

# Determinants of Self-Management Behavior in Individuals with Hypertension: A Cross-Sectional Analysis

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## ABSTRACT

**Background:** Hypertension is a leading contributor to global morbidity and mortality, necessitating not only pharmacological management but also effective self-management practices by patients. Identifying the factors influencing self-management behavior among hypertensive patients is essential for developing targeted interventions to improve health outcomes.

**Methods:** This study employed a quantitative descriptive correlational design. A total of 105 hypertensive patients residing in the Saguling sub-district were selected using accidental sampling. Data collection instruments included a demographic questionnaire and the validated Hypertension Self-Management Behavior Questionnaire (HSMBQ). Data were analyzed using univariate and bivariate statistical methods, including Kendall's Tau and Chi-square tests, with a significance level set at  $p < 0.05$ .

**Results:** The findings revealed that various demographic factors including age, education level, occupation, and duration of hypertension were significantly associated with self-management behaviors. Most respondents demonstrated moderate levels of self-management. The study identified perceived barriers, self-efficacy, and social support as crucial factors affecting the patients' ability to manage hypertension effectively.

**Conclusion:** Understanding the demographic and psychosocial factors influencing self-management behaviors in hypertensive patients is vital for the development of effective health education and intervention programs. Strategies aimed at reducing perceived barriers and enhancing support systems could significantly improve hypertension outcomes.

## BACKGROUND

Hypertension remains one of the leading causes of morbidity and mortality worldwide, affecting millions of individuals and exerting a considerable burden on healthcare systems. The effective management of hypertension entails not only pharmacological treatment, but also a comprehensive approach that emphasizes self-management practices. These practices are essential, as they empower patients to take an active role in managing their condition through adherence to medication regimens, the implementation of lifestyle modifications, and regular monitoring of blood pressure. However, numerous factors may influence patients' ability and motivation to engage in effective self-management. Gaining a thorough understanding of these factors is crucial for the development of targeted interventions aimed at enhancing self-care behaviors and improving overall health outcomes (Guwatudde et al., 2015).

Hypertension management presents a complex challenge and requires an in-depth understanding of the various factors that influence patients' self-management practices. Several studies have identified key determinants such as perceived barriers, self-efficacy, socio-demographic characteristics, and social support, all of which significantly affect adherence to self-management behaviors among individuals with hypertension (Sakinah et al., 2020).

Perceived barriers play a central role in understanding hypertension management. Research consistently demonstrates that the presence of such barriers can significantly hinder patients' self-care behaviors. For instance, Mahboubi et al. highlighted the relevance of perceived barriers in the management of chronic diseases, noting that patients from diverse settings including those in Ghana and China reported that these barriers directly contributed to non-adherence to treatment regimens. Addressing perceived barriers is therefore essential for enhancing self-management among individuals with hypertension (Mahboubi et al., 2021).

Demographic factors such as age, educational level, and socioeconomic status play a significant role in shaping self-management outcomes. Studies have shown that younger and more educated individuals tend to exhibit higher levels of self-care management. In one particular study, it was found that factors such as education and socioeconomic status were positively associated with effective hypertension self-care practices (Labata et al., 2019). In addition, patients who have been diagnosed for a longer period often demonstrate better self-management capabilities due to the accumulated knowledge and experience in managing their condition (Tsai, 2017).

## METHODS

The research method employed in this study is a quantitative approach with a descriptive correlational design. The population consisted of individuals with hypertension residing in the Saguling sub-district. A total of 105 hypertensive patients were selected as the sample using an accidental sampling technique. Data were collected through the administration of questionnaires. The instruments used included a demographic questionnaire and the Hypertension Self-Management Behavior Questionnaire (HSMBQ), which has been validated ( $r$ -value  $> 0.361$ ) and demonstrated high reliability, with a Cronbach's Alpha coefficient of 0.945.

