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The Role of Family Support in Treatment Adherence among Hypertensive Patients

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Abstract

Hypertension is a chronic disease that requires long-term treatment and consistent medication adherence. Patient adherence is influenced not only by individual factors but also by the role of the family in providing support during the treatment process. Lack of family support can hinder patient adherence to therapy, thereby increasing the risk of complications. Our study is to determine the role of family support in treatment adherence in hypertensive patients at the Sukarami Public Health Center. This study used an observational analytical design with a cross-sectional approach. We collected data from a total of 108 respondents through consecutive sampling, consisted of a family support questionnaire and a Morisky Medication Adherence Scale (MMAS-8) questionnaire. We found a significant relationship between family support and medication adherence ($p < 0.001$) with an Odds Ratio (OR) of 16.608. This indicates that hypertensive patients with good family support were 16.608 times more likely to be adherent to medication.

Keywords: Family Support, Medication Adherence, Hypertension

1. Introduction

Currently, hypertension is one of the non-communicable diseases prioritized in public health, both nationally and globally. This condition often remains asymptomatic for many years, even for ten to twenty years, and is generally detected only after complications occur in target organs. Therefore, hypertension is commonly referred to as a "silent killer".[1]

The World Health Organization (WHO) stated that there is significant global increase in the prevalence of hypertension. A prevalence of 26.4% has been reported of the world's population, and it is projected to rise to 29.2% by 2025.[2]

According to the Indonesian Health Survey (Survei Kesehatan Indonesia/SKI) in 2023 by the Ministry of Health, the prevalence of hypertension among individuals aged ≥18 years was recorded at 30.8% based on blood pressure measurements and 8.6% based on a doctor's diagnosis. These findings indicate that hypertension has remained a major public health problem in recent years. In South Sumatra Province, data from the Central Statistics Agency reported of hypertension cases is also relatively high, with approximately 1,781,891 cases recorded in 2024. Palembang City is reported to have one of the highest hypertension caseloads in the province.[3,4]

The success of hypertension management is largely determined by patients' adherence to regular medication use. Medication adherence aims to maintain blood pressure stability and prevent serious complications with renal failure, stroke, heart failure, and coronary heart disease.[5] Although pharmacological therapy has been proven effective in reducing the risk of complications, maintaining long-term medication adherence remains a major challenge for both patients and their families. Poor adherence has been identified as one of the main causes of uncontrolled blood pressure and is associated with worse clinical outcomes.[6]

Family support as a crucial role in improving treatment outcomes In the management of chronic diseases. Patients who receive adequate family support tend to achieve better disease control and higher levels of medication adherence compared to those who do not receive such support.[7,8] Family support includes attention, attitudes, and actions provided to sick family members, which can enhance patients' self-confidence, motivation, and adherence to treatment.[9] These findings are supported by previous international studies, which reported that family social support significantly contributes to improved medication adherence among hypertensive patients.[10]

In Sukarami Public Health Center, Sukarami District, a total of 6.942 hypertension cases were recorded based on the 2018 profile of the Palembang City Health Office. Despite the high number of hypertension cases, studies about family support and medication adherence among hypertensive patients at Sukarami Public Health Center remain limited. Therefore, our study to analyze the family support and medication adherence among hypertensive patients at Sukarami Public Health Center.

2. Method

Our study an analytic observational design with a cross-sectional approach, conducted from October to December 2025 at Sukarami Public Health Center, Palembang City. The study population comprised all hypertension patients who visited the Sukarami Public Health Center with inclusion criteria, a total of 108 respondents selected using consecutive sampling.

The inclusion criteria were hypertensive patients diagnosed by a physician based on medical records, aged ≥18 years, who were undergoing antihypertensive treatment during the period of May to December 2025, and were willing to participate by providing informed consent. Respondents were also required to live with family members or have family involvement in their healthcare, and able to read and write in Bahasa Indonesia. The exclusion criteria included respondents with mental disorders that could affect their ability to understand instructions or complete the questionnaire, as well as those with communication difficulties due to physical limitations such as visual or hearing impairments.

We collected data a family support questionnaire and the Morisky Medication Adherence Scale-8 (MMAS-8). The family support questionnaire assessed several domains, including emotional support, informational support, and instrumental support. The total score was used to categorize family support into good and low levels based on a predefined cut-off value adapted from previous studies.

The variables analyzed in this study included age, gender, education level, type of antihypertensive medication with monotherapy and combination, income based on the Central Bureau of Statistics in 2022, physical activity, smoking habits, coffee consumption, alcohol consumption, salt intake, family history of hypertension, history of hypercholesterolemia, use of hormonal contraceptives, family support, and medication adherence. The classification of variables such as income level, physical activity, and lifestyle factors was based on relevant literature and previous studies.

Analyzing data univariate used to describe respondent characteristics, family support, and medication adherence. The bivariate analyzed using Fisher's Exact test to assess the association between family support and medication adherence.

Our study have an ethical approval from the Bioethics, Humanities, and Islamic Medicine Committee, Faculty of Medicine,

Universitas Muhammadiyah Palembang, with number 040/EC/KBHKI/FK-UMP/X/2025.

3. Result

3.1 Characteristics of Respondents

Characteristics of respondents are presented in Table 1. The majority of respondents were elderly (≥60 years) and female, with most having completed senior high school education. In terms of treatment, most respondents received antihypertensive monotherapy, predominantly from the calcium channel blocker class (amlodipine). The majority were categorized as middle-income and reported low levels of physical activity.

