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Research Article

Health Beliefs, Illness Perceptions, and Self-Management Behaviors in Hypertension Clients

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Abstract

Background: Hypertension is a health problem that impacts all age groups and social backgrounds, with the risk of serious complications, reduced quality of life, and a huge burden for clients, families, and the country. The increasing number of hypertension cases requires serious attention to reduce its impact.
Aims: This study analyzes the relationship between health beliefs, disease perceptions, and self-management behavior in hypertensive clients at the Juwana Community Health Center.
Methods: This research used a cross-sectional design and involved 95 clients selected using purposive sampling. Data was collected through a valid and reliable questionnaire and then analyzed using the Spearman-Rho correlation test.
Result: The results showed a significant relationship between health beliefs and self-management behavior ($r = 0.327$; $p = 0.001$), while the relationship between illness perception and self-management was insignificant ($r = 0.178$; $p = 0.083$). The majority of clients had sufficient categories for health beliefs (74%), disease perceptions (81.3%), and self-management behavior (71.9%).
Conclusion: In conclusion, health beliefs influence self-management behavior, while illness perceptions do not have a significant relationship. Interactive media-based educational programs are needed to increase health confidence and support self-management of hypertension patients.

Keywords: Hypertension; Health beliefs; Illness perceptions; Self-management

1. INTRODUCTION

Hypertension is a major global public health problem affecting individuals across all age groups and socioeconomic strata. It progressively reduces quality of life, increases dependency, and imposes a substantial burden on families, health systems, and national economies. Globally, hypertension is the leading cause of premature mortality, largely due to its asymptomatic nature and poor long-term control. According to the World Health Organization, 1.28 billion adults worldwide live with hypertension, yet only 21% achieve adequate blood pressure control, and nearly half remain undiagnosed (World Health Organization, 2024). These conditions highlight hypertension as a persistent and critical non-communicable disease requiring effective long-term management strategies.
Indonesia reflects a similar pattern. Although national prevalence declined from 34.1% in 2018 to 30.8% in 2023, substantial gaps remain between diagnosis, treatment, and regular follow-up, particularly among productive-age adults and older populations (Indonesian Ministry of Health, 2023). In Central Java Province, hypertension prevalence reached 38.2% among individuals aged over 15 years, with notable regional clustering, including high case numbers in Pati District (Central Java Health Office, 2023; Pati Health Office, 2022). These data indicate that hypertension control remains suboptimal despite the availability of health services.

Previous studies consistently demonstrate that poor self-management and low adherence to antihypertensive treatment significantly increase the risk of complications, disability, and mortality. Self-management behaviors, such as medication adherence, lifestyle modification, blood pressure monitoring, and interaction with health professionals, are strongly influenced by patients' perceptions, beliefs, and health literacy. Several studies report significant associations between illness perception, Health Belief Model (HBM) constructs, and treatment adherence among hypertensive patients (Mufidah, 2020; Prazuliana, 2022; Rosaline & Rahmah, 2023; Laili et al., 2023). However, most existing research focuses on specific age groups (e.g., elderly or adults), uses varying measurement instruments, and applies predominantly numerical or limited behavioral categorizations.

Despite extensive evidence on the role of self-management and health beliefs in hypertension control, there is a lack of comprehensive studies that simultaneously examine self-management behavior and Health Belief Model constructs across *all age groups* with hypertension using a standardized, theory-based behavioral framework. Furthermore, inconsistencies in measurement tools and analytical approaches limit comparability and practical application of findings in clinical nursing interventions. Evidence integrating perception, belief, and adherence within a unified model applicable to diverse age groups remains insufficient.

This study addresses these gaps by examining hypertensive patients across all age groups using a theory-driven framework that integrates self-management components and Health Belief Model constructs. By employing a refined behavioral categorization approach and focusing on patients' beliefs and perceptions as modifiable determinants of adherence, this study provides novel insights for nursing practice. The findings are expected to inform the development of age-inclusive, belief-oriented health education and self-management interventions, thereby strengthening the role of nurses in improving long-term hypertension control and patient outcomes.

2. MATERIAL AND METHOD

This study employed a correlational survey design with a cross-sectional approach to examine the relationship between health beliefs, disease perceptions, and self-management among clients with hypertension. Health beliefs and disease perceptions were treated as independent variables, while self-management served as the dependent variable. The study was conducted in the working area of the Juwana Pati Community Health Center in January 2025.

