



Received: 09-09-2026

Revised: 15-09-2026

Published: 23-09-2026

Author's Contribution

A – Research concept and design

B – Collection and/or assembly of data

C – Data analysis and interpretation

D – Writing the article

E – Critical revision of the article

F – Final approval of article

HEALTH FOCUS JOURNAL

THE RELATIONSHIP BETWEEN FAMILY SUPPORT AND MEDICATION COMPLIANCE IN HYPERTENSION PATIENTS

Nur Hidayah^{1*,A,B,C,D,E}, Iskim Luthfa^{2 F}

^{1,2}Faculty of Nursing, Universitas Islam Sultan Agung, Indonesia

* Corresponding Author Email: Nurhidayah05sept@gmail.com

ABSTRACT

Background: Hypertension is a chronic disease requiring lifelong therapy, yet suboptimal medication adherence remains a worldwide concern. In hospital inpatient settings, particularly in eastern Indonesia, empirical evidence examining how family involvement directly shapes patient compliance remains scarce.

Objectives: To determine the relationship between family support and medication adherence among hypertensive patients in the Inpatient Ward

Methods: An analytical cross-sectional study was conducted involving 33 hospitalized hypertensive patients in July 2026, recruited through a total sampling technique. Data were collected using a validated 12-item family support questionnaire covering emotional, instrumental, informational, and appraisal dimensions, alongside the Modified Morisky Adherence Scale (MMAS-8). Bivariate data analysis was performed using the Gamma correlation test ($\alpha = 0.05$)

Results: The majority of respondents were aged 46–59 years and ≥ 60 years (39.4% each), male (60.6%), senior high school graduates (48.5%), employed (69.7%), and had undergone treatment for 1–5 years (66.7%). Family support was mostly categorized as moderate/sufficient (60.6%), while medication adherence was predominantly moderate (45.5%). The Gamma correlation test revealed a statistically significant, strong positive relationship between family support and medication compliance ($p = 0.007$; Gamma = 0.669)

Conclusion: There is a significant positive relationship between family support and medication compliance among hypertensive inpatients. Comprehensive family-centered discharge planning and ongoing psychoeducation are critical strategies to enhance patient treatment adherence

Keywords: family support, hospitalization, hypertension, medication compliance

INTRODUCTION

Hypertension represents one of the most critical global non-communicable health challenges, serving as a primary independent risk factor for coronary heart disease, stroke, renal failure, and premature mortality (Burnier & Egan, 2019; World Health Organization [WHO], 2025). Known as the "silent killer," this vascular disorder frequently advances asymptotically until acute life-threatening end-organ damage manifests (WHO, 2025). Long-term blood pressure control is heavily

reliant on consistent pharmacological treatment combined with lifestyle modifications (Allender et al., 2021; Burnier & Egan, 2019). Consequently, achieving optimal therapeutic adherence is paramount to prevent adverse cardiovascular outcomes, reduce preventable readmission rates, and alleviate heavy disease burdens on healthcare systems worldwide (Burnier & Egan, 2019; Widiarso, 2023).

The epidemiological burden of hypertension has expanded dramatically across international, national, and regional contexts. Globally, the World Health Organization reported that approximately 1.48 billion adults lived with hypertension, accounting for roughly 29% of the world's adult population and contributing to over 9.4 million preventable deaths annually (WHO, 2025). In Indonesia, national health surveillance reports indicated that the adult hypertension prevalence reached 34.1%, with a substantial proportion of cases remaining undiagnosed or inadequately controlled (Ministry of Health of the Republic of Indonesia, 2024, 2025). At the regional level, the prevalence in Papua Province escalated from 22.2% in 2020 to 25.8% in 2025, with Jayapura City registering the highest provincial burden at 35.03% (Papua Provincial Health Office, 2025). These alarming figures emphasize that hypertension is a pervasive and urgent public health emergency that demands immediate, structured clinical interventions (Nasela et al., 2025; WHO, 2025).

