

PREDICTORS OF SELF-MANAGEMENT IN THE ELDERLY WITH HYPERTENSION IN ACEH BESAR REGENCY

Ibrahim¹, Maiza Duana²Universitas Syiah Kuala^{1,2}*Email: ibrahim@usk.ac.id¹, maizaduana@utu.ac.id²

ARTICLE INFO	ABSTRACT
Keywords: Hypertension, self-management, elderly, social support, knowledge	<i>Hypertension is one of the most common non-communicable diseases worldwide, with its prevalence increasing with age. Data from the World Health Organization (WHO) shows that about 1.13 billion people in the world suffer from hypertension, and this number is expected to increase to 1.5 billion by 2025. Self-management is becoming an important approach in hypertension management, which includes the ability of individuals to manage their own health through blood pressure monitoring, dietary regulation, physical activity, and adherence to medication. This study aims to explore the influence of factors such as knowledge, social support, physical condition, and access to health services on self-management skills in the elderly with hypertension. The method used was a correlational research design with a cross-sectional approach, involving elderly respondents with hypertension in Aceh Besar. The results of the analysis show that housing conditions and family support are the main predictors in self-management, with the highest R-Square value of 0.840. Knowledge also contributed significantly, while the distance of health services showed a smaller influence. In conclusion, to improve self-management in the elderly with hypertension, it is important to apply a holistic approach that considers social, environmental, and health education factors. Integrated interventions can help the elderly manage their condition more effectively, improve their quality of life, and reduce complications related to hypertension.</i>

INTRODUCTION

Hypertension is one of the most common non-communicable diseases worldwide, with its prevalence increasing with age. According to data from the World Health Organization (WHO), about 1.13 billion people in the world suffer from hypertension, and this number is expected to increase to 1.5 billion by 2025 (Ministry of Health, 2019). One approach to hypertension management is self-management, which includes the ability of individuals to manage their own health. This includes monitoring blood pressure, dietary regulation, physical activity, and adherence to medication. However, there are various factors that can affect the ability of the elderly to do self-management. Among these factors are knowledge about hypertension, social support, physical and mental health conditions, and access to health services. The study of (Xu et al., 2024) found that self-management plays a key role in allowing patients to take control of their health conditions, reduce dependence on traditional health services, and ultimately improve health prognosis.

Knowledge about hypertension is very important, because a good understanding of this condition can increase the motivation of the elderly to take care of themselves (Chantakeeree et al., 2022). Social support from family and friends also plays a significant role in encouraging the elderly to be involved in self-management practices. In addition, physical and mental health conditions, such as the presence of depressive disorders, can affect the ability of the elderly to manage their health. Good access to health services and information is also a key factor in supporting self-management (Dinh & Bonner, 2023). Several studies show that good social support is positively related to self-management skills in the elderly with hypertension (Wicaksono & Lestari, 2024), while adequate knowledge serves as the main supporting factor (Daz, 2020). By understanding these different

predictors, appropriate interventions can be designed to improve self-management and, ultimately, the quality of life of elderly people with hypertension.

METHOD

This study employs a quantitative research approach with a correlational design, utilizing a cross-sectional study to assess relationships among variables at a single point in time. Specifically, the research focuses on elderly individuals diagnosed with hypertension residing in three selected sub-districts of Aceh Besar: Darul Imarah, Selimuem, and Mesjid Raya. This approach was chosen to enable the identification of potential associations between various factors and hypertension among the elderly, providing a snapshot of relevant patterns and correlations within the specified population (Creswell, 2015; Hurlock, 2021). The population includes all elderly individuals within these sub-districts who have been diagnosed with hypertension, which aligns with prior studies emphasizing the importance of targeted sampling in epidemiological research to facilitate reliable data collection and analysis (Green & Thorogood, 2018). A cross-sectional design is particularly suitable for capturing variations in health behaviors, lifestyle factors, and demographic characteristics that may influence hypertension management and control among the elderly in these areas (Bowling, 2014).