A total of 96 hypertensive clients were recruited using purposive sampling. This sampling technique was chosen to ensure that participants met specific clinical and cognitive criteria relevant to the research objectives, thereby enhancing internal validity. Inclusion criteria were hypertensive clients diagnosed by health professionals without complications, aged 20 years and older, with blood pressure ≥120/80 mmHg, undergoing treatment at the Juwana Community Health Center, and possessing the ability to read and write (Roflin, 2021; Lailiyah, 2021). Exclusion criteria included clients who were uncooperative or who did not complete all stages of the research process. The purposive sampling approach was considered appropriate given the need to focus on a clinically stable population capable of completing self-report questionnaires accurately.

Data were collected using validated self-administered questionnaires. Health beliefs were measured using the Health Belief Model–based questionnaire developed by Nurhidayati Rusmadi (2021), consisting of 45 items rated on a four-point Likert scale ranging from "strongly disagree" to "strongly agree," with a total score range of 45–180. The instrument demonstrated satisfactory psychometric properties, with item validity values of $r > 0.361$ ($p < 0.05$) and high internal consistency (Cronbach's alpha = 0.927). Disease perception was assessed using a questionnaire developed by Wahyuni (2021), comprising 13 items with a score range of 13–52. This instrument showed acceptable validity ($r = 0.632$) and high reliability (Cronbach's alpha = 0.927). Self-management was measured using the questionnaire developed by Mufidah (2020), consisting of 25 items with response options ranging from "never" to "very often," yielding a total score range of 25–125. The instrument demonstrated acceptable reliability across its dimensions, with Cronbach's alpha coefficients of 0.657, 0.773, 0.797, 0.699, and 0.835, indicating adequate internal consistency for behavioral assessment in hypertensive populations. The use of previously validated instruments strengthens the reliability and comparability of the findings.

Data collection was conducted in coordination with health center staff. Eligible participants were identified during routine visits, provided with information about the study objectives and procedures, and asked to provide informed consent before participation. Questionnaires were completed under the researcher's supervision to minimize missing data and ensure participant comprehension. Data analysis was performed using the Spearman rank correlation test, as the data were ordinal and did not meet the assumptions of normality. This statistical approach was appropriate for assessing the strength and direction of relationships between health beliefs, disease perceptions, and self-management behaviors. Ethical approval for the study was obtained from the Health Research Ethics Committee of Universitas Muhammadiyah Kudus (No. 135/Z-7/KEPK/UMKU/I/2025). All procedures adhered to ethical principles of autonomy, confidentiality, and voluntary participation.

3. RESULT AND DISCUSSION

3.1. Result

Table 1. Characteristics of Hypertensive Clients

Variable	f	%	Mean	SD
Age (years)	-	-	44.78	11.951
Gender				
Woman	63	65.6	-	-
Man	33	34.4	-	-
Work				
Work	20	20.8	-	-
Doesn't work	8	8.3	-	-
Farmer	6	6.3	-	-
Fisherman	3	3.1	-	-
Government employees	3	3.1	-	-
Self-employed	13	13.5	-	-
Housewife	43	44.8	-	-
Education				

Variable	f	%	Mean	SD
Elementary school	11	11.5	-	-
Junior High School	23	24	-	-
Senior High School	48	50	-	-
College	14	14.6	-	-
Family history of hypertension				
Yes	61	63.5	-	-
No	35	36.5	-	-
Total	**96**	**100**	-	-

Based on Table 1, it can be seen that the average age of hypertensive clients is 44.78 years old with a standard deviation of 11.951. Most of the hypertensive clients were female, namely 63 clients (65.6%). Meanwhile, the majority of hypertensive clients' work, namely 43 clients (44.8%), was housewives. Most hypertensive clients had a recent education at the high school level, 48 clients (50%), while the majority, namely 61 clients (63.5%), had a history of hypertension.

Table 2. Health Beliefs of Hypertension Clients (n=96)

Health Beliefs	f	%
Enough	71	74
Good	25	26
Total	**96**	**100**

Based on Table 2, it shows that most clients have sufficient health beliefs, namely 71 clients, or 74%. In this study, health beliefs were categorized into three categories, namely good, sufficient, and poor.

