
The Role of Patient Knowledge in Anxiety and Lifestyle Management Among Hypertensive Patients

¹Cicik I, ² Edilawit F.

¹ Surya Mitra Husada Health Collage, East Java, Indonesia

² Menelik second Health and Medical college, Ethiopia

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ABSTRACT

Hypertension is a prevalent non-communicable disease that significantly contributes to morbidity and mortality worldwide. Patients with hypertension often experience psychological responses such as anxiety, which may affect their adherence to treatment and healthy lifestyle behaviors. Patient knowledge has been identified as a key factor influencing both psychological and behavioral outcomes, yet evidence regarding its role in anxiety and lifestyle management remains limited, particularly in low-resource hospital settings. This study aimed to examine the role of patient knowledge in anxiety levels and lifestyle management among hypertensive patients.

A cross-sectional correlational study was conducted involving 71 hypertensive patients selected using accidental sampling. Data were collected using structured questionnaires assessing patient knowledge about hypertension, anxiety levels, and lifestyle behaviors. The relationships between patient knowledge and both anxiety and lifestyle management were analyzed using Spearman Rank correlation.

The findings indicated that patients with higher knowledge levels exhibited significantly lower anxiety and demonstrated healthier lifestyle behaviors, including dietary control and regular physical activity. Statistical analysis confirmed a significant correlation between patient knowledge and anxiety ($p = 0.003$) as well as between knowledge and lifestyle management ($p = 0.001$). These results suggest that patient knowledge is an important determinant of both psychological well-being and self-care behaviors in hypertension management.

Enhancing patient knowledge through structured educational interventions is recommended to reduce anxiety and promote healthier lifestyle behaviors among hypertensive patients. Improving patient education can contribute to better blood pressure control and overall health outcomes in resource-limited healthcare settings.

Keywords: Hypertension, Patient Knowledge, Anxiety.

Author Correspondence:

Author: Cicik I.

Affiliation: Surya Mitra Husada Health Collage, East Java, Indonesia

E-mail: cicik43@author.com

What are the main findings?
1. Higher patient knowledge is significantly associated with lower anxiety levels in hypertensive patients.
2. Patients with greater knowledge are more likely to adopt healthier lifestyle behaviors, including diet and physical activity.
3. Enhancing patient education can improve psychological well-being and support effective hypertension management in low-resource settings.

INTRODUCTION

Hypertension is one of the most common non-communicable diseases and remains a major public health concern worldwide. It is characterized by a persistent increase in arterial blood pressure above normal limits, generally defined as systolic pressure ≥ 140 mmHg and diastolic pressure ≥ 90 mmHg (Triyanto, 2014). Hypertension often develops without clear symptoms and is therefore widely known as a “silent killer,” because many individuals are unaware of their condition until serious complications occur (Shanty, 2011). If not properly controlled, hypertension can lead to severe health problems such as stroke, heart disease, kidney failure, and other cardiovascular complications.

Globally, hypertension contributes significantly to morbidity and mortality. Data from the World Health Organization indicate that hypertension is one of the leading risk factors for cardiovascular disease worldwide (WHO, 2017). In Indonesia, the prevalence of hypertension continues to increase and poses a significant burden on public health services. The Indonesian Basic Health Research (Riskesdas) also reports that hypertension remains one of the most common chronic

diseases among adults (Kementerian Kesehatan RI, 2013). These findings highlight the importance of effective strategies for prevention and management of hypertension.

The occurrence and progression of hypertension are influenced by various factors, including lifestyle behaviors such as smoking, unhealthy diet, lack of physical activity, and excessive salt intake (Udjianti, 2014). Unhealthy lifestyle patterns have been widely associated with increased blood pressure and the development of hypertension. Studies have also shown that lifestyle factors play an important role in both the occurrence and management of hypertension among adults (Rachmawati, 2013). Therefore, lifestyle modification is considered an essential component in hypertension management alongside pharmacological therapy.

In addition to physical factors, psychological conditions may also influence the health status of individuals with hypertension. Patients with chronic illnesses often experience psychological responses such as fear, stress, and anxiety related to their health condition. Anxiety is an emotional response characterized by feelings of uncertainty, worry, and tension that may arise when individuals perceive threats to their physical or psychological well-being (Lubis, 2009). When experienced excessively, anxiety may affect physiological processes and potentially influence cardiovascular responses.