Data were gathered using structured questionnaires, which were adapted and validated to fit the local context and ensure the reliability and validity of responses (Fink, 2015)9). Analysis was performed through correlation tests to ascertain the relationships between hypertension prevalence and demographic as well as lifestyle variables, following protocols outlined in quantitative research methodology (Pallant, 2020). Findings from this research may provide insights into the unique needs of the elderly hypertensive population in Aceh Besar, contributing to the development of targeted intervention programs and public health policies that address specific risk factors within these communities (Polit & Beck, 2004)

RESULTS AND DISCUSSION

Characteristics Responden

The characteristics of the observed repondents include age, gender and education in full in Table 1 below:

Table 1 Respondent Characteristics Based on Age, Gender and Education

Characteristic	Category	Sum	
		f	%
Age	45-55 Years	191	70,5
	56-60 Years	80	29,5
Gender	Man	151	55,7
	Woman	120	44,3
Education	Elementary/Junior	65	24,0
	High/Equivalent		
	High School/Vocational	117	43,2
	School/Equivalent		
	DIII/IV/S1/S2	89	32,8

Source: Data Processed (2024)

Based on Table 1, it can be seen that interms of age, the majority of respondents are classified as adults (78.6%), with most of the sample being female (61.1%). In terms of education, the majority of respondents have secondary education (67.5%), most of them work as civil servants (27.4%) and students (18.8%). The marriage status of the respondents showed that the majority of them were married (66.7%).

Research Results

Multivariate Analysis

Model Measurement (Outer Model)

Tabel 2. Composite Reliability, Cronbach Alpha dan Average Variance Extracted

Variable	Cronbach	Composite	Average
----------	----------	-----------	---------

	<i>Alpha</i>	<i>Reliability</i>	<i>Variance Extracted</i>
Distance from Health Services	0,870	0,899	0,564
Housing Conditions	0,913	0,929	0,658
Knowledge	0,899	0,921	0,626
Long Suffering	0,909	0,929	0,656
Family Support	0,936	0,949	0,729

Source: Data Processed (2024)

Based on 2, it can be concluded that all constructs meet the reliable criteria, this is indicated by the composite reliability value > 0.70; cronbach alpha > 0.6 and AVE > 0.50 as recommended by Fornell and Lacker in (Ghozali, 2016).

R-Square dan F-Square

The full R Square and F-Square test results are as follows:

Table 3 R-Square and F-Square Values

No	Variable	R- Squares	F- Squares
1	Distance from Health Services	0,713	0,018
2	Housing Conditions	0,840	0,007
3	Knowledge	0,670	0,026
4	Long Suffering	-	0,015
5	Family Support	-	12,985
6	Distance from Health Services	-	4,256

Source: Data Processed (2024)

Based on the analysis of Table 3 regarding the R-Square and F-Square values related to self-management predictors in the elderly with hypertension, it can be seen that each variable has a different contribution. The distance of health services showed an R-Square of 0.713, which means that 71.3% of the variation in self-management could be explained by this variable, although the F-Square value was only 0.018, indicating a relatively small influence. The residential condition had the highest R-Square, which was 0.840, indicating that 84% of the variation in self-management could be explained by this condition, with an F-Square of 0.007 which also showed little influence. Knowledge contributed an R-Square of 0.670, indicating that 67% of variation could be influenced by the patient's level of knowledge, with an F-Square of 0.026 indicating a more significant influence. On the other hand, the lama suffers from not having an R-Square value, but its F-Square of 0.015 shows little influence. Family support emerged as the most influential variable with a very high F-Square, which was 12,985, although there was no measurable R-Square value. Finally, the distance of health services also shows a significant F-Square of 4,256, even without the R-Square value. Overall, these results suggest that housing conditions and family support are the main predictors of self-management in the elderly with hypertension, while environmental factors and social support need to be considered in designing interventions to improve self-management among the elderly.

Discussion

The results showed that the variable distance of health services showed an R-Square value of 0.713, which means that 71.3% of the variation in self-management could be explained by the distance traveled by patients to get health services. Nonetheless, the F-Square value for this variable is only 0.018, which indicates that although healthcare distance makes a statistically significant contribution (Ghozali & Latan, 2015), its effect in everyday practice is relatively small. This may indicate that while healthcare accessibility is important, other more profound factors such as social support and environmental conditions also play a greater role in health management.

Furthermore, residential conditions recorded the highest R-Square among all variables, which was 0.840. This shows that 84% of the variation in self-management can be explained by the patient's living conditions. The

F-Square for this condition is 0.007, which shows that although this variable has a significant influence, the strength of its effect in the context of daily health management is relatively small. This may indicate that while the physical and social environment in which they live plays an important role, other factors such as knowledge and family support may be more dominant in influencing how older people manage their health.

Knowledge as the third variable contributed an R-Square of 0.670, which means that 67% of the variation in self-management could be influenced by the patient's level of knowledge about hypertension and its management. The F-Square value for knowledge of 0.026 shows that the effect is more significant compared to the distance of health services and living conditions. This emphasizes the importance of health education in improving the self-management skills of the elderly. With adequate knowledge of their health conditions, patients can make better decisions regarding self-care, such as adherence to medication, proper diet, and physical activity necessary to manage hypertension (Indonesia, 2019).