Table 3. Hypertension Clients' Perception of Disease (n=96)

Perception of Illness	f	%
Enough	78	81.3
Good	18	18.8
Total	**96**	**100**

Based on Table 3, it shows that most clients have a sufficient perception of the disease, as many as 78 clients (81.3%). These data indicate that the majority of clients have an adequate view of the disease.

Table 4. Self-management of Hypertension Clients (n=96)

Self-Management	f	%
Not enough	1	1
Enough	69	71.9
Good	26	27.1
Total	**96**	**100**

Based on Table 4, it is known that most clients have sufficient self-management, namely 69 clients (71.9%).

Table 5. Relationship Between Health Beliefs and Self-Management in Hypertension Clients

Health Beliefs	Hypertension Client Self-Management							r	p-value
	Not enough		Enough		Good		Amount		
	f	%	f	%	f	%	n		
Enough	1	1.4	56	78.9	14	19.7	71	0.327	0.001
Good	0	0	13	52	12	48	25		
Total	**1**	**1.4**	**69**	**131**	**26**	**67.7**	**96**		

Based on Table 5, shows that there is a statistically significant relationship between health beliefs and self-management in hypertensive clients, with sufficient strength of the relationship (r = 0.327, p = 0.001). Most clients with health beliefs are in the sufficient category, as many as 56 clients (78.9%), who have self-management and are also in the sufficient category.

Table 6. Relationship Between Disease Perception and Self-Management in Hypertensive Clients

Perception of Illness	Not enough		Enough		Good		Amount	r	p-value
	f	%	f	%	f	%	n		
Enough	1	1.3	58	74.4	19	24.4	78	0,178	0,083
Good	0	0	11	61.1	7	38.9	18		
Total	1	1.3	69	135.5	26	63.3	96		

Based on data from Table 6, shows that the majority of clients with a sufficient category of disease perception have sufficient self-management (74.4%). On the other hand, clients with good disease perception tend to have better self-management, with 38.9% being in a good category. However, statistical analysis showed that the relationship between illness perception and self-management had a weak relationship strength (r = 0.178) and was not statistically significant (p = 0.083). This indicates that disease perception does not directly influence self-management behavior in hypertensive clients.

3.2. Discussion

A. Characteristics of Hypertensive Clients

Based on the results of research in the Juwana Health Center Work Area, it was found that the average (mean) age of hypertensive clients was in the middle adult category, aged 40-59 years. The results of this study are in line with research (Eswarya et al., 2023), which states that most clients in the study were hypertensive patients who visited West Denpasar Health Center II with a frequency of 75 clients (78.1%) of hypertensive patients in the age range of 40-59 years old. The results of this research are also in line with research (Maya, 2024) that states that the characteristics of clients based on age show that the age group 40-59 years dominates, with a total of 20 clients, or 66.7%; most clients are in the age range of 40-59 years and are experiencing hypertension due to an unhealthy lifestyle. This lifestyle includes consuming instant and ready-to-eat food, lack of physical activity, smoking habits, and consuming alcoholic drinks. This is in line with the results of other studies, which show an increase in the prevalence of hypertension in the productive age group, one of which is caused by busyness and unhealthy lifestyles, thereby increasing the risk of hypertension in this group. As we age, the body's physiological functions tend to decrease, including the elasticity of blood vessels. This decrease in elasticity can cause blood vessels to become stiff and brittle, thereby increasing the risk of hypertension (Mufidah, 2020).

Based on gender, it was found that most clients were female. The results of this study are in line with research (Hamiidah et al., 2024), which states that the results of the study show that most hypertensive clients in the Mlati II Health Center working area are women, with a percentage reaching 86.8%. The results of this research also agree with research (Rasdiyanah et al., 2022) that most clients were female, with a total of 42 (70.0%). Women have a higher risk of developing hypertension, especially after entering menopause. A decrease in the production of the hormone estrogen during menopause causes a loss of its protective effect on blood vessels, increasing blood pressure. At the age of over 45 years, women generally begin to experience menopause, and the production of the hormone estrogen, which previously helped prevent degenerative diseases, stops. As a result, women become more susceptible to degenerative diseases, including hypertension. Therefore, premenopausal women tend to have higher blood pressure than men. In men, the risk of hypertension is more often associated with lifestyle factors, such as smoking habits, high levels of stress, coffee consumption, and uncontrolled eating patterns. Meanwhile, in elderly women, the risk increases due to changes in the hormone estrogen during menopause. Estrogen, which functions to protect blood vessels from damage, decreases, thereby increasing susceptibility to hypertension (Purwono et al., 2020).

