

ARTICLE INFORMATION

Received: September, 18, 2026

Revised: September, 29, 2026

Available online: September, 30, 2026

at: <https://e-jurnal.ipphorr.com/index.php/mhc>

Family support as a psychosocial factor associated with medication adherence among older adults with hypertension

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Abstract

Background: Hypertension is an increase in blood pressure $\geq 140/90$ mmHg which is known as a silent killer because it often shows no symptoms but carries the risk of causing complications in the heart, kidneys, brain, and eyes. In Indonesia, 34.1% of elderly people suffer from hypertension and many elderly people are not compliant in taking medication due to frequent forgetfulness and lack of family support. Forms of family support include: emotional support, information, appreciation, instrumental. This study aims to determine the relationship between family support and medication adherence in elderly people with hypertension at the Bareng Community Health Center.

Purpose: The objective of this research is to examine the correlation between family support and medication adherence among elderly individuals with hypertension.

Method: This study used a quantitative correlational design with a cross-sectional approach. The population in this study were 186 elderly people aged ≥ 60 years diagnosed with hypertension at the Bareng Community Health Center in Malang City, who were registered as having hypertension. The sample consisted of 127 elderly hypertensive patients selected based on inclusion criteria. The research instrument was a questionnaire on family support and medication adherence. Data analysis used the Spearman's Rho test

Results: Most respondents had moderate family support (70.1%), while 69.3% had low medication adherence. Spearman's Rho test showed a statistically significant weak positive correlation between family support and medication adherence ($r = 0.211$, $p = 0.018$). This finding indicates that higher levels of family support were associated with higher levels of medication adherence among older adults.

Conclusion: There was a significant relationship between family support and medication adherence in elderly people with hypertension at the Bareng Community Health Center in Malang City. Families with elderly people with hypertension are advised to take the time to monitor them to improve medication adherence or better manage their treatment.

Keywords: Elderly; Family Support; Hypertension; Medication Adherence.

INTRODUCTION

Hypertension is a chronic health condition characterized by persistently elevated blood pressure and is commonly referred to as high blood pressure (World Health Organization, 2023). Although hypertension may remain asymptomatic for a prolonged period, its long-term management requires continuous treatment and sustained health behaviours. The chronic nature of hypertension may

place additional demands on older adults, who may experience physical limitations, changes in daily functioning, and increased dependence on others for health-related activities. Consequently, hypertension management should not only address physiological aspects but also consider the psychological and social context in which patients manage their condition. Hypertension is a major global public health concern.

An estimated 1.28 billion adults aged 30–79 years worldwide have hypertension, and approximately 46% are unaware that they have the condition, while less than half (42%) have been diagnosed and treated (World Health Organization, 2023). In Indonesia, hypertension is particularly prevalent among older adults, with reported prevalence increasing with age. The prevalence among individuals aged 55–64 years, 65–74 years, and ≥ 75 years was 55.2%, 63.2%, and 69.5%, respectively, according to the 2018 Basic Health Research (BHR). The high prevalence among older adults highlights the importance of long-term management strategies that address not only medical treatment but also factors affecting patients' ability and motivation to maintain treatment. The psychosocial context of chronic illness is important because patients must continuously adapt their daily behaviours to the demands of treatment. Older adults may encounter difficulties in remembering medication schedules, obtaining medication, attending healthcare services, and maintaining motivation for long-term treatment. Recent evidence indicates that adherence to hypertension management may be influenced by social support, self-efficacy, motivation, stress, forgetfulness, and other patient-related factors. These factors suggest that treatment adherence should be understood not only as an individual behaviour but also as a behaviour influenced by interpersonal and social environments.

In East Java Province, the estimated number of individuals aged ≥ 15 years with hypertension is approximately 11,702,478, consisting of 48.8% males and 51.2% females. Approximately 73.8% of these individuals received health services for hypertension. In Malang City, the estimated number of individuals with hypertension was approximately 230,070, with 87.8% receiving health services (Malang City Health Office, 2023). Despite the availability of healthcare services, continuity of treatment remains important because hypertension requires long-term medication and lifestyle management. Medication adherence is an essential component of hypertension management. Non-adherence may occur because patients forget to take medication, experience difficulties maintaining routines, have concerns regarding treatment, or lack sufficient support in carrying out their treatment regimen. WHO has identified caregiver involvement as a relevant approach for promoting patient retention and

medication adherence in hypertension care, particularly among older patients who may require assistance with health management and daily activities (World Health Organization, 2021). Thus, medication adherence may be influenced by interpersonal resources available to patients in their everyday environment.