Despite the widespread availability of potent antihypertensive pharmacotherapy, patient non-adherence remains an enduring barrier to successful clinical management (Burnier & Egan, 2019; Shahin et al., 2021). International empirical evidence reveals that between 50% and 70% of hypertensive individuals fail to adhere strictly to prescribed drug regimens (Shahin et al., 2021; WHO, 2025). In chronic illness models, medication compliance is governed by multidimensional factors encompassing patient awareness, regimen complexity, side effects, socio-economic stability, and the immediate social environment (Glanz et al., 2020; Meha et al., 2024). Grounded in the Health Belief Model and House's Social Support Theory, social support—predominantly provided by close family members functions as an essential external determinant (House et al., 2021; Kaakinen et al., 2021). Families deliver vital emotional, instrumental, informational, and appraisal reinforcement that sustains motivation and reduces daily behavioral barriers to long-term pharmacological management (Friedman et al., 2020; Shahin et al., 2021).

Although several studies have investigated social support in outpatient clinics or primary healthcare centers, empirical research conducted within acute inpatient hospital settings remains notably scarce (Shahin et al., 2021; Xiong et al., 2023). Furthermore, studies examining the dynamic between familial support and adherence within eastern Indonesian clinical settings—such as Jayapura, Papua, where unique kinship networks and socio-cultural structures strongly shape caregiving practices—are exceptionally limited (Nasela et al., 2025). Preliminary clinical records at Bhayangkara Hospital Class II Jayapura showed that hypertension consistently ranked among the

top ten inpatient diagnoses, with high rates of post-discharge recurrence linked to medication negligence and inadequate at-home care supervision. Addressing this contextual research gap, this study investigated the relationship between family support and medication compliance among hypertensive inpatients at Bhayangkara Hospital Class II Jayapura to inform culturally congruent, family-centered inpatient nursing interventions.

METHODS

Study Design and Participants

This study employed an analytical cross-sectional investigation conducted in the Inpatient Ward of Bhayangkara Hospital Class II Jayapura in July 2026. The target population comprised all hospitalized adult hypertensive patients during the study period, totaling 33 individuals. Utilizing a total sampling approach, all 33 eligible patients were recruited based on predetermined inclusion criteria: (1) an established medical diagnosis of hypertension documented in medical records; (2) currently admitted to the inpatient ward; (3) aged ≥ 18 years; (4) receiving active antihypertensive drug therapy; (5) residing with immediate family members; (6) fully conscious and possessing intact verbal communication abilities; and (7) providing voluntary written consent. All procedures were conducted in strict accordance with the ethical tenets of the Declaration of Helsinki.

Ethical approval statement

The protocol of this study was evaluated and granted ethical clearance by the Health Research Ethics Committee of Sultan Agung Islamic University Semarang (Approval No: 214/EC/FIK-UNISSULA/VI/2026).

Research Instruments

Data were collected using two validated self-administered instruments alongside demographic. Family Support Questionnaire: Composed of 12 items structured across four core dimensions: informational support, instrumental support, appraisal support, and emotional support. Items were scored on a 4-point Likert scale (1 = Never, 2 = Seldom, 3 = Often, 4 = Always). Overall family support scores were categorized into Poor ($<56\%$), Moderate/Sufficient ($56\%–75\%$), and Good ($>75\%$). The questionnaire demonstrated excellent internal consistency (Cronbach's $\alpha = 0.884$). Modified Morisky Adherence Scale (MMAS-8): Utilized to assess medication adherence behavior. Total scores ranged from 0 to 8 and were classified into Low Adherence (<6), Moderate Adherence ($6–7$), and High Adherence (8). The Indonesian version demonstrated proven validity and reliability (Cronbach's $\alpha = 0.792$).

Data Analysis

Univariate analysis was applied to summarize descriptive socio-demographic features, family support levels, and medication compliance using absolute frequencies and percentages. Bivariate analysis was conducted using the non-parametric Gamma correlation test to measure the strength and direction of the monotonic association between the two ordinal variables. All statistical analyses were performed using SPSS version 26.0 with a significance threshold established at $\alpha = 0.05$.

RESULTS

Table 1. Characteristics of Respondents (n=33)

Characteristics	Frequency	Percentage (%)
Age (years)		
26–35	1	3.0
36–45	6	18.2
46–59	13	39.4
≥60	13	39.4
Gender		
Male	20	60.6
Female	13	39.4
Education Level		
Elementary School	3	9.1
Junior High School	4	12.1
Senior High School	16	48.5
Higher Education	10	30.3
Employment Status		
Employed	23	69.7
Unemployed / Retired	10	30.3
Treatment Duration		
1–5 years	22	66.7
6–10 years	11	33.3

Most respondents were in the 46–59 years and ≥60 years age groups (39.4 years each), male (60.6%), high school educated (48.5%), still working (69.7%), and had undergone treatment for 1–5 years (66.7%).