Regarding lifestyle factors, most respondents were non-smokers and reported occasional consumption of coffee and salt, while none reported alcohol consumption. In addition, most respondents had a family history of hypertension, but did not have a history of hypercholesterolemia and were not using hormonal contraceptives.

3.2 Respondent Characteristics Based on Family Support

Based on family support, we found that the majority of respondents had good family support, with 94 individuals (87%) (Table 1).

3.3 Respondent Characteristics Based on Medication Adherence

In Table 1, our study found the respondents were classified as adherent to medication, with 80 individuals (74.1%).

3.4 Family Support and Medication Adherence

Data analyzed, we found the Odds Ratio (OR) was 16.608 (95% CI: 4.176–66.042), indicating that respondents with good family support had significantly higher odds of being adherent compared to those with low family support (Table 2).

Table 1. Characteristics of Respondents

Characteristics of Respondents	Frequency (n)	Percentage (%)
Age (years)		
Young (18-39)	8	7.4
Middle Ages (40-59)	41	38.0
Elderly (≥60)	59	54.6
Gender		
Male	43	39.8
Women	65	60.2
Final Education		
No School	1	0.9
Not Finishing Elementary School	7	6.5
Elementary School	19	17.6
Junior High School	16	14.8
High School	45	41.7
College	20	18.5
Types of Anti-Hypertensive Drugs		
Monotherapy		
Calcium Channel Blockers (amlodipine)	56	51.9
Angiotensin-Converting Enzyme (captopril)	1	0.9
beta-blocker (bisoprolol)	5	4.6
Angiotensin Receptor Blocker (candesartan)	28	25.9
Combination		
Calcium Channel Blockers & beta -blocker (amlodipine and bisoprolol)	4	3.7

Characteristics of Respondents	Frequency (n)	Percentage (%)
Angiotensin Receptor Blocker (amlodipine and candesartan)	14	13.0
Income		
Low (IDR < 2.000.000)	48	44.4
Medium (IDR 2.000.000 - IDR 5.000.000)	50	46.3
High (> IDR 5.000.000)	10	9.3
Sports Activities		
Frequent (≥ 3x/week)	11	10.2
Sometimes (< 1-2x/week)	65	60.2
Never	32	29.6
Smoking Habits		
Yes	21	19.4
No	87	80.6
Coffee Consumption		
Frequent (≥ 1 glass/day)	23	21.3
Sometimes (< 1glass/day)	47	43.5
Never	38	35.2
Salt Consumption		
Often (> 1 teaspoon/day)	35	32.4
Sometimes (< 1 teaspoon/day)	71	65.7
Never	2	1.9
Alcohol Consumption		
Yes	0	0
No	108	100.0
Family History of Hypertension		
There	87	80.6
No	21	19.4
History of Hypercholesterolemia		
There	40	37.0
No	68	63.0
History of Hormonal Contraceptive (estrogen) Use		
Yes	21	19.4
No	87	80.6
Family Support		
Good	94	87.0
Bad	14	13.0
Medication Adherence		
Adherent	80	74.1
Non-Adherent	28	25.9
Total	**108**	**100**

Table 2. Family Support and Medication Adherence

		Adherent	Non-Adherent	Value p	OR (95% CI)
Family Support	Good	77	17	< 0.001	16.608
	Bad	3	11		
	Total	80	28		

4. Discussion

Our study showed a significant association between family support and medication adherence among hypertensive patients, with good family support had higher odds of being adherent to medication compared to those with low family support. However, the relatively high OR value with a wide confidence interval suggests possible imprecision. This condition may be influenced

by the small number of respondents in the low family support group. In addition, this study only used bivariate analysis without controlling for potential confounding variables such as age, education, income, and lifestyle factors, wich is the results should be interpreted with caution.[8]

Based on our study, we suggest that family support plays an important role in medication adherence among hypertensive patients. The family support, including emotional, informational, and instrumental support, can provide motivation, reminders, and assistance in maintaining regular medication use and health control. Patients who receive adequate support from family members tend to have better engagement in long-term treatment.[5,7,8] The previous studies stated the family social support significantly improves medication adherence among hypertensive patients.[10]

Medication adherence in hypertension is a complex and multidimensional process influenced by various interconnected factors, including patient-related, therapy-related, and socio-demographic factors. Poor adherence has been identified as a major barrier to blood pressure control and is associated with worse clinical outcomes.[6] Therefore, the presence of family support may help address some of these barriers by improving patient motivation and engagement in treatment.

Several internal factors with age, gender, family history about hypertension, and history of hypercholesterolemia, as well as external factors including education level, type of antihypertensive medication, income, physical activity, and lifestyle behaviors (such as smoking, coffee and salt consumption, alcohol consumption, and use of hormonal contraceptives), may also influence medication adherence.[3,11,12] However, these factors were not analyzed as confounding variables in this study and should be further explored in future research.

The proportion of respondents with good family support and high medication adherence was relatively high in this study. This may be influenced by the study setting, as respondents were recruited from patients attending the health center, who are more likely to be engaged in treatment. Therefore, this condition may introduce selection bias, and the findings may not be generalizable to all hypertensive patients in the community.

In addition, medication adherence was measured using self-reported data, which may lead to information bias. Respondents may overestimate their adherence behavior, and the absence of objective measurements such as medication records may limit the accuracy of the findings.

5. Conclusion

The family support was significantly associated with higher medication adherence among hypertensive patients. These findings suggest that involving family members in patient care may help improve medication adherence. Therefore, integrating family support into hypertension management programs at the primary healthcare level is recommended.

6. Acknowledgment

None to declare

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