Univariate analysis was conducted using frequency distributions, covering variables such as age, gender, marital status, occupation, duration of hypertension, Education level, Living with family, and self-management, as the data were in ordinal and nominal forms. For bivariate analysis, the researcher employed Kendall's Tau and Chi-square tests. Data were processed using SPSS software, and statistical analysis was carried out using the Kendall's Tau and Chi Square test. The significance level ( $\alpha$ ) was set at 0.05. If the  $p$ -value was less than 0.05 ( $p < 0.05$ ), the hypothesis was accepted, indicating a significant relationship between the independent and dependent variables. Conversely, if the  $p$ -value exceeded 0.05 ( $p > 0.05$ ), the hypothesis was rejected. This study has received approval from the ethics committee, and all participants have provided written consent. Data confidentiality will be maintained, and participant identities will be anonymised.

## RESULTS

**Table 4.1**  
**Demographic Characteristics of Respondents with Hypertension (n=105)**

Karakteristik		Frekuensi	Presentase (%)
<b>Age</b>			
Young	Adult	32	30,5
Middle Age	Adult	53	50,5
Elderly		20	19,0
<b>Education Level</b>			
Elementary		6	5,7
Junior High School		11	10,5
Senior High School		51	48,6
Higher Education		37	35,2
<b>Sex</b>			
Man		50	47,6
Women		55	52,4
<b>Occupation</b>			
Farmer		22	21,4
Private Sector Employee		21	20,0
Civil Servant		14	13,3
Housewife		27	26,3
Entrepreneur		21	20,0

<b>Living with Family</b>		
Yes	94	89,5
No	11	10,5
<b>Duration of Hypertention</b>		
1-5 Years	68	64,8
6-9 Years	29	27,6
> 10 Years	8	7,6
<b>Marital Status</b>		
Single	11	10,5
Married	84	80
Divorced	2	1,9
Widowed	8	7,6

Table 4.2

**Self-Management of Respondents with Hypertension (n=105)**

Karakteristik	Frekuensi	Presentase (%)
<b>Self-Management</b>		
Low	15	14,3
Moderate	46	43,8
High	44	41,9

Table 4.3

**Correlation matrix between demographic, and Self-Management**

Variables	1	2	3	4	5	6	7	8
1. Age	1							
2. Education	0.21*	1						
3. Sex	0.32**	0.06	1					
4. Occupation	0.22*	0.23*	0.08	1				
5. Living with Family	0.20	0.08	0.08	0.11	1			
6. Duration	-0.41	0.12	0.14	0.02	-0.12	1		
7. Marital Status	-0.08	-0.07	-0.25	0.02	0.32**	-0.31**	1	
8. Self Management	0.20*	0.06*	0.33**	0.03**	0.18*	-0.005**	0.09*	1

\* $p < 0.05$ , \*\* $p < 0.01$ **DISCUSSION**

This study reported that a significant majority of hypertensive patients, specifically 80% ( $n = 43$ ), demonstrated a moderate level of self-care management. This finding is particularly noteworthy as it aligns with previous research, such as that conducted by Tursina et al. (2022), which similarly indicated that self-care management among individuals with hypertension frequently falls within the moderate category. The consistency of these findings across studies suggests a persistent trend in the management of hypertension that warrants further exploration.

A notable aspect of this study is the demographic profile of the respondents, where the average age was primarily that of middle-aged adults. This observation supports the notion that as individuals age, there tends to be a decline in their ability to self-manage their health conditions. Milwati and Pitoyo (2021) emphasised this connection, indicating that the challenges associated with self-care management are often exacerbated in older populations. This decline may be attributed to various factors, including cognitive decline, the presence of comorbidities, and a general decrease in physical capability, all of which can impede an individual's capacity to adhere to self-care practices effectively.