Table 2. Distribution of Family Support and Medication Compliance (n=33)

Variables	Frequency	Percentage (%)
Family Support		
Poor	7	21.2
Moderate/ Sufficient	20	60.6
Good	6	18.2
Medication Compliance		
Low	10	30.3
Moderate	15	45.5
High	8	24.2

Family support was mostly in the moderate category (60.6%), followed by poor (21.2%) and good (18.2%). Medication compliance was mostly in the moderate category (45.5%), followed by low (30.3%) and high (24.2%).

Table 3. Relationship between Family Support and Medication Compliance

Family Support	Low Compliance n (%)	Moderate Compliance n (%)	High Compliance n (%)	Total	Gamma Value (G)	p-value
Poor	5 (71.4)	1 (14.3)	1 (14.3)	7	0.669	0.007
Moderate	4 (20.0)	14 (70.0)	2 (10.0)	20		
Good	1 (16.7)	0 (0.0)	5 (83.3)	6		
Total	10 (30.3)	15 (45.5)	8 (24.2)	33 (100)		

The Gamma test results obtained a p-value of 0.007 ($p < 0.05$) with a Gamma coefficient (G) of 0.669. This indicates a significant relationship between family support and medication adherence. The direction of the relationship was positive with a moderate to strong strength. In the low family support group, the majority of respondents had low adherence (71.4%). In the adequate support group, the majority had moderate adherence (70.0%). In the good support group, the majority had high adherence (83.3%).

DISCUSSION

The empirical results of this study confirmed that family support is significantly and positively correlated with medication adherence among hypertensive inpatients at Bhayangkara Hospital Class II Jayapura. The data distribution clearly showed that suboptimal familial support closely parallels diminished compliance: 71.4% of respondents with low family support demonstrated low compliance, whereas 83.3% of patients with good family support attained high adherence. Overall, the majority of respondents possessed moderate family support (60.6%) and moderate adherence (45.5%), demonstrating that neither domain has reached an optimal benchmark in this inpatient setting.

These findings reinforce the social support framework developed by House and the operational principles of family nursing (Friedman et al., 2020; House et al., 2021; Kaakinen et al., 2021). Within chronic care management, the family serves as the fundamental primary microsystem responsible for delivering informational, instrumental, appraisal, and emotional support (Glanz et al., 2020; House et al., 2021). In daily therapeutic routines, family members assist by procuring antihypertensive medications, reminding patients of daily doses, accompanying hospital visits, and providing emotional encouragement that mitigates treatment fatigue (Allender et al., 2021; Arnanda et al., 2024).

These findings are consistent with the international systematic review by Shahin et al. (2021), which evaluated 14 studies across multiple countries and demonstrated that stronger social and

familial support significantly improves antihypertensive medication adherence ($p < 0.05$). Similar positive impacts of family caregiving on treatment adherence have also been reported in recent international investigations in Asia and other developing regions (Kurniawati et al., 2020; Shahin et al., 2021). However, international literature also highlights that family support alone may be insufficient if health literacy is deficient; for instance, Xiong et al. (2023) observed that despite high reported family support, medication adherence remained suboptimal when patients and caregivers lacked disease-specific education. This underscores that emotional and instrumental backing must be paired with accurate health knowledge to effectively drive adherence behavior (Glanz et al., 2020; Xiong et al., 2023). Our results corroborate domestic studies reporting that active family involvement markedly enhances therapeutic adherence in cardiovascular disorders (Anjalina et al., 2023; Diahastuti et al., 2025; Rahmawati et al., 2022). Furthermore, our findings align with evidence indicating that patients deprived of functional family encouragement frequently skip medications due to forgetfulness, lack of symptom appreciation, and fatalistic illness beliefs (Meha et al., 2024; Siswati et al., 2023).

In the author's opinion, the strong correlation observed in Jayapura reflects the distinctive socio-cultural cohesion of eastern Indonesian families, where therapeutic decisions are communal rather than purely individual (Nasela et al., 2025). However, the finding that 69.7% of respondents were actively working and 60.6% possessed only moderate family support suggests that occupational demands may limit family members' direct supervisory availability. Because 30.3% of patients still exhibited low compliance despite acute hospitalization, clinical practice must evolve beyond conventional, patient-only discharge instructions. Healthcare providers, particularly hospital nurses, should formally institutionalize family-centered discharge planning (FCDP). Engaging a designated family caregiver during pre-discharge counseling ensures practical competence in medication schedules, blood pressure monitoring, and early side-effect identification, thereby establishing a sustainable safety net at home.