Based on education, most clients have completed their education at the high school level. The results of this research are also in line with research (Khusnah, 2021) that states that the characteristics of clients based on education level at the Melati Kuala Kapuas Health Center, of the 96 clients studied, showed that the majority had a high school education, namely 36 clients (37.5%). The results of this research are in line with Sugestina's research, which stated that the results of the research found that clients with the highest level of education were 36 people (60%). Even though the client's education level is classified as moderate, hypertension is still often found among them. This is because some clients already understand the risk factors for hypertension, especially the importance of maintaining a healthy lifestyle. For example, they know that consuming foods high in sodium, such as salted fish, and foods high in cholesterol, such as fried foods, can increase the risk of this disease. However, despite having this knowledge, some clients still violate the principles of a healthy lifestyle, so hypertension remains a problem they experience. A person's level of education plays a role in influencing the information received, which ultimately has an impact on the individual's behavior and ability to manage their health. Therefore, education is not always the main determining factor in adopting a healthy lifestyle (Sugestina, 2023).

Meanwhile, most of the clients' work, namely 43 clients (44.8%), are housewives. The results of this study are in line with research (Rasdiyanah et al., 2022) that states that housewives (IRT) are included in a group vulnerable to hypertension, considering their complex roles, such as managing the needs of their husbands and children, which can trigger stress. This stress is one of the main risk factors for hypertension, especially in housewives who do not work and may face additional pressure from domestic responsibilities without support or activities outside the home. Apart from that, research (Zhabilla Gustin, 2023) states that based on client characteristics based on type of work, most clients are housewives (63.6%). Women who do not work or only act as housewives have a higher risk of developing hypertension than women who work. This is thought to be related to the physical activity carried out by housewives. Busy daily activities often make them feel like they don't have time to exercise, so physical activity becomes less than optimal. This condition can increase the risk of being overweight or obese, which is one of the main factors causing hypertension (Afifah et al., 2022).

From the results of this research, it was found that the majority, namely 61 clients (63.5%), had a history of hypertension. Meanwhile, 35 clients (36.5%) had no history of hypertension. These results are in line with research (Pebrisiana et al., 2022) stating that the research results were obtained from a total of 99 clients (100%); there were 22 clients (22.2%) who had no history of hypertension, while the other 77 clients (77.8%) were known to have a history of hypertension. Apart from that, this research is also in line with research (Maya, 2024) that states that the results of the study show that as many as 21 clients, or 70% of the total clients, have a family history of hypertension; the majority of patients diagnosed with hypertension have a family history of a similar disease, considering that hypertension is a disease that can be inherited. Hypertension, or high blood pressure, is a chronic condition characterized by increased blood pressure on the walls of the arteries. This condition forces the heart to work harder to pump blood throughout the body through the blood vessels, which can ultimately disrupt blood flow, damage blood vessels, and trigger degenerative diseases and even death. Hypertension is often referred to as the "silent killer" because it has no specific symptoms, can attack anyone at any time, and has the potential to cause serious complications. Based on research, hypertensive clients have a 12 times greater risk of having a stroke and a 6 times greater risk of having a heart attack than those who do not suffer from hypertension (Pratiwi, 2020).

B. Health Beliefs of Hypertensive Clients

The research results obtained at the Juwana Community Health Center show that most clients have sufficient health confidence. This shows that the majority of clients have a level of health confidence that is in the middle category, which means they have a sufficient understanding of the importance of maintaining health, although there is still room to improve this understanding to encourage more proactive behavior in preventing and managing health problems. The results of this research are in line with research (Rosaline & Rahmah, 2023) that states that in the health belief variable, the majority of clients who are in the fairly good health belief level category amount to 61 people (56.5%). The health belief model is rooted in psychological theory and behavior, which states that health-related behavior is influenced by two main components, namely the desire to avoid disease and the belief that certain actions can prevent or cure disease. Therefore, individuals who have a positive perception of disease tend to be more focused on taking steps to prevent and control their health problems. On the other hand, individuals with negative perceptions tend to ignore their health conditions.