The duration of hypertension among participants in this study averaged between one to five years. This timeframe is critical as it reflects a stage in the disease where patients may still possess a degree of motivation to adhere to treatment regimens. However, previous research has indicated that patients with a history of hypertension lasting more than five years often exhibit non-adherence to treatment, primarily due to feelings of fatigue and treatment burnout (A.K. et al., 2015). This phenomenon underscores the importance of understanding the psychological and emotional toll that chronic illnesses can impose on

individuals. For many, the initial stages of a diagnosis may be met with determination and a willingness to engage in self-care; however, over time, the repetitive nature of managing a chronic condition can lead to a sense of hopelessness and disengagement (Siregar, 2021).

Gender differences also emerged as a significant factor in this study. The majority of respondents were female, which aligns with findings from Arrang et al. (2023) that indicated women with hypertension generally exhibit better coping responses and a greater willingness to monitor and manage their health compared to their male counterparts. This difference may stem from social and cultural factors that influence health behaviours. Women are often socialised to prioritise health and wellness, which may lead to more proactive health management strategies. In contrast, men may be less attentive to health-related issues, potentially due to societal norms that discourage vulnerability or the seeking of help. This disparity in health management behaviours highlights the need for tailored interventions that consider gender-specific approaches to enhance self-care practices among hypertensive patients. The social context of the respondents revealed that most lived with their families and were married. This aspect likely contributed to the moderate level of self-care management observed. Research has consistently shown that social support plays a vital role in the implementation of self-care management (A.K. et al., 2015). The presence of supportive family members can provide both emotional and practical assistance, thereby enhancing an individual's ability to engage in effective self-care practices. For instance, family members can encourage adherence to medication regimens, assist in meal preparation that aligns with dietary restrictions, and provide motivation for physical activity. These supportive interactions can create an environment conducive to better health management, ultimately leading to improved health outcomes (McClintock, 2017).

The implications of improved self-management in hypertensive patients are substantial. Prior studies have confirmed that effective self-management strategies can significantly reduce blood pressure and prevent complications associated with hypertension (Nina et al., 2021). Lifestyle changes, such as increased physical activity, reduced salt intake, and strict adherence to antihypertensive medication regimens, have been proven effective in lowering blood pressure. For instance, regular physical activity not only aids in weight management but also improves cardiovascular health, while dietary modifications can directly influence blood pressure levels. Furthermore, adherence to medication regimens is crucial, as non-adherence can lead to exacerbations of the condition and increased risk of cardiovascular events (Cuevas, 2017).

The findings of this study underscore the importance of understanding the various factors that influence self-care management among hypertensive patients. The moderate level of self-care observed indicates a need for targeted interventions that address the unique challenges faced by this population. By considering demographic factors such as age, gender, and social support systems, healthcare providers can develop more effective strategies to enhance self-management practices. As research continues to evolve in this area, it is imperative to focus on fostering environments that support individuals in their journey towards better health management, ultimately leading to improved outcomes for those living with hypertension. The interplay of psychological, social, and lifestyle factors must be acknowledged and addressed to empower patients in their self-care efforts, paving the way for a healthier future.

## CONCLUSION

This study examined the related factors including demographic factors, duration being diagnosed with hypertension determining self-management among people with hypertension. Based on the result showed that age, gender, diseases duration, marital status, occupation, education, living with family were related to self-management. Therefore, nursing and other health professional should concern and consider these factors in allocating care to increase self-management of people with hypertension.

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## CONFLICTS OF INTEREST

The authors declare that they have no conflict of interest.

