

Factors Associated with Health Literacy Among Elderly People with Hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province

Sureewan Siladlao¹, Suwanan Chaiyached², Kanokwan Jankree³, Theerasak Kumwong⁴, Sarayut Chusuton⁵, and Wanwimon Mekwimon Kingkaew^{6*}

^{1,2,3,4,5,6}Suan Sunandha Rajabhat University, Thailand

E-mail : sureewan.si@ssru.ac.th, s64122232101@ssru.ac.th, s64122232104@ssru.ac.th, s64122232113@ssru.ac.th, sarayut.ch@ssru.ac.th, , wanwimon.me@ssru.ac.th*

Abstract

This study uses a cross-sectional descriptive approach. The objectives are as follows: 1) assess the health literacy of elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province, and 2) identify the factors associated with their health literacy. The study sample comprised 215 elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province. Data were analyzed using descriptive statistics, including percentages, means, and standard deviations, as well as chi-square tests to examine relationships. The findings revealed that most respondents were female (60.50%), while males accounted for 39.50 percent. The majority of participants were aged between 71 and 80 years (44.60%). Regarding marital status, most were married (56.70%), and 66.00% had completed primary education. Most respondents (64.20%) were unemployed, with an average monthly income of less than 1,500 THB reported by 59.50 percent. Regarding health conditions, most participants weighed 56–65 kilograms (33.50%) and were 151–160 centimeters tall (40.90%). A family history of hypertension was reported by 60.00 percent of participants, and all participants (100.00%) had chronic diseases. The most recent average blood pressure reading was 131–150 mmHg (47.90%), and 80.00% had been diagnosed with hypertension for 1–10 years. The health literacy assessment indicated that most participants (50.21%) had good health literacy levels. The analysis of the relationships between personal factors and health literacy revealed that age, income, and duration of illness were significantly associated with health literacy at the 0.05 level. Conversely, gender, marital status, education level, occupation, and heredity were not significantly associated with health literacy at the 0.05 level.

1. Introduction

Hypertension is a significant public health concern with a continuously increasing trend worldwide. According to the World Health Organization, the global number of hypertension patients in 2019 was 1.3 billion, and it is projected to reach 1.56 billion by 2025. In Thailand, data from the Division of Non-Communicable Diseases revealed that the prevalence rate of hypertension per 100,000 population showed a continuous upward trend from 2015 to 2023, rising from 10,756.8 per 100,000 population in 2015 to 15,638.2 per 100,000 population in 2023 (Department of Disease Control, 2023). A major concern is that most patients are unaware of their condition, and even after diagnosis, they often fail to receive continuous care due to the absence of warning symptoms. Attention is typically given only after complications arise, which may result in suboptimal treatment outcomes. However, maintaining consistent blood pressure control within normal ranges can significantly reduce the risk of cerebrovascular disease and ischemic heart disease, a medically recognized fact globally (Department of Disease Control, 2019).

Samut Songkhram Province has experienced a continuously increasing rate of hypertension patients. Data from the Ministry of Public Health's Health Data Center (HDC) showed cumulative annual morbidity rates for fiscal years 2021–2023 of 1,389.51, 1,287.45, and 1,615.18 per 100,000 population, respectively. Mueang Samut Songkhram District had the highest new case rate (1,789.07 per 100,000 population), followed by Amphawa District (1,434.34) and Bang Khonthi District (1,339.29), respectively. Ban Prok Subdistrict, Mueang Samut Songkhram District, had 392 hypertension patients in fiscal year 2023 (Ban Prok Subdistrict Health Promoting Hospital, 2024), an increase from 236 patients in 2021. Most patients were still unable to control their blood pressure levels and were at risk of developing complications. Therefore, it is essential to promote health literacy to prevent physical, psychological, social, and economic impacts. This study examined the factors associated with health literacy among elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province. The research findings will serve as guidelines for developing appropriate health literacy promotion models to effectively reduce the severity of complications and the impact of hypertension.

1.1 Literature Review

Health literacy refers to the ability to access, understand, evaluate, and use health information to appropriately care for oneself and others (World Health Organization, 2016). For elderly individuals with hypertension, health literacy is particularly crucial as it directly influences their ability to manage their condition effectively, adhere to medication regimens, monitor blood pressure levels, and adopt lifestyle modifications necessary for disease control. Adequate health literacy enables elderly patients to comprehend medical instructions, recognize warning signs of complications, and make informed decisions regarding their health management.

Several factors have been identified as significantly associated with health literacy among elderly patients with hypertension. Sociodemographic factors, including age, gender,

educational level, income, marital status, and duration of illness, play substantial roles in determining health literacy levels. Therefore, it is essential to promote health literacy to prevent physical, psychological, social, and economic impacts. This study examined the factors associated with health literacy among elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province. The research findings will serve as guidelines for developing appropriate health literacy promotion models to effectively reduce the severity of complications and the impact of hypertension.

1.2 Research Objective

1) To examine the health literacy of elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province.

2) To investigate the factors associated with the health literacy of elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province.

2. Methodology

This study employed a cross-sectional analytical research design aimed at examining factors associated with the health literacy of elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province. The sample consisted of 215 older adults who were classified as homebound or socially active and had been diagnosed with hypertension, receiving care at Ban Prok Subdistrict Health Promoting Hospital and Ban Kaew Fa Subdistrict Health Promoting Hospital. Data were collected using a structured questionnaire comprising three parts:

Part 1: A personal factors questionnaire.

Part 2: A health literacy assessment for elderly patients with hypertension.