Based on research (Laili et al., 2023), it was stated that the results of research based on data collection through the Health Belief Model questionnaire showed that most clients, 41 people (71.9%), had a fairly positive Health Belief Model. High self-efficacy, or an individual's belief in his or her ability to maintain health, plays an important role in encouraging compliance with preventive behavior. Individuals with high self-efficacy tend to have positive beliefs that the prevention and treatment efforts undertaken will be successful in bringing healing. This encouragement is a key factor in successful disease management. Confidence in recovery can be strengthened through knowledge obtained from various sources, such as health workers and family support, as well as information obtained through social media and print media. Beliefs about health as reflected in the Health Belief Model (HBM) are an important aspect for hypertensive clients to optimize the success of their treatment. HBM is a conceptual framework that aims to understand influencing factors, such as demographic characteristics and individual knowledge, as well as their perceptions of health conditions. This model evaluates the extent to which individuals have the desire to avoid the bad impacts of the disease they experience (Ismayadi, 2021).

C. Hypertension Client's Perception of Illness

In this study, disease perceptions were divided into 3 categories, namely good, fair, and poor. From the research results, it was found that the majority of clients had a sufficient perception of the disease. Meanwhile. These data indicate that the majority of clients have a fair view of the disease, with a smaller proportion having a more positive perception. These results indicate that although most clients have a sufficient understanding of the disease, there is still room to improve their perception for the better. The results of this research are in line with research (Wahyuni, 2021) that states that as many as 18 clients (56.3%) have positive perceptions, and the majority of them, namely 13 clients (40.6%), are in the category of high compliance with drug consumption. This shows that the more positive the patient's perception of the disease, the higher the level of compliance in taking medication. For patients with low compliance, it is recommended that they increase their discipline in taking medication with family support and ensure that they always carry a supply of medication, especially when traveling.

Based on research (Hilmi et al., 2019), the research results showed that most patients had a positive perception of their illness, namely 81 clients (54%). Illness perception is the way a person views and understands their health condition. When someone faces an illness, he tends to describe the illness based on his thoughts. If patients have a negative perception of their illness, their level of health care tends to be low. Conversely, with a positive outlook, patients are more likely to undergo good health care, thereby improving the quality of management of their health conditions. (Caesaria, S., Robiyanto, & Untari, 2020).

D. Hypertension Client Self-Management

In this study, self-management in hypertensive clients was divided into 3 categories, namely good, sufficient, and poor. The results of this research showed that the majority of clients had sufficient self-management. These results indicate that the majority of clients are

quite capable of managing themselves, with a significant proportion also demonstrating good self-management. The results of this research are in line with research (Mufidah, 2020) that shows that almost all clients fall into the moderate level of self-management category, with the number of clients being 62 people (22.55%). The high level of self-management in hypertensive patients reflects their ability to care for themselves and adopt lifestyle changes effectively. The results of this study are also in line with research (Irawan, 2023), which states that the research results show that as many as 94 clients, or 86.2% of hypertensive patients, are classified as moderate. Based on research (Sonia et al., 2023), it is stated that most of the research was in the sufficient category, with as many as 83 clients (62.9%).

Self-management includes five main dimensions, namely self-integrity, ability to self-regulate, interaction with health workers, monitoring blood pressure, and compliance with directions given by health workers. Self-management is a series of efforts or steps taken by a person to organize and manage himself effectively so that he can direct himself toward achieving predetermined life goals (Bardian & Febrianti, 2024).

Self-management behavior, which is in the adequate category, is caused by a lack of individual ability and attention in maintaining their health. Clients have the opportunity to achieve a better level of self-management behavior. However, research results showed that the majority of clients were female; usually, women tend to pay less attention to health aspects, such as controlling food portions, choosing types of food, and implementing exercise routines. (Sonia et al., 2023). Researchers concluded that the client's habits or lifestyle, which are still relatively adequate, coupled with risk factors such as a family history of hypertension, are the main causes of the high incidence of hypertension today. This is in line with the initial data obtained, which shows that although there is awareness about the importance of health management, these factors still contribute to the high prevalence of hypertension. Therefore, more comprehensive interventions and more significant behavioral changes are needed to reduce the incidence of this disease.

