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Original Research

The Relationship between Family Support and Self-Care Behavior among Individuals with Hypertension in Tangerang

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A R T I C L E I N F O

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A B S T R A C T

Uncontrolled hypertension can lead to severe complications and is a significant contributor to mortality. The family serves as a key functional component in supporting individuals with hypertension, playing a critical role in improving self-care behaviors. The purpose of this study is to examine the relationship between family support and self-care behaviors among individuals with hypertension in a community health center in Tangerang**.** The method this study was a cross-sectional design was employed involving 88 respondents selected through accidental sampling. Data were analyzed using the Pearson chi-square test. The finding revealed that 52 respondents (59.1%) had moderate self-care behavior, and 74 respondents (84.1%) had good family support. The Pearson chi-square test revealed no significant association between family support and self-care behavior ($p > 0.05$). There was no significant association between family support and self-care behavior among individuals with hypertension. These results suggest that healthcare providers should continue to educate and involve families while also empowering individuals to take an active role in managing their condition. Future intervention study encourages additional strategies alongside family support that effectively promote self-care behaviors.

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INTRODUCTION

Hypertension is one of the most common cardiovascular diseases and a major contributor to premature mortality worldwide (Mills et al., 2020). Hypertension, commonly referred to as elevated blood pressure, is described as a systolic pressure of ≥130 mmHg and/or diastolic pressure >80 mmHg, imposing excessive stress on vascular walls (American Heart Association, 2024; Iqbal & Jamal, 2023). Approximately 1.3 billion of the population aged 30 and older have hypertension, with most cases found in low- and middle-income countries (WHO, 2023a). However, only one-third of individuals are acquainted with their hypertension diagnosis (Schutte et al., 2021).

Despite being a common condition, uncontrolled hypertension can

lead to severe cardiovascular and renal complications (WHO, 2023b). According to the 2023 Indonesian Health Survey, hypertension is the fourth leading risk factor for mortality in the country, accounting for approximately 10.2% of all deaths. The national prevalence of hypertension among individuals aged ≥18 years was 30.8%, based on blood pressure measurements. In Banten Province, the prevalence was reported at 28.5% (Ministry of Health Republic of Indonesia, 2023). Notably, Tangerang province, as one of the districts in Banten, had a higher number of hypertension prevalence in 2023, with 729,628 reported cases (Banten Provincial Health Services, 2023).

Hypertension can substantially diminish quality of life and contribute to increased healthcare expenditures (Sarfika et al., 2023). Therefore, comprehensive management is essential, requiring both pharmacological treatment and lifestyle modifications, which encompass various self-care behaviors involving medication adherence, body weight control, dietary regulation, reduction of alcohol consumption, smoking cessation, regular physical activity, and reducing stress (Irwan et al., 2022; Jeemon & Chacko, 2020; Konlan & Shin, 2023). Orem's Self-Care Theory (1991) defines self-care as deliberate actions undertaken independently by individuals to maintain health, continuous personal development, and their well-being (Alligood, 2018). While individuals with hypertension are expected to take an active role in their self-care, many find it challenging to implement and sustain these critical lifestyle changes (Motlagh et al., 2016).

Self-care behaviors can substantially reduce blood pressure, but they require long-term commitment and adequate support systems (Muhe et al., 2025), particularly from family. In Orem's Self-Care Theory, family support is considered a basic conditioning factor that influences an individual's self-care agency and behavior (Alligood, 2018). It is essential in managing patient self-care by promoting medication adherence, offering emotional and spiritual encouragement, source information, and assisting with daily health routines such as medication reminders, meal preparation, and exercise participation, all of which boost therapeutic motivation and contribute to improved health outcomes and help prevent complications (Manangkot et al., 2020; Proboningsih et al., 2025). Previous studies have shown that family support significantly influences healthy behavior in managing blood pressure and adhering to medical regimens. The greater the family support, the higher the individual's adherence to self-care practices (Jeemon & Chacko, 2020; Olalemi et al., 2020; Susanto et al., 2024).

A scoping review by Irwan et al.(2022) on hypertension self-care management in Southeast Asia, emphasized the crucial role of family support. However, empirical evidence specifically examining the association between family support and self-care behavior among individuals with hypertension remains limited. The unique family structure in this region, predominantly extended families, as is also common in Indonesia, offers a distinct social context that may significantly influence the success of hypertension management. The review also highlighted that insufficient family support is a major barrier to successful engagement in self-care behaviors. Given these gaps, further research is urgently needed to investigate the influence of family support on self-care practices. Therefore, this study aims to examine the relationship between family support and self-care behavior among individuals with hypertension at a Community Health Centre in Tangerang.

