, limitations in daily activities, and the demands associated with long-term treatment. At the same time, psychological responses, interpersonal relationships, and environmental circumstances may shape how patients perceive and manage their health condition. Assessment of these dimensions is therefore relevant for understanding the overall condition of patients undergoing long-term antihypertensive treatment.

The distribution of quality of life across the four WHOQOL-BREF domains shows variation between physical, psychological, social, and environmental dimensions. The environmental domain had the highest proportion of respondents classified as having good quality of life, whereas the psychological domain had the lowest proportion in the good category. This pattern suggests that favorable quality of life among the respondents was not necessarily uniform across all dimensions. Patients may experience supportive environmental and social circumstances while still facing psychological challenges associated with living with a chronic disease. The domain-specific distribution is presented in Table 3 to illustrate these differences more clearly.

Table 3. Quality of Life Based on WHOQOL-BREF Domains

Quality of Life Classification	Physical Health n (%)	Psychological Well-being n (%)	Social Relationships n (%)	Environment n (%)
Good	48 (57.8)	35 (42.1)	51 (61.4)	57 (71.2)
Moderate	35 (42.1)	48 (57.8)	32 (38.5)	26 (31.3)
Poor	0 (0)	0 (0)	0 (0)	0 (0)
Total	83 (100)	83 (100)	83 (100)	83 (100)

As shown in Table 3, the environmental domain had the highest proportion of respondents with good quality of life, namely 57 respondents (71.2%), followed by the social relationships domain with 51 respondents (61.4%) and the physical health domain with 48 respondents (57.8%). In contrast, the psychological well-being domain had the lowest proportion of respondents with good quality of life, at 35 respondents (42.1%), while 48 respondents (57.8%) were classified as having moderate psychological quality of life. No respondents were classified as having poor quality of life in any of the four domains. This distribution indicates that the respondents generally perceived their environmental, social, and physical circumstances more positively than their psychological condition. Favorable environmental conditions may reflect adequate access to healthcare, satisfactory living circumstances, and sufficient opportunities to maintain daily activities, while supportive social relationships may provide emotional and practical assistance in managing a chronic condition. The relatively lower proportion of good psychological well-being suggests that emotional aspects of living with hypertension may require greater attention in patient-centered care.

The physical health domain showed that 48 respondents (57.8%) had good quality of life, whereas 35 respondents (42.1%) were categorized as moderate, indicating that a considerable proportion of patients may still experience physical limitations or concerns associated with long-term hypertension management. Patients with chronic hypertension are required to maintain treatment routines and adapt their daily activities to their health condition, which may influence their perception of physical functioning. The social relationships domain demonstrated a more favorable pattern, with 51 respondents (61.4%) reporting good quality of life and 32 respondents (38.5%) reporting moderate quality of life. Positive interpersonal relationships can provide encouragement, practical assistance, and support for maintaining healthy behaviors and medication routines, particularly among patients managing chronic diseases (Mala et al., 2022). The environmental domain showed the most favorable distribution, with 57 respondents (71.2%) classified as having good quality of life, suggesting that environmental conditions may support patients in accessing healthcare and maintaining their daily functioning. However, favorable social and environmental circumstances do not necessarily correspond to equally favorable psychological well-being, highlighting the importance of assessing quality of life through its individual dimensions.

The overall quality-of-life classification provides an additional perspective on the condition of the respondents. Based on the overall WHOQOL-BREF assessment, 48 respondents (57.8%) were categorized as having good quality of life, while 35 respondents (42.1%) were categorized as having moderate quality of life, and no respondent was classified as having poor quality of life. The overall distribution is presented in Table 4.

Table 4. Overall Quality of Life Among Hypertensive Patients

Quality of Life Classification	Score	n	%
Good	≥67	48	57.8
Moderate	33–66	35	42.1
Poor	<33	0	0
Total		83	100

The results in Table 4 show that more than half of the respondents had good overall quality of life, while a considerable proportion remained in the moderate category. The absence of respondents with poor quality of life indicates that the study population generally experienced relatively favorable

conditions despite living with hypertension. The predominance of good quality of life may be related to the relatively favorable environmental and social relationship domains identified in the domain-specific assessment. Supportive surroundings and interpersonal relationships can help patients adapt to the demands of chronic disease management and maintain daily functioning. At the same time, the proportion of respondents with moderate quality of life indicates that favorable overall conditions do not mean that all dimensions of quality of life are equally optimal. The lower proportion of good psychological well-being suggests that emotional aspects of living with hypertension may require greater attention in patient-centered care.