Family support represents an important psychosocial resource for elderly patients living with chronic disease. Family members may provide emotional reassurance, information, reminders, practical assistance, and encouragement, thereby helping patients cope with the demands of long-term treatment. Family support may also strengthen patients' sense of being cared for and reduce the difficulties associated with managing treatment independently. From a psychosocial perspective, such support may facilitate adaptation to chronic illness and encourage the continuation of health-related behaviours. Family support can be expressed through emotional, informational, appraisal, and instrumental dimensions. Emotional support includes attention, empathy, and understanding of the patient's condition. Informational support involves providing health-related information and encouraging appropriate healthcare-seeking behaviour. Appraisal support includes appreciation, encouragement, and positive reinforcement, whereas instrumental support involves direct practical assistance, such as helping patients obtain medication or accompanying them to healthcare facilities (Rahmawati & Daryani, 2024). These forms of support may work together to help elderly patients maintain treatment routines.

The role of family is particularly relevant among elderly patients because aging may be accompanied by changes in physical, psychological, and social functioning. Assistance from family members may compensate for some of these difficulties while maintaining the patient's involvement in self-care. Active family involvement, such as reminding patients to take medication, supervising medication use, accompanying them to healthcare facilities, and preparing drinking water when medication is taken, may support treatment continuity (Mandaty, Widiati, Fauziah, & Fauzia, 2023). In this context, family support is not merely practical assistance but also represents an interpersonal resource that may reinforce motivation and confidence in managing chronic illness. Healthcare professionals, particularly

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nurses, also have an important role in strengthening the psychosocial resources available to elderly patients. Nurses can provide education, encourage self-care, assess barriers to adherence, and involve family members in treatment planning. A family-centred approach may therefore complement pharmacological management by addressing social and behavioural factors that influence treatment continuity. A preliminary observation at Bareng Community Health Center in December 2024 identified potential challenges in medication adherence among elderly patients with hypertension. Of 10 elderly patients observed, 6 reported that they did not take their medication regularly because they forgot or lacked assistance from family members. In contrast, 4 patients reported regular medication use and stated that family members consistently reminded them to take their medication. Although these preliminary observations cannot establish a causal relationship, they indicate the relevance of examining family support as a psychosocial factor associated with medication adherence in the local population.

RESEARCH METHOD

This study employed a quantitative correlational design with a cross-sectional approach to examine the relationship between family support and medication adherence among older adults with hypertension at Bareng Community Health Center. The study population consisted of 186 older adults, and 127 respondents were selected using accidental sampling based on the predetermined sample size. Data collection was conducted after obtaining research permission and ethical approval. The researcher coordinated the data collection schedule with the community health center and explained the purpose, procedures, benefits, and voluntary nature of participation to each prospective respondent. Respondents who agreed to participate were asked to complete an informed consent form before completing the research questionnaire. Participants were included after providing consent and were given the questionnaire to complete according to the predetermined data collection period.

Data were collected using two questionnaires, namely a family support questionnaire and the Morisky Medication Adherence Scale (MMAS-8). The family support questionnaire consisted of 20 items measured using a four-point Likert scale. For positive statements, responses of “never,” “sometimes,” “often,” and “always” were scored 1, 2, 3, and 4, respectively, whereas the scoring was reversed for negative statements. Positive items were numbers 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 15, 17, 18, 19, and 20, while negative items were numbers 1, 6, 11, and 16. Higher scores indicated greater family support. Family support was categorized as low (18–32), moderate (33–48), high (49–64), and very high (65–80). Medication adherence was assessed using the eight-item Morisky Medication Adherence Scale (MMAS-8), which uses a Guttman scale with scores ranging from 0 to 1 for each item. For negative statements in items 1, 2, 3, 4, 6, and 7, a score of 1 was assigned to a “no” response and 0 to a “yes” response. For the positive statement in item 5, a score of 1 was assigned to a “yes” response and 0 to a “no” response. Item 8 was scored 1 for “never” forgetting medication and 0 for responses indicating that forgetting occurred several times, occasionally, often, or always. Higher total scores indicated higher medication adherence. Medication adherence was categorized as low for scores below 5, moderate for scores of 5–6, and high for scores of 7–8.