METHOD

This study employed a cross-sectional correlational design and was conducted at a Community Health Centre in Tangerang from March to April 2024. A total of 88 respondents were selected using accidental sampling. The inclusion criteria in this study were being literate, living with family, a history of hypertension for more than three months, and aged >18 years. Individuals with dementia were excluded. Approval for the study's ethical conduct was granted by the Research and Ethics Committee of the Faculty of Medicine at Universitas Pelita Harapan, which complies with ethical standards, with the ethical permission number is 085/K-LKJ/ETIK/II/2024.

Participants were informed about the study's purpose, and written informed consent was obtained from those who agreed to participate. Respondents who expressed willingness to participate were required to provide informed consent by signing a form containing the consent agreement. Confidentiality and privacy of the respondent's information were maintained throughout the study. Respondents were guaranteed that no identifiable data would be published, and participation in the study was completely voluntary, and respondents were free to withdraw at any time without any consequence. The researchers conducted data collection by distributing questionnaires, in which respondents were asked to complete instruments measuring self-care behavior and family support. Respondents were asked to complete both instruments, and the data were recorded systematically.

The measurement tool used in this study is a family support questionnaire consisting of 12 questions, with a calculated reliability coefficient (r count) of 0.446 (r table 0.308) and a Cronbach's alpha reliability value of 0.628. Meanwhile, data on self-care behavior were obtained using the Hypertension Self-Care Activity Level Effects (H-SCALE) instrument., which comprises items evaluating medication adherence (3 items) and weight management behaviors (10 items), physical activity (2 items), exposure to smoking (2 items), alcohol use (2 items), and healthy dietary regimen adherence (12 items) with coefficient r count were 0.539 (with r table 0.62) and Cronbach's alpha were 0.740. Data analysis included both univariate and bivariate analyses, with the Pearson Chi-square test used to assess the association between the two variables. A p-value of less than 0.05 was considered statistically significant.

RESULT

A total of 88 eligible individuals with hypertension who were living

with family completed the questionnaires. The majority of respondents were female (73.9%), with most respondents (40.9%) having attained a high school or vocational background. Nearly half of the respondents (47.7%) were retirees, and the vast majority (98.9%) were married. The largest age group was 40-65 years, comprising 57 respondents (64.8%), followed by those over 65, totaling 31 respondents (35.2%). In terms of hypertension duration, 67 respondents (76.1%) experienced hypertension for 1-10 years. Table 1 presents a detailed overview of the respondents' sociodemographic characteristics.

Table 1. Sociodemographic Characteristics (n=88)

Characteristics		Frequency (n)	Percentage (%)
Gender	Male	23	26.1
	Female	65	73.9
Education	Uneducated	6	6.8
	Elementary School	7	8.0
	Junior High School	7	8.0
	Senior High School/Vocational School Bachelor's	36	40.9
	Degree/Diploma	32	36.3
Marital status	Married	87	98.9
	Unmarried	1	1.1
Occupation	Unemployed	3	3.4
	Retired	42	47.7
	Housewife	32	36.4
	Labors	1	1.1
	Entrepreneur	5	5.7
	Civil Servant/Army/Police	5	5.7
Age group (years)	40-65	57	64.8
	>65	31	35.2
Duration of Hypertension (years)	1-10	67	76.1
	11-20	18	20.5
	21-30	3	3.4