E. Relationship Health Beliefs and Self-Management in Hypertension Clients

The research results show that there is a relationship between health beliefs and self-management with a p-value of 0.001 ($p<0.05$). This relationship is statistically significant with sufficient relationship strength (correlation coefficient 0.327). This indicates that the higher an individual's health beliefs, the better their ability to carry out self-management. With sufficient relationship strength, these results emphasize the importance of increasing health beliefs through education and support so that patients can more optimally manage their health conditions. These efforts can also help prevent complications and improve the patient's overall quality of life. The research results are in line with research (Rosaline & Rahmah, 2023) that revealed a relationship between the level of health beliefs (health belief) and compliance in undergoing treatment for hypertensive patients in the Ciracas District Health Center Working Area with a p-value of $0.035 < 0.05$, which means H0 is rejected and Ha is accepted. Health beliefs are closely related to individual health behavior. Individuals tend to implement recommended health behaviors if they have a high level of health beliefs. This is due to their understanding of disease susceptibility and severity, as well as awareness of the benefits of healthy behavior recommended by health workers.

Based on research (Laili et al., 2023), it is stated that the results of data calculations using the Spearman Rho test show a significance value of P value = 0.000 with a significance level of $\alpha = 0.05$ ($0.000<0.005$). This shows that the alternative hypothesis (H1) is accepted, namely that there is a relationship between the health belief model and adherence to taking medication in hypertensive patients in Kertosono Village, Panggul District, Trenggalek Regency. This analysis yields a correlation coefficient (r) of 0.719, indicating a very strong, positive relationship. This means that the higher the level of health confidence, the higher the level of client compliance in taking medication. Based on research (Rosaline & Rahmah, 2023), the most dominant relationship and the greatest influence on adherence to taking hypertension medication is the health belief model. The research method used was descriptive analytics with a cross-sectional design. The data collection technique used was purposive sampling with a total sample of 108 clients. The results of the study stated that there was a relationship between health beliefs and treatment compliance (p-value = 0.035). It is hoped that health service providers can improve health education interventions with hypertensive clients, especially hypertensive clients with poor health beliefs and inadequate health literacy, to increase better perceptions of treatment compliance behavior.

The client's level of self-confidence is reflected in their belief in recovery from hypertension, as well as their enthusiasm for adopting a healthy lifestyle. This can be demonstrated through client participation in activities such as morning exercise at the community health center, attending seminars or health promotion at the village hall, and routinely carrying out early examinations to detect hypertension (Rayanti et al., 2021). The Health Belief Model is influenced by various factors, one of which is the experience of relapse that has been experienced. This experience becomes an evaluation for hypertensive clients that recurrence can occur due to non-compliance with taking medication. This can increase patient confidence that undergoing hypertension treatment as recommended by medical personnel can help prevent recurrence or worsening of the disease condition. In the end, this belief encourages individuals to be more compliant in taking hypertension medication (Laili et al., 2023).

F. The Relationship between Perception of Illness and Self-Management in Hypertension Clients

The findings of this study indicate that there is no statistically significant relationship between illness perception and self-management among hypertensive clients ($p = 0.083$; $r = 0.178$), with the strength of the association classified as weak. This suggests that illness perception alone is insufficient to directly influence self-management behaviors in hypertensive patients. Although perception of illness reflects an individual's cognitive and emotional understanding of their condition, it does not automatically translate into consistent health-related actions.

These results are consistent with previous studies reporting non-significant associations between illness perception and self-management or adherence behaviors. Hamiidah et al. (2024) found no relationship between illness perception and self-management among hypertensive patients ($p = 0.497$), while Mabuka (2022) similarly reported no significant association between disease perception and self-control in elderly hypertensive clients ($p = 0.129$). Collectively, these findings suggest that the influence of illness perception on self-management may be indirect and mediated by other psychosocial or contextual factors.

From a theoretical perspective, this result can be explained by the notion that cognitive awareness alone is not sufficient to drive sustained behavioral change. According to self-regulation and behavior change theories, effective self-management requires not only knowledge and perception of illness but also motivation, self-efficacy, social support, and perceived benefits of action (Ryan & Deci, 2017). Patients may understand the seriousness of hypertension but still fail to engage in self-management behaviors due to barriers such as low confidence, limited resources, habitual lifestyle patterns, or lack of family and health system support.

Furthermore, within the Health Belief Model framework, illness perception represents only one component of health behavior formation. Other constructs such as perceived susceptibility, perceived benefits, perceived barriers, cues to action, and self-efficacy have been shown to exert stronger and more direct effects on adherence and self-management behaviors (Glanz et al., 2015). Several studies demonstrate that self-management in hypertension is more strongly influenced by perceived barriers and self-efficacy than by illness perception alone (Bosworth et al., 2018; Flynn et al., 2020). This may explain why patients with adequate disease understanding still demonstrate suboptimal self-management.