Quality of life among hypertensive patients is influenced by multiple interconnected factors, including physical health, psychological conditions, social support, healthcare access, and the ability to adapt to long-term disease management. The present findings demonstrate this multidimensional pattern because the highest proportion of good quality of life was observed in the environmental domain, whereas the psychological domain showed the greatest proportion of moderate classification. Similar findings have been reported in studies emphasizing that quality of life among patients with hypertension cannot be interpreted solely through clinical indicators because social and psychological circumstances also contribute to patients' perceptions of well-being (Shoaliha et al., 2025). The relatively favorable overall quality of life observed in this study may reflect the combination of adequate social relationships, supportive environmental conditions, and relatively limited documented comorbidity among respondents. Nevertheless, maintaining quality of life requires attention to psychological well-being alongside physical and social needs. Integrating health education, emotional support, family involvement, and routine clinical monitoring may help healthcare providers address the multidimensional needs of patients with hypertension.

Relationship Between Medication Adherence and Quality of Life

The relationship between antihypertensive medication adherence and quality of life was examined to determine whether differences in adherence levels were associated with differences in the overall quality of life of hypertensive patients. Medication adherence is theoretically expected to contribute to better disease management because consistent use of prescribed antihypertensive medication may support blood pressure control and reduce the risk of complications that can interfere with daily functioning. In this study, the descriptive distribution indicated that respondents with higher adherence tended to have a greater proportion of good quality of life. Among respondents with high adherence, 25 of 39 patients (64.1%) had good quality of life, compared with 16 of 29 patients (55.2%) with moderate adherence and 7 of 15 patients (46.7%) with low adherence. This descriptive pattern suggests a tendency toward better quality of life among respondents with higher medication adherence, although the observed distribution does not by itself establish a statistically significant relationship. The statistical analysis was subsequently conducted to determine whether the observed distribution represented a significant association between the two variables.

The distribution of quality of life across the three medication adherence categories shows that good quality of life was most frequently observed among respondents with high adherence. Conversely, moderate quality of life was more common among respondents with low adherence, indicating a descriptive tendency in which lower adherence was accompanied by a less favorable quality-of-life distribution. However, descriptive differences between categories need to be interpreted together with the inferential statistical analysis because differences in proportions do not necessarily indicate a statistically meaningful relationship. The cross-tabulation and statistical test results are presented in Table 5.

Table 5. Relationship Between Medication Adherence and Quality of Life

Medication Adherence	Good Quality of Life n (%)	Moderate Quality of Life n (%)	Poor Quality of Life n (%)	Total n (%)
High	25 (64.1)	14 (35.9)	0 (0)	39 (100)
Moderate	16 (55.2)	13 (44.8)	0 (0)	29 (100)
Low	7 (46.7)	8 (53.3)	0 (0)	15 (100)
Total	48 (57.8)	35 (42.2)	0 (0)	83 (100)

As presented in Table 5, the proportion of respondents with good quality of life decreased from 64.1% among those with high adherence to 55.2% among those with moderate adherence and 46.7% among those with low adherence. Meanwhile, moderate quality of life was reported by 35.9% of respondents with high adherence, 44.8% with moderate adherence, and 53.3% with low adherence. Although this distribution suggests a descriptive tendency toward better quality of life among patients with higher medication adherence, the Pearson Chi-Square test produced a p-value of 0.236, which exceeds the significance level of 0.05. This finding indicates that there was no statistically significant relationship between antihypertensive medication adherence and quality of life among the respondents. The Coefficient of Contingency was 0.132, indicating that the strength of association between the two variables was very weak. These results suggest that variation in medication adherence alone was insufficient to explain differences in overall quality of life within the study population.

The absence of a statistically significant relationship is consistent with the findings of Shoaliha et al. (2025), who also reported no significant relationship between medication adherence and quality of life among hypertensive patients, with a p-value of 0.675. Their findings suggest that adherence to medication alone may not sufficiently explain variations in patients' perceived quality of life because quality of life encompasses multiple dimensions extending beyond pharmacological treatment. Prasetyo et al. (2023) similarly reported that medication adherence was not uniformly associated with quality of life, although a significant relationship was identified in the psychological domain. These findings reinforce the multidimensional nature of quality of life and indicate that the effects of medication adherence may not be reflected equally across physical, psychological, social, and environmental dimensions. In the present study, the relatively favorable environmental and social relationship domains may also have contributed to overall quality of life independently of medication adherence. Family support, healthcare accessibility, socioeconomic circumstances, psychological adaptation, and patients' broader health conditions may therefore play important roles in shaping quality of life.