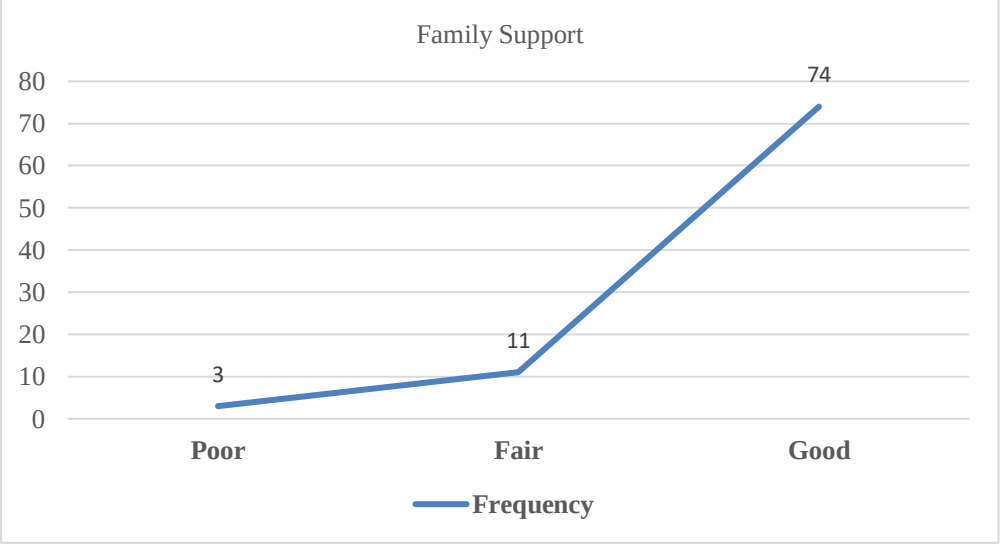

Figure 1. Family Support for Hypertension Individuals (n=88)

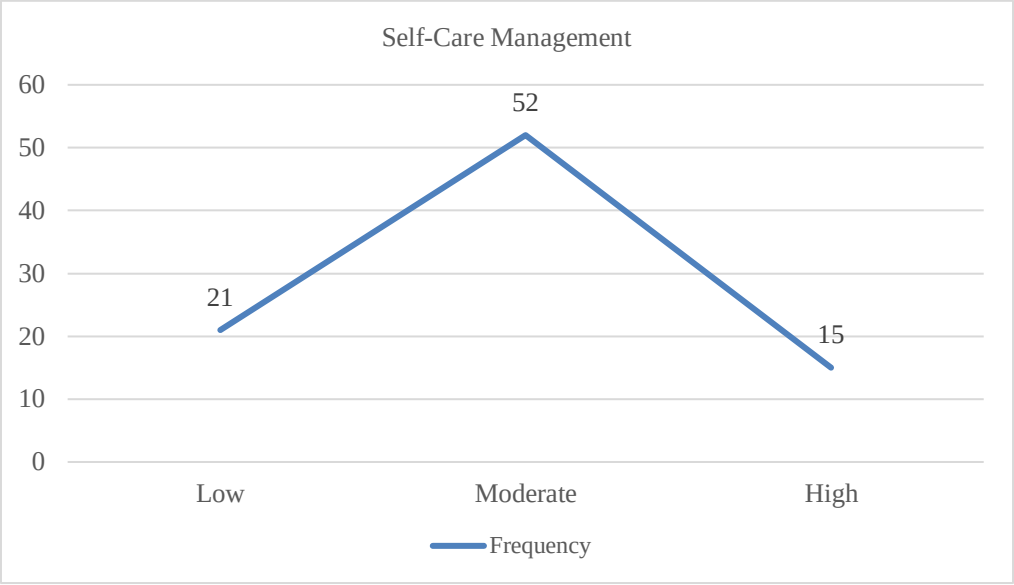

Figure 2. Self-Care Behavior in Individuals with Hypertension (n=88)

Figures 1 and 2 show that out of the 88 respondents in the study, the majority received a good level of family support (74 respondents, 84.1%), while 52 respondents (59.1%) demonstrated a moderate level of self-care behavior.

Table 2. Relationship between Family Support and Self-Care Behavior in Individuals with Hypertension (n=88)

Family support	Self-care behavior								p value
	Low		Moderate		High		Total		
	n	%	n	%	n	%	n	%	
Poor	2	2.3	1	1.1	0	0.0	3	3.4	
Fair	2	2.3	7	8.0	2	2.3	11	12.5	0.496
Good	17	19.3	44	50.0	13	14.8	74	84.1	

Table 2 presents the results of the Pearson Chi-square test conducted to examine the relationship between family support and self-care behavior among individuals with hypertension. The results indicated no statistically significant association, χ^2 (df = 4, n=88) = 3.385, p = 0.496, indicating no significant association between family support and self-care behavior.

DISCUSSION

This study aimed to examine the relationship between family support and self-care behavior in individuals with hypertension. Although a positive association between family support and self-care behavior was expected, the results showed otherwise. Respondents with good family support exhibited the highest proportions of low and moderate self-care behavior (19.3% and 50%, respectively). Additionally, the distribution of self-care behaviors did not differ significantly across the levels of family support, indicating no statistically significant relationship between the two variables.