One factor that may influence both lifestyle behavior and psychological responses among hypertensive patients is knowledge. Knowledge is an important determinant of health behavior because individuals who possess adequate information about their disease tend to demonstrate better attitudes and behaviors

toward disease management (Notoatmodjo, 2010). Patients who understand the causes, risk factors, and management of hypertension are more likely to adopt healthier lifestyles, comply with treatment recommendations, and actively participate in disease control efforts.

Previous studies have also indicated that patient knowledge is associated with blood pressure control and health behaviors among hypertensive patients. For example, research has shown that knowledge about hypertension and dietary intake, particularly sodium consumption, is related to blood pressure levels among hypertensive individuals (Libri, 2015). This suggests that increasing patient knowledge may contribute to better disease management outcomes.

Based on preliminary observations among hypertensive patients at Bhayangkara Hospital Kediri, it was found that some patients still have limited understanding regarding hypertension management, including lifestyle modification and self-care practices. In addition, several patients reported experiencing anxiety related to their health condition. These findings indicate that insufficient knowledge may influence both psychological responses and lifestyle behaviors among hypertensive patients.

Therefore, it is important to examine how patient knowledge is related to anxiety levels and lifestyle management in individuals with hypertension. Understanding this relationship may help healthcare professionals develop more effective health education strategies to improve patient knowledge, reduce anxiety, and encourage healthier lifestyle behaviors among hypertensive patients.

METHODS

This study employed a quantitative correlational research design aimed at examining the relationship between patient knowledge, anxiety, and lifestyle management among individuals with hypertension. The study was conducted at Bhayangkara Hospital Kediri, with a population consisting of hypertensive patients receiving treatment at the hospital. A total of 71 respondents were selected using an accidental sampling technique based on inclusion and exclusion criteria. Data were collected using structured questionnaires measuring patient knowledge about hypertension, levels of anxiety, and lifestyle behaviors related to hypertension management. The collected data were then analyzed using statistical correlation analysis to determine the relationship between patient knowledge and both anxiety levels and lifestyle management among hypertensive patients.

RESULTS

Table 1. Frequency Distribution of Respondent Demographic Characteristics (n = 71)

Characteristics	Frequency (n)	Percentage (%)
Age		
36–45 years	12	16.9
46–55 years	24	33.8
56–65 years	22	31
>65 years	13	18.3
Gender		
Male	30	42.3
Female	41	57.7
Education Level		
Primary school	18	25.4
Junior high school	20	28.2

Characteristics	Frequency (n)	Percentage (%)
Senior high school	25	35.2
Higher education	8	11.2

Table 1 shows the demographic characteristics of the respondents. Most respondents were aged 46–55 years (33.8%), followed by those aged 56–65 years (31.0%). Based on gender, the majority of respondents were female (57.7%), while 42.3% were male. In terms of educational background, most respondents had completed senior high school education (35.2%), while a smaller proportion had higher education (11.2%).

Table 2. Relationship Between Patient Knowledge and Anxiety Levels

Knowledge Level	Mild Anxiety	Moderate Anxiety	Severe Anxiety	Total
Good	18	5	1	24
Moderate	10	14	4	28
Poor	3	9	7	19
Total	31	28	12	71

Table 2 indicates a significant relationship between patient knowledge and anxiety levels among hypertensive patients. Respondents with good knowledge tended to experience milder anxiety, whereas respondents with lower knowledge levels were more likely to experience moderate to severe anxiety. The statistical analysis showed a significant correlation ($p = 0.003$), suggesting that higher patient knowledge is associated with lower anxiety levels.

Table 3. Relationship Between Patient Knowledge and Lifestyle Management

Knowledge Level	Healthy Lifestyle	Unhealthy Lifestyle	Total
Good	19	5	24

Moderate	15	13	28
Poor	6	13	19
Total	40	31	71

Statistical test: Spearman Rank
p-value = 0.001

Table 3 shows the relationship between patient knowledge and lifestyle management among hypertensive patients. Respondents with good knowledge were more likely to adopt healthy lifestyle behaviors, including dietary control, regular physical activity, and adherence to health recommendations. Conversely, respondents with poor knowledge were more likely to maintain unhealthy lifestyle patterns. Statistical analysis demonstrated a significant relationship between knowledge and lifestyle management ($p = 0.001$). This finding indicates that higher levels of patient knowledge contribute to better lifestyle management among hypertensive patients.