The family support questionnaire demonstrated adequate validity, with item correlation coefficients ranging from 0.623 to 0.961, exceeding the reference value of 0.202. Its reliability was also adequate, with a Cronbach’s alpha coefficient of 0.978. The MMAS-8 demonstrated validity based on a Kaiser–Meyer–Olkin value of 0.861 and Bartlett’s Test of Sphericity of 0.000, with an overall validity coefficient of 0.824. Its reliability coefficient was 0.898, while test-retest reliability assessed using Spearman’s rank correlation produced a coefficient of 0.881. These results indicated that both instruments were valid and reliable for data

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collection. Before statistical analysis, the collected data were processed through editing, coding, scoring, and tabulation. Editing was performed to check the completeness of questionnaire responses, while coding was used to assign numerical codes to respondent characteristics and questionnaire responses. The family support questionnaire was scored according to the positive and negative item scoring system, with total scores subsequently classified into low, moderate, high, and very high categories. The MMAS-8 responses were scored according to the established positive and negative item scoring procedures, with total scores classified into low, moderate, and high medication adherence. The processed data were entered into a spreadsheet and subsequently analysed using the Statistical Package for the Social Sciences (SPSS). Univariate analysis was performed to describe the distribution of family support and medication adherence among the respondents. Bivariate analysis was conducted to determine the relationship between family support and medication adherence among older

adults with hypertension. Because both variables were measured on an ordinal scale and the objective of the analysis was to assess their correlation, Spearman's rho correlation test was used. Statistical significance was determined at an alpha level of 0.05, with a p-value of <0.05 indicating a statistically significant relationship between the variables, whereas a p-value of >0.05 indicated no statistically significant relationship. Ethical principles were applied throughout the research process. Before participation, respondents received information regarding the study objectives and procedures and were informed that participation was voluntary and that they had the right to refuse or withdraw from participation. The information collected was intended solely for scientific and educational purposes. Ethical approval was obtained from the Health Research Ethics Committee of Universitas Hafshawaty Zainul Hasan. The study received ethical clearance on May 10, 2025, under approval number 201/KEPK-UNHASA/V/2025.

RESEARCH RESULTS

Table 1. Distribution of Respondent (N= 127)

Variable	Results
Family Support (n/%)	
Low	0/0.0
Moderate	89/70.1
High	36/28.3
Very High	2/1.6
Medication Adherence (n/%)	
Low	88/69.3
Moderate	30/23.6
High	9/7.1

Table 1 shows that most hypertension patients had moderate family support (70.1%), followed by high family support (28.3%). Regarding medication adherence, most patients had low adherence (69.3%), while 23.6% had moderate adherence and 7.1% had high adherence.

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Table 2. Relationship between Family Support and Medication Adherence among Hypertension Patients

Variables	Spearman's rho	p-value
Family Support and Medication Adherence	0.211	0.018

Based on Table 2, the Spearman's Rho test showed a statistically significant relationship between family support and medication adherence among elderly patients with hypertension ($r = 0.211$, $p = 0.018$). The correlation coefficient indicated a weak positive correlation, meaning that higher levels of family support were associated with higher levels of medication adherence. Therefore, the null hypothesis (H_0) was rejected, indicating that family support was significantly associated with medication adherence among elderly patients with hypertension.

DISCUSSION

The findings demonstrated a significant relationship between family support and antihypertensive medication adherence among elderly patients with hypertension at Bareng Community Health Center, with a p-value of 0.018 ($p < 0.05$). Family support was categorized into four levels: low, moderate, high, and very high. The findings indicate that differences in the level of family support were associated with differences in medication adherence among elderly patients. These findings highlight the relevance of family support as a psychosocial factor in the management of chronic illness among older adults (Afriana, Mediawati, Komariah, & Aziz, 2026). From a psychosocial perspective, family support may provide an interpersonal resource that helps elderly patients maintain health-related behaviours. Long-term treatment requires patients to incorporate medication use into their daily routines, which may become challenging when treatment is prolonged and the disease does not always produce noticeable symptoms. Family members can provide reminders, encouragement, attention, and practical assistance, thereby helping patients maintain treatment routines. WHO has highlighted caregiver involvement as a potentially important approach to supporting medication adherence in hypertension care, particularly among older patients who may require assistance with health management and daily activities (Ministry of Health of the Republic of Indonesia, 2024).