On the other hand, the long suffering does not show an R-Square value, but has an F-Square of 0.015, which indicates a small influence. This may indicate that while a long period of suffering from a disease can contribute to the patient's experience in managing their health, other, more relevant factors such as social support and knowledge play a greater role in determining the effectiveness of self-management.

Family support as the last variable emerged as one of the most influential predictors with a very high F-Square value, which was 12.985. Although there is no measurable R-Square value for this variable, a high F-Square value suggests that emotional and practical support from the family has a significant effect on improving the ability of the elderly to manage their hypertension conditions. This support can be in the form of motivation to follow treatment, help in preparing healthy meals, or accompany patients in carrying out physical activities. In this context, family support not only serves as a complementary factor, but also as a key driver that can improve the quality of life of elderly patients.

Finally, the healthcare distance also showed a significant F-Square of 4,256, albeit without an R-Square value. This suggests that while distance may not explain the large proportion of variance in self-management, there is still an influence worth considering. The long distance from healthcare facilities can be a barrier for seniors to get the care they need, which in turn can affect their overall health management. The results of this analysis show that housing conditions and family support are the main predictors of self-management in the elderly with hypertension (Wicaksono & Lestari, 2024). These findings highlight the importance of considering environmental factors and social support in designing interventions to improve self-management among elderly patients. In formulating health programs, it is important to focus not only on medical aspects, but also on social and environmental aspects that can influence health behavior. Interventions that include health education, improving service accessibility, and strengthening social support from families and communities will be more effective in improving self-management and quality of life for the elderly with hypertension. Thus, a holistic and integrated approach is needed to achieve optimal results in the management of hypertension among the elderly.

CONCLUSION

Housing conditions emerged as the main predictor, explaining 84% of the variation in self-management, followed by distance from health services, knowledge, and family support. Although family support does not have a measurable R-Square value, a very high F-Square emphasizes the importance of social roles in health management. Knowledge also shows a significant contribution, emphasizing the need for health education for the elderly. Thus, to improve self-management in the elderly with hypertension, there needs to be a holistic approach that considers social, environmental, and health education factors. Comprehensively designed interventions can help older people manage their condition more effectively, improve quality of life, and reduce complications associated with hypertension.

REFERENCES

- Bowling, A. (2014). *Research methods in health: investigating health and health services*. McGraw-hill education (UK).
- Chantakeeree, C., Sormunen, M., Jullamate, P., & Turunen, H. (2022). Understanding perspectives on health-promoting behaviours among older adults with hypertension. *International Journal of Qualitative Studies on Health and Well-Being*, 17(1), 2103943.
- Creswell, J. W. (2015). Penelitian kualitatif & desain riset. *Yogyakarta: Pustaka Pelajar*, 1–634.
- Dinh, T. T. H., & Bonner, A. (2023). Exploring the relationships between health literacy, social support, self-efficacy

- and self-management in adults with multiple chronic diseases. *BMC Health Services Research*, 23(1), 923.
- Fink, A. (2015). *How to conduct surveys: A step-by-step guide*. SAGE publications.
- Ghozali, I. (2016). *Partial Least Squares Konsep Teknik dan Aplikasi Menggunakan Program MsartPls 3.0 Untuk Penelitian Empiris*. Rhineka Cipta.
- Ghozali, I., & Latan, H. (2015). Partial least squares konsep, teknik dan aplikasi menggunakan program smartpls 3.0 untuk penelitian empiris. *Semarang: Badan Penerbit UNDIP*, 4(1).
- Green, J., & Thorogood, N. (2018). *Qualitative methods for health research*.
- Hurlock, K. E. (2021). Psychoanalytic Theory. In *Encyclopedia of Queer Studies in Education* (pp. 467–472). Brill.
- Indonesia, K. K. R. (2019). Hipertensi Penyakit Paling Banyak Didap Masyarakat. *Untuk Indonesia Yang Lebih Sehat*.
- Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge.
- Polit, D. F., & Beck, C. T. (2004). *Nursing research: Principles and methods*. Lippincott Williams & Wilkins.
- Wicaksono, R., & Lestari, P. (2024). Dukungan Keluarga dengan Self-Management pada Pasien Hipertensi. *Journal of Holistics and Health Sciences*, 6(1).
- Xu, Y., Zai, W., Yang, M., Zhu, L., Zhang, Y., Fu, X., & Dai, T. (2024). Influence of intelligent management mode based on Internet of Things on self-management ability and prognosis of elderly patients with hypertensive heart disease: An observational study. *Medicine*, 103(22), e38179.