The findings differ from those reported by Printinasari (2023), who identified a significant relationship between medication adherence and quality of life with a p-value of 0.003. A significant relationship was also reported by Nurmawati et al. (2019), indicating that better adherence may be associated with better quality of life under particular circumstances. Differences between these findings and the present study may be related to variations in respondent characteristics, measurement instruments, healthcare settings, disease duration, sample composition, and other factors affecting patients' daily experiences. The present study involved 83 hypertensive patients, most of whom had relatively favorable sociodemographic and health characteristics, including a high proportion of non-smokers and respondents without documented comorbidities. Such characteristics may reduce the observable influence of medication adherence on overall quality of life because respondents may experience relatively stable health and environmental conditions regardless of their adherence category. The findings indicate that medication adherence remains important for hypertension management, but it should not be considered the sole determinant of patients' quality of life.

From a clinical perspective, the descriptive tendency toward better quality of life among respondents with higher adherence remains relevant despite the non-significant statistical finding. The proportion of good quality of life was highest among respondents with high adherence, suggesting that consistent medication use may represent one component of favorable disease management even though its association with overall quality of life was statistically weak in this sample. Hypertension management should therefore combine adherence-focused interventions with broader strategies addressing psychological well-being, social support, physical functioning, and environmental conditions. Health education can be strengthened through individualized counseling, medication reminders, family involvement, and routine assessment of barriers to treatment adherence. At the same time, healthcare providers should assess patients' quality of life across multiple domains rather than assuming that improvements in medication adherence will automatically result in better overall well-being. An integrated approach is particularly important in chronic disease management because patients' experiences are shaped by interactions among treatment behavior, health status, social circumstances, and psychological adaptation.

CONCLUSION

Based on the findings among 83 hypertensive patients in the service area of Tlogosari Kulon Community Health Center, the respondents were predominantly female, aged 56–65 years, working as

housewives, educated at the senior high school or vocational school level, non-smokers, without documented comorbidities, and characterized by a relatively long history of hypertension. The distribution of antihypertensive medication adherence showed that the largest proportion of respondents had a high level of adherence, accounting for 39 respondents (47.0%), followed by moderate adherence among 29 respondents (34.9%) and low adherence among 15 respondents (18.0%). The overall quality-of-life assessment indicated that 48 respondents (57.8%) had good quality of life, while 35 respondents (42.1%) had moderate quality of life, with no respondents classified as having poor quality of life. Across the WHOQOL-BREF domains, the environmental domain showed the highest proportion of good quality of life (71.2%), followed by social relationships (61.4%) and physical health (57.8%), whereas psychological well-being had the lowest proportion of good classification (42.1%). These findings indicate that the respondents generally demonstrated favorable medication adherence and quality-of-life conditions, although differences were observed across the individual dimensions of quality of life. The descriptive distribution also showed a tendency toward a higher proportion of good quality of life among respondents with higher medication adherence. This pattern provides an important basis for interpreting the subsequent statistical analysis of the relationship between medication adherence and quality of life.

The Pearson Chi-Square analysis produced a p-value of 0.236 (>0.05), indicating that there was no statistically significant relationship between antihypertensive medication adherence and overall quality of life among the respondents. Although respondents with high medication adherence had the highest proportion of good quality of life (64.1%), compared with those with moderate adherence (55.2%) and low adherence (46.7%), the observed differences were insufficient to demonstrate a significant association. The Coefficient of Contingency of 0.132 further indicated that the strength of the relationship between medication adherence and quality of life was very weak. These findings suggest that overall quality of life among hypertensive patients is not determined by medication adherence alone but may also be influenced by physical, psychological, social, environmental, and other individual factors. Hypertension management should therefore incorporate medication adherence support together with interventions addressing psychological well-being, social support, physical functioning, healthcare access, and patients' broader living conditions. The findings also highlight the importance of multidimensional quality-of-life assessment in evaluating outcomes among patients receiving long-term hypertension treatment. Future studies may consider incorporating additional clinical and psychosocial variables and using larger samples to provide a more comprehensive understanding of factors associated with quality of life among hypertensive patients.

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