The finding that most respondents received good family support is consistent with studies conducted in Ethiopia (Ademe et al., 2019; Geleta et al., 2025) and India (Jeemon & Chacko, 2020) that share a cultural tradition of rich family support networks. This is reflected in large extended families, where multiple generations often live together, with a strong emphasis on familial bonds and support systems that are known as family-centered societies (Thomas et al., 2017). As a key component of the broader social support system, families serve as support in motivating and sustaining health-promoting behaviors. They can enhance patient self-care by offering constructive support, such as emotional encouragement, informational guidance, and assistance with daily health-related activities, for instance, meal preparation and medication reminders (Luo et al., 2024). Medication adherence is a critical factor in achieving effective treatment outcomes among patients with hypertension. A systematic review by Shahin et al. (2021) identified family support as the most significant factor influencing medication adherence, emphasizing the value of family involvement in enhancing hypertension management.

Self-care behavior in individuals with hypertension plays a vital role in achieving blood pressure control, preventing associated complications, effective self-care that contributes to better clinical

outcomes, and a decreased risk of stroke and other cardiovascular diseases (Konlan & Shin, 2023). In this study, most respondents demonstrated moderate self-care behavior, indicating a partial yet inconsistent engagement in managing their condition. Moderate self-care behavior indicates that individuals with hypertension were making certain efforts to control their blood pressure to avoid complications. This finding suggested that while there is some awareness of the risks and severity of hypertension-related complications, the self-care practices may lack consistency, completeness, or optimal effectiveness (Karimi et al., 2024). In line with this, Sarfika et al. (2023) also found that individuals with hypertension often fall into the moderate self-care category.

Despite these findings, no significant association was found between family support and self-care behavior, which concurs with the study by Lee et al. (2010). This contrasts with prior research demonstrating that stronger family support is typically associated with better adherence to self-care behaviors and improved clinical outcomes (Bahari et al., 2019; Jeemon & Chacko, 2020; Susanto et al., 2024). Individuals with strong social support tend to exhibit higher levels of self-care behavior. A study conducted in Central Java found that family support and individuals' perception of their illness were significantly associated with self-care behaviors, with illness perception playing a more substantial role than family support in determining the level of self-care (Pahria et al., 2022). This was further supported by de Santana Silva et al. (2024), who emphasized illness perception as a critical determinant in hypertension management, suggesting a possible explanation for the lack of association observed in our study.

Self-care behaviors are influenced by various other factors, including educational level, marital status, access to health information, availability of facilities for physical activity, and individual self-care agency (Ademe et al., 2019; Motlagh et al., 2016). A cross-sectional study performed by Awoke et al. (2022) individuals with hypertension who had received formal education were 2.45 times more likely to engage in effective self-care practices compared to those without formal education. Spousal support also significantly contributes to lifestyle adherence, such as weight control and regular exercise, particularly in patients with higher BMI (Hosseinzadeh et al., 2019; Sarfika et al., 2023). This aligns with the respondents' characteristics in this study, the majority of whom are married and have received formal education. Few studies found that spouses can provide more psychological support than other family members (Shen et al., 2025) and patient with formal education tend to demonstrate greater resilience in the face of major setbacks, exhibit a stronger willingness to learn about their condition and prognosis, and actively engage in communication with their families to seek support (Kim et al., 2018).

Gender also plays a role in influencing self-care behavior among individuals with hypertension. Studies have shown that patients under the age of 50 tend to demonstrate better adherence to medication regimens compared to older individuals (Hosseinzadeh et al., 2019; Motlagh et al., 2016). This aligns with the findings of this study, where the majority of respondents were under the age of 65. Regarding the duration of hypertension, most respondents in this study had been living with the condition for 1–10 years, while only a few had experienced it for more than 20 years. This suggests that the majority were still in the earlier stages of the disease. However, previous research indicates that older age and a longer duration of living with hypertension are positively associated with improved self-care behaviors, as individuals have had more time to understand their condition and are more likely to engage in effective management practices. This may be attributed to increased exposure to health education and clinical experiences over time (Lee et al., 2010).

CONCLUSION

This cross-sectional study examined the relationship between family support and self-care behavior among individuals with hypertension. This study found that individuals with hypertension generally received good family support, reflecting the importance of family role in assisting individuals with hypertension. However, the absence of a significant relationship between family support and self-care behavior suggested that family involvement alone may not be sufficient to influence individuals' self-care practices. This highlights the need to explore additional strategies alongside family support to effectively promote self-care behavior. Healthcare providers are encouraged to support and educate families about hypertension, while also empowering individuals to enhance their self-care practices. Furthermore, future intervention studies are recommended to focus on strengthening family support, as well as improving patients' self-efficacy and motivation in managing hypertension.

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