The findings may also be understood through the emotional dimension of family support. Elderly patients who receive attention and reassurance from family

members may feel that their health condition is recognized and that they are not managing the disease alone. Emotional support may contribute to motivation and confidence in continuing treatment. In chronic illness management, these interpersonal resources are relevant because adherence involves repeated health behaviours that must be maintained over an extended period. Recent evidence on hypertension adherence has identified social support, self-efficacy, motivation, and psychological or behavioural barriers as relevant factors influencing adherence to treatment and lifestyle recommendations (Olaniran, Akodu, Olaniran, Bamidele, Ogunyemi, & Idowu, 2023; Pan, Hu, Wu, & Li, 2021; Shahin, Kennedy, & Stupans, 2021).

Family support may also facilitate adaptation to the demands of living with hypertension. Older adults may experience changes in physical functioning and may require assistance with medication management and healthcare utilization. Family members can help patients adjust their daily routines by reminding them about medication schedules, accompanying them to healthcare facilities, and assisting them in obtaining prescribed medication. Active family involvement was associated with medication adherence among elderly patients with hypertension (Budiman, Hidayat, & Melinda, 2022; Damayantie, Heryani, & Muazir, 2018). These findings support the interpretation that family involvement may function as a social resource that facilitates continuity of treatment.

The different dimensions of family support provide several pathways through which support may be associated with adherence. Emotional support may provide reassurance and reduce feelings of being alone in managing illness. Informational support may improve patients' understanding of hypertension and the importance of regular treatment. Appraisal support may reinforce positive treatment behaviours through appreciation and encouragement. Instrumental support may reduce practical barriers by assisting patients in obtaining medication or accessing healthcare services. Therefore, family support should be viewed as a multidimensional psychosocial resource rather than simply as physical assistance (Shen, Guan, Du, Pei, Zhao, & Liu, 2022; Wu, Xiong, Zhu, Chen, Zhang, Gong,

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& Yan, 2024). The findings are also consistent with the concept of family functioning in chronic illness management. Families have roles in recognizing health problems, making healthcare decisions, providing care to ill members, maintaining a supportive environment, and utilizing available health services. For elderly patients with hypertension, these functions may help integrate treatment into everyday family routines. Family involvement may therefore support both practical self-management and the psychological adaptation required to live with a chronic condition (Shofinah, Rahmiyati, & Nugrahaeni, 2025; Siwi, Nadhiroh, & Widara, 2024). The importance of family involvement is also reflected in national health guidance emphasizing the role of families and communities in supporting health management among older adults (Ministry of Health of East Java Province, 2023; Ministry of Health of the Republic of Indonesia, 2018). The role of family support is particularly important when medication adherence is affected by forgetfulness. In the preliminary observation at the study site, several elderly patients reported irregular medication use because they forgot to take their medication or did not receive assistance from family members. In contrast, patients who reported regular medication use described consistent reminders from family members. Although these observations are descriptive and cannot establish causality, they provide contextual support for interpreting the significant association identified in the study. Forgetfulness and difficulties in maintaining regular medication routines have also been identified as relevant barriers to medication adherence among patients with chronic conditions (Iskani, 2025; Uchmanowicz, Chudiak, Uchmanowicz, Rosińczuk, & Froelicher, 2018).

The findings also have implications for nursing practice. Nurses should consider family members as potential partners in the psychosocial management of elderly patients with hypertension. In addition to providing medication education directly to patients, nurses may assess the availability of family support, identify barriers to adherence, and involve family members in medication reminders and healthcare follow-up. Such a family-centered approach is consistent with holistic chronic disease management, in which physical treatment is complemented by psychosocial and social support (Afriana et al., 2026; Shahin et al., 2021). However, the cross-sectional design of this study limits interpretation to an association between family support and medication adherence and does not establish a causal relationship. Other factors, including health literacy, duration of hypertension, number of

medications, medication-related concerns, cognitive functioning, socioeconomic conditions, and access to healthcare services, may also influence adherence. Future studies could examine these factors together and assess whether psychosocial interventions involving family members can improve medication adherence and broader outcomes of psychological well-being among elderly patients with hypertension. Further investigation may also consider the multidimensional nature of social and family support, as well as individual and contextual factors that may influence adherence among older adults (Pan et al., 2021; Shen et al., 2022).

CONCLUSION

A significant relationship between family support and antihypertensive medication adherence among elderly patients with hypertension. The Spearman's Rho analysis involving 127 respondents yielded a p-value of 0.018 ($p < 0.05$), with a correlation coefficient of 0.211, indicating a weak positive correlation. This finding suggests that greater family support was associated with better adherence to antihypertensive medication among elderly patients. The findings highlight the relevance of family support as a psychosocial resource in supporting medication adherence and the self-management of hypertension among older adults.

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