DISCUSSION

The present study examined the role of patient knowledge in anxiety levels and lifestyle management among hypertensive patients. The findings showed that patients with higher levels of knowledge tended to experience lower anxiety and demonstrate healthier lifestyle behaviors. These results highlight the importance of patient education as a key component in hypertension management, particularly in improving psychological adaptation and encouraging behavioral change. Knowledge about hypertension has been recognized as an important factor influencing treatment adherence, blood pressure control, and patient engagement in health-related behaviors (Mills et al., 2020; World Health Organization, 2021).

The findings of this study revealed a significant relationship between patient knowledge and anxiety levels among individuals with hypertension. Patients with adequate knowledge about hypertension were more likely to experience lower anxiety compared with those with limited knowledge. Adequate information about disease causes, treatment, and prognosis can reduce uncertainty and help patients better understand their health condition, thereby reducing psychological distress. Previous studies indicate that insufficient knowledge about chronic diseases can increase emotional distress, while improved knowledge may enhance coping mechanisms and psychological adjustment among patients with chronic illnesses (Pan et al., 2015; Kretchy et al., 2014).

In addition, this study found that patient knowledge was significantly associated with lifestyle management among hypertensive patients. Respondents with higher levels of knowledge were more likely to adopt healthy lifestyle behaviors such as reducing salt intake, maintaining a balanced diet, and engaging in regular physical activity. Lifestyle modification is widely recognized as a fundamental component of hypertension management, and adherence to healthy behaviors has been shown to contribute significantly to blood pressure control (Carey et al., 2018; Whelton et al., 2018).

The relationship between knowledge and lifestyle behaviors observed in this study is consistent with previous research conducted among hypertensive patients in various settings. Studies examining knowledge, attitudes, and practices regarding hypertension have reported that individuals with higher levels of knowledge tend to demonstrate more positive attitudes and better practices toward lifestyle modification.

These behaviors include maintaining a healthy diet, increasing physical activity, and adhering to treatment recommendations, which are essential for preventing hypertension-related complications (Gebremichael et al., 2019; Saleem et al., 2019).

Furthermore, knowledge regarding hypertension risk factors and lifestyle modification can significantly influence patients' motivation to adopt healthier behaviors. Patients who understand the relationship between lifestyle factors and hypertension are more likely to actively participate in disease management and follow recommended health practices. Previous studies have also reported that awareness and understanding of hypertension contribute to improved self-care behaviors, including blood pressure monitoring, medication adherence, and lifestyle modification (Bosworth et al., 2011; Burnier & Egan, 2019).

These findings suggest that improving patient knowledge should be prioritized in hypertension management programs. Educational interventions delivered by healthcare professionals, particularly nurses and primary healthcare providers, can help increase patients' understanding of hypertension and empower them to manage their condition more effectively. Structured education programs focusing on risk factors, lifestyle modification, and treatment adherence have been shown to improve patient outcomes and support better blood pressure control (WHO, 2021; Whelton et al., 2018).

However, this study has several limitations that should be considered. The cross-sectional design limits the ability to determine causal relationships between knowledge, anxiety, and lifestyle behaviors.

Additionally, the study was conducted in a single hospital setting, which may limit the generalizability of the findings. Future research is recommended to use longitudinal approaches and involve larger and more diverse populations to better explore the long-term effects of patient knowledge on psychological outcomes and lifestyle management among hypertensive patients.

Overall, the findings emphasize that patient knowledge plays an important role in influencing both psychological responses and lifestyle behaviors among individuals with hypertension. Enhancing patient education and health promotion programs may help reduce anxiety and encourage healthier lifestyle behaviors, ultimately contributing to better hypertension management and improved health outcomes.

CONCLUSION AND SUGGESTION

and lifestyle management among hypertensive patients. Higher levels of knowledge are associated with lower anxiety and better adherence to healthy lifestyle behaviors, including dietary control and regular physical activity. These findings highlight the critical importance of patient education in hypertension management. It is recommended that healthcare providers, particularly nurses and primary care professionals, implement structured educational interventions to enhance patients' understanding of hypertension, improve self-management skills, reduce anxiety, and promote sustainable lifestyle modifications. Future studies are encouraged to employ longitudinal designs and larger, more diverse populations to further investigate the long-term impact of knowledge-based interventions on hypertension outcomes.

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CONFLICT OF INTEREST

No conflict of interest.

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