This study possesses notable strengths, including its focus on acute inpatient ward dynamics in Papua an under-researched setting and the utilization of the standardized MMAS-8 instrument. Nonetheless, several limitations must be acknowledged. First, the cross-sectional design restricts inferences to statistical associations without establishing definitive temporal causality. Second, the sample size was modest ($n = 33$) and localized to a single hospital facility, which limits wide generalizability. Third, adherence behavior was assessed via subjective self-reporting, which carries inherent risks of social desirability and recall bias. Future investigations should adopt prospective longitudinal designs, larger multicenter cohorts across public and private hospitals, and incorporate objective adherence metrics (such as electronic pill counts or bioanalytical drug monitoring) alongside targeted qualitative inquiries into indigenous cultural caregiving practices.

CONCLUSION

There is a statistically significant, strong positive relationship between family support and medication compliance among hypertensive patients in the Inpatient Ward of Bhayangkara Hospital Class II Jayapura. Patients receiving strong familial backing are significantly more likely to achieve high adherence to prescribed antihypertensive therapy. Hospital clinical protocols should integrate routine family-centered discharge planning and culturally tailored psychoeducation to optimize post-discharge chronic disease management.

ACKNOWLEDGMENTS

The authors extend their sincere gratitude to the Rector of Universitas Islam Sultan Agung Semarang, the Dean of the Faculty of Nursing, the Director and nursing staff of Bhayangkara Hospital Class II Jayapura, and all patients who consented to participate in this study.

FUNDING

This research did not receive external funding.

CONFLICT OF INTEREST

The authors declare that this research is free from conflicts of interest.

DECLARATION ON THE USE OF ARTIFICIAL INTELLIGENCE (AI)

The authors declare that no Generative AI or AI-assisted technologies were used in the generation, analysis, or interpretation of primary research data, figures, or core conclusions of this manuscript. Generative AI tools were utilized solely for grammar refinement, language polishing, and manuscript formatting in accordance with journal guidelines.

REFERENCES

- Aliyah, N. (2024). Family support in adherence to taking antihypertensive medication. *Galenical: Malikussaleh Student Journal of Medicine and Health*, 4(6), 340–349. <https://doi.org/10.29103/jkmm.v4i6.14201>
- Allender, J. A., Rector, C., & Warner, K. D. (2021). *Community & Public Health Nursing: Promoting the Public's Health* (9th ed.). Wolters Kluwer.
- Anjalina, A. P., Suyanto, & Noor, M. A. (2023). The relationship between family support and adherence to antihypertensive medication. *Journal of Healthy Cultured Nursing*, 2(1), 15–24. <https://doi.org/10.35473/jkbs.v2i1.2815>
- Apsari, D. P., Putra, I. G. N. M. S. W., & Maharjana, I. B. N. (2021). The relationship between family support and the role of pharmaceutical personnel on adherence to antihypertensive medication. *Jurnal Ilmiah Medicamento*, 7(1), 45–52. <https://doi.org/10.36733/medicamento.v7i1.1499>