## REFERENCES

A.K., N., G., E., & C, S. P. (2015). Socio-demographic and clinical determinants of psychiatric co-morbidity in persons with essential hypertension attending the university of Port Harcourt

- Teaching Hospital. *European Archives of Psychiatry and Clinical Neuroscience*, 265(1 SUPPL. 1).
- Arrang, S. T., Veronica, N., & Notario, D. (2023). Relationship between Knowledge Level and Other Factors with the Level of Compliance of Hypertension Patients at Dr. Mintohardjo Naval Hospital, Jakarta. *JURNAL MANAJEMEN DAN PELAYANAN FARMASI (Journal of Management and Pharmacy Practice)*, 13(4). <https://doi.org/10.22146/jmpf.84908>
- Cuevas, A. G., Williams, D. R., & Albert, M. A. (2017). Psychosocial factors and hypertension: a review of the literature. *Cardiology clinics*, 35(2), 223-230
- Guwatudde, D., Nankya-Mutyoba, J., Kalyesubula, R., Laurence, C., Adebamowo, C., Ajayi, I. O., Bajunirwe, F., Njelekela, M., Chiwanga, F. S., Reid, T., Volmink, J., Adami, H. O., Holmes, M. D., & Dalal, S. (2015). The burden of hypertension in sub-Saharan Africa: A four-country cross sectional study. *BMC Public Health*, 15(1). <https://doi.org/10.1186/s12889-015-2546-z>
- Labata, B. G., Ahmed, M. B., Mekonen, G. F., & Daba, F. B. (2019). Prevalence and predictors of self care practices among hypertensive patients at Jimma University Specialized Hospital, Southwest Ethiopia: Cross-sectional study. *BMC Research Notes*, 12(1). <https://doi.org/10.1186/s13104-019-4125-3>
- Mahboubi, M., Mirzaei-Alavijeh, M., Hosseini, S. N., Motlagh, M. E., Saadatfar, A., Fattahi, M., & Jalilian, F. (2021). Psychometric Analysis of Hypertension Self-Management Behaviors Questionnaire; an Application of Intervention Mapping Approach in Questionnaire Development. *Journal of Education and Community Health*, 8(4). <https://doi.org/10.52547/jech.8.4.237>
- McClintock, H. F., & Bogner, H. R. (2017). Incorporating patients' social determinants of health into hypertension and depression care: a pilot randomized controlled trial. *Community mental health journal*, 53, 703-710. <https://doi.org/10.1007/s10597-017-0131-x>
- Milwati, S., & Pitoyo, J. (2021). Nalyze The Selfcare Model Based on Health Belief Model for Hypertention Patients Aged 45 To and Above In Malang. *Jurnal IDAMAN (Induk Pemberdayaan Masyarakat Pedesaan)*, 5(1). [https://doi.org/10.31290/j.idaman.v\(5\)i\(1\)y\(2021\).page:43-54](https://doi.org/10.31290/j.idaman.v(5)i(1)y(2021).page:43-54)
- Nina, N., Calisane, P., & Lindayani, L. (2021). The Effect of Self-Management Interventions on Self-Care and Blood Pressure in Hypertension Patients. *Risenologi*, 2018(September).
- Sakinah, S., Ratu, J. M., & Weraman, P. (2020). The Relationship between Demographic Characteristics and Knowledge with Self Management of Hypertension in Timorese Community: Cross-sectional Study. *Jurnal Penelitian Kesehatan "SUARA FORIKES" (Journal of Health Research "Forikes Voice")*, 11(3). <https://doi.org/10.33846/sf11305>
- Siregar, C. T., Nasution, S. Z., Ariga, R. A., Lufthiani, Tanjung, D., & Harahap, I. A. (2021). The role and function of family caring for family members with chronic disease in medan. *In AIP Conference Proceedings*. 2342(1). 120004. <https://doi.org/10.1063/5.0045438>
- Tsai, H.-T. (2017). Differences of Self-Management in Controlling Blood Pressure between Patients with Hypertension and Healthy People in Vietnam. *POJ Nursing Practice & Research*, 1(1). <https://doi.org/10.32648/2577-9516/1/1/004>
- Tursina, H. M., Nastiti, E. M., & Sya'id, A. (2022). Factors Influencing Self Management in Hypertension Patients. *JURNAL KEPERAWATAN CIKINI*, 3(1). <https://doi.org/10.55644/jkc.v3i1.67>