The research instrument achieved a content validity index (IOC) ranging from 0.67 to 1.00 and a reliability coefficient (Cronbach's alpha) of 0.87.

Data analysis utilized descriptive statistics to assess general characteristics of the sample, such as gender, age, and educational level. Health literacy levels were measured using frequency distribution, percentages, means, and standard deviations. Factors associated with health literacy were analyzed using the Chi-square test to determine relationships.

3. Results

The analysis of general data from 215 participants revealed that the majority of respondents were female (60.50%), while 39.50% were male. Most respondents were aged 71–80 years (44.60%). More than half were married (56.70%). In terms of education, the majority had completed primary school (66.00%). Most respondents were unemployed (64.20%) and reported an average monthly income of less than 1,500 THB (59.50%). Regarding health-related information, most respondents weighed 56–65 kilograms (33.50%) and had a height of 151–160

centimeters (40.90%). A large proportion had a family history of hypertension (60.00%). All respondents reported having at least one comorbidity (100.00%). The most recent blood pressure readings were commonly within the range of 131–150 mmHg (47.90%). Additionally, the majority had been diagnosed with hypertension for 1–10 years (80.00%).

The analysis of the relationships between personal factors and health literacy revealed that age, income, and duration of illness were significantly associated with health literacy at the 0.05 level. In contrast, gender, marital status, educational level, occupation, and family history showed no significant association with health literacy.

Table 1 Frequency, Percentage, and Interpretation of Health Literacy Levels Among with Hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province. (N = 215)

Health Literacy Levels	Frequency	Percent
Excellent Levels	35	16.28
Good Levels	89	41.40
Moderate level	91	42.33
	215	100

From Table 1, it was found that the majority of the sample demonstrated moderate level health literacy, accounting for 42.33 percent, followed by very good health literacy at 41.40 percent and excellent health literacy at 16.28 percent

Table 2 Factors Associated with Health Literacy Among of Elderly Patients with Hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province.

Personal Factors	Health Literacy	
	χ^2	p-value
Gender	4.626	0.328
Age	45.732	.000*
Marital status	10.398	0.238
Educational level	32.957	0.105
Occupation	45.745	0.005
Income	71.740	.000*
Genetic predisposition	15.441	0.51
Duration of hypertension	48.005	.000*

From Table 2, the analysis of the relationships between personal factors and health literacy revealed that age, income, and duration of illness were significantly associated with health literacy at the 0.05 level. In contrast, gender, marital status, educational level, occupation, and family history showed no significant association with health literacy.

4. Conclusion

This study examined health literacy among elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province, with a sample of 215 participants. The findings revealed that the majority of elderly patients demonstrated moderate health literacy levels (42.33%), followed by good levels (41.40%), and excellent levels (16.28%), respectively.

The analysis of the relationships between personal factors and health literacy revealed that age, income, and duration of illness were significantly associated with health literacy at the 0.05 level. In contrast, gender, marital status, educational level, occupation, and family history showed no significant association with health literacy. These findings indicate that elderly patients with hypertension possess adequate capacity to access and utilize health information effectively for self-care and health promotion within their communities.

Discussion

The study findings on health literacy among elderly patients with hypertension in Ban Prok Subdistrict, Mueang Samut Songkhram District, Samut Songkhram Province revealed that among 215 respondents. The majority (42.33%) demonstrated moderate health literacy levels. These findings align with Neelasomit, H., who reported similar moderate health literacy levels among elderly hypertensive patients in Sam Sung District, Khon Kaen Province. This suggests that elderly patients with hypertension have adequate capacity to access, comprehend, and apply health information effectively for health promotion within their communities. However, the analysis of relationships revealed that age, income, and duration of hypertension were significantly associated with health literacy. Therefore, it is recommended that health literacy promotion strategies be developed specifically for elderly populations, employing communication approaches that emphasize practical application and skill-based learning. Such targeted interventions would enhance self-management capabilities and improve health outcomes more effectively.

Acknowledgment

The researcher wishes to express profound gratitude to Suan Sunandha Rajabhat University, Bangkok, Thailand, for providing financial support for this study. Special thanks are extended to colleagues at the College of Allied Health Sciences, Samut Songkhram Campus, for their valuable assistance, and to the elderly patients with hypertension in Ban Prok Subdistrict, Mueang District, Samut Songkhram Province, whose excellent cooperation in completing the questionnaires ensured the successful completion of data collection.

References

- Jamnanong, N., Pattarapol, M., & Saneh, S. (2022). Health literacy factors affecting hypertension prevention behaviors among high-risk groups in Tha Chai Subdistrict, Si Satchanalai District, Sukhothai Province [in Thai]. *Journal of Science and Technology Northern*, 3(3), 18-37.

- Kareesun, K., Malathum, P., & Sutti, N. (2019). Relationship between health literacy, knowledge about hypertension control, and health care behaviors among elderly patients with hypertension [in Thai]. *Ramathibodi Nursing Journal*, 25(3), 280-295.
- Neelasomit H. Health literacy and self-management among elderly patients with hypertension in Sam Sung District, Khon Kaen Province. *Journal of Khon Kaen Provincial Health Office*. 2024;6(2):e268925.
- Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15, 259-267.
- Songsin, N. (2024). Health Literacy and Coronavirus Disease 2019 Prevention Behaviors of Secondary School Students in Samut Songkhram Province. *Journal of Council of Community Public Health*, 6(2), 32-44.
- World Health Organization-WHO. (2023). Health literacy. Retrieved July 19, 2023, from <https://www.who.int>