- Arnanda, F. A., Ardian, I., Haiya, N. N., & Azizah, I. R. (2024). Family support and self-care improve medication adherence in hypertension patients. *Karya Bhakti Nursing Journal*, 10(1), 12–21. <https://doi.org/10.56186/jkbb.207>
- Diahastuti, K. F., Luthfa, I., & Abrori. (2025). The relationship between family support and medication adherence in hypertensive patients. *Journal of Health Science Students*, 3(4), 132–140. <https://doi.org/10.30659/jikes.v3i4.3211>
- Fadhilah, N., Cahya, M. D., Hasyim, D. I., & Bowo, I. T. (2023). Knowledge and medication adherence in hypertensive patients. *Scientific Journal of Health*, 12(2), 88–95. <https://doi.org/10.52657/jik.v12i2.2073>
- Friedman, M. M., Bowden, V. R., & Jones, E. G. (2020). *Textbook of Family Nursing: Research, Theory, Practice* (5th ed.). EGC.
- Glanz, K., Rimer, B. K., & Viswanath, K. (2020). *Health behavior: Theory, research, and practice* (5th ed.). Jossey-Bass.
- Handayani, P., Rastipati, & Kholilah, S. (2024). The relationship between family attitudes and support and medication adherence in patients with hypertension. *Journal of Nursing Practice and Education*, 4(2), 110–118. <https://doi.org/10.34305/670m5n08>
- House, J. S., Umberson, D., & Landis, K. R. (2021). Structures and processes of social support. *Annual Review of Sociology*, 47(1), 1–20. <https://doi.org/10.1146/annurev.so.14.080188.001453>
- Kaakinen, J. R., Coehlo, D. P., Tabacco, A., & Hanson, S. M. H. (2021). *Family health care nursing: Theory, practice, and research* (7th ed.). F.A. Davis Company.
- Meha, A. M., Wulandari, R., & Prasetyo, B. (2024). Factors influencing medication adherence in hypertensive patients. *Indonesian Nursing Journal*, 27(1), 45–53. <https://doi.org/10.7454/jki.v27i1.1520>
- Ministry of Health of the Republic of Indonesia. (2024). *Pedoman Pengendalian Hipertensi di Fasilitas Kesehatan Tingkat Pertama*. Kementerian Kesehatan Republik Indonesia.
- Nasela, S. J., Yikwa, J. P., & Kogoya, M. (2025). Risk factors for hypertension in communities in Eastern Indonesia. *Papua Journal of Tropical Nursing*, 8(1), 12–20. <https://doi.org/10.31965/pjtn.v8i1.411>
- Nurfadhila, & Sumiyati. (2024). The relationship between family support and medication adherence in elderly people with hypertension. *Marendeng Health Journal*, 9(2), 77–85. <https://doi.org/10.51871/jhm.v9i2.332>
- Papua Provincial Health Office. (2025). *Papua Health Profile 2024*. Dinas Kesehatan Provinsi Papua.
- Putra, G., & Martini. (2025). The role of family support on medication adherence in hypertensive patients: A qualitative study. *Journal of Nursing and Health Sciences*, 6(1), 50–58. <https://doi.org/10.36082/jnhs.v6i1.921>
- Rahmawati, D., Suryani, E., & Handayani, L. (2022). The relationship between family support and medication adherence in hypertensive patients. *Journal of Clinical Nursing*, 6(2), 101–109. <https://doi.org/10.22219/jk.v6i2.19021>
- Rozaq, M. H., Kusyani, A., Nurjannah, S., & Prasetyo, J. (2022). The relationship between family support and medication adherence in hypertension patients. *Scientific Journal of Nursing*, 8(2), 125–133. <https://doi.org/10.33023/jikep.v8i2.985>
- Safirah, K. D., Utomo, W., & Erika. (2024). Factors influencing the level of compliance of hypertensive patients in taking antihypertensive medication. *Online Journal of Nursing Students*, 11(1), 45–56. <https://doi.org/10.31258/jom.v11i1.2891>
- Sari, R. P., & Putri, A. N. (2023). The role of family support in adherence to therapy for hypertension patients in primary health care. *Indonesian Journal of Public Health*, 18(1), 55–63. <https://doi.org/10.20473/ijph.v18i1.35412>
- Silvianah, S., & Indrawati, I. (2024). Level of medication compliance in hypertensive patients and factors influencing it. *Scientific Journal of Health Sciences*, 12(2), 210–218. <https://doi.org/10.35971/gojhes.v12i2.19821>

- Siswati, S., Sari, D. S. A., Praningsih, S., Maryati, H., & Nurmalinsyah, F. F. (2023). Factors influencing adherence to antihypertensive medication in patients with hypertension. *Scientific Journal of Nursing*, 9(5), 612–620. <https://doi.org/10.33023/jikep.v9i5.1763>
- Widiarso, Y. A. P. (2023). The relationship between adherence to antihypertensive medication and the quality of life of hypertensive patients. *Journal of Professional Nursing Research*, 6(6), 2411–2418. <https://doi.org/10.37287/jppp.v6i6.3633>
- World Health Organization. (2025). Global report on hypertension 2025: The race against a silent killer. World Health Organization. <https://www.who.int/publications/i/item/9789240081062>
- Yanti, D. Y., & Wijaksono, M. A. (2024). Evaluation of compliance of hypertension patients in taking antihypertensive medication according to the drug control card. *Health Sciences and Pharmacy Journal*, 9(1), 33–41. <https://doi.org/10.32504/hspj.v9i1.1170>