In addition, hypertension is often asymptomatic, leading patients to underestimate the urgency of consistent self-care despite sufficient disease knowledge. The absence of immediate physical discomfort may reduce perceived threat and weaken motivation to adhere to lifestyle modification or long-term treatment (Carey & Whelton, 2018). This phenomenon reinforces the characterization of hypertension as a "silent killer," where awareness does not necessarily translate into action.

The findings of this study highlight the need for health interventions that move beyond information-based education. While improving illness perception remains important, educational strategies should be combined with behavioral skill-building, motivational approaches, and social support enhancement to strengthen self-management outcomes (Beno et al., 2022; Vrijens et al., 2021). Interventions that incorporate counseling, goal-setting, family involvement, and continuous follow-up may be more effective in fostering sustainable self-management behaviors among hypertensive clients.

Overall, the weak and non-significant relationship between illness perception and self-management observed in this study underscores the complexity of behavioral change in chronic disease management. This finding supports the argument that comprehensive, multi-component interventions are required to improve hypertension self-management, rather than relying solely on improving patients' perceptions of their illness.

Implication

The findings of this study highlight the crucial role of health beliefs in influencing self-management behaviors among clients with hypertension. Strengthening positive health beliefs can motivate patients to adopt and maintain healthier lifestyles, adhere to medication, and regularly monitor blood pressure. Health professionals, especially nurses in primary care, should develop targeted interventions that incorporate the Health Belief Model to promote self-efficacy and long-term behavioral change. Additionally, these findings suggest the need for community-based health education programs that are culturally adapted to rural populations, where access to information and healthcare resources may be limited.

Research Contribution

This study contributes to the existing body of knowledge by empirically demonstrating that health beliefs, rather than illness perceptions, have a stronger association with self-management behavior among hypertensive clients. It provides valuable evidence for nursing practice and public health policy, emphasizing that improving belief systems and self-efficacy may be more effective than merely addressing disease perceptions. The use of validated and reliable instruments also supports methodological rigor and can serve as a reference for future research investigating behavioral determinants in chronic disease management. Furthermore, by focusing on a rural population, this study enriches the understanding of sociocultural contexts that influence hypertension self-care in developing countries.

Limitation

This research has several limitations that affect the results and implementation, including limited time, energy, and available resources. Apart from that, in

collecting data, the purposive sampling method was originally planned to be used. However, due to the limited number of clients that could be reached, this research made efforts to find clients by visiting various posbindu and using a house-to-house approach. This step was taken to obtain clients who fit the predetermined sample criteria, even with existing obstacles.

Suggestion

Based on the study findings, several important suggestions can be drawn for practice, policy, and future research. Health practitioners are encouraged to design and implement structured educational interventions grounded in the Health Belief Model to strengthen patients' self-confidence and motivation in managing hypertension. Such interventions should utilize interactive and culturally relevant approaches, such as visual, digital, and community-based media, to improve understanding and adherence to treatment, particularly among clients in rural areas. Policymakers should also integrate belief-oriented education strategies into national hypertension management programs to enhance community participation and prevent disease complications. Furthermore, educational institutions should emphasize behavioral change theories and patient-centered communication in nursing and public health curricula, enabling future health professionals to better guide clients in chronic disease self-management. Future research is recommended to examine other psychosocial determinants, including social support, stress, and intrinsic motivation, through longitudinal or intervention-based designs to strengthen causal interpretation and evaluate the effectiveness of belief-based educational programs on improving hypertension self-management outcomes.

4. CONCLUSION

The results showed that health beliefs and self-management behavior had a significant relationship, while illness perceptions did not have a significant effect on self-management. Recommendations for clients: It is important to increase awareness and knowledge about hypertension and adopt a consistently healthy lifestyle to achieve optimal management. For research locations, intensive education regarding hypertension management and healthy living behavior needs to be increased to encourage positive behavioral changes. In educational institutions, the development of innovative educational media and community service programs by students and lecturers can strengthen health education for hypertension patients. Future researchers are advised to explore additional factors such as social support, stress, and motivation, as well as evaluate the effectiveness of health education methods to improve the self-management of hypertension patients.

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6. AUTHOR CONTRIBUTION STATEMENT

Each author made substantial contributions to the implementation of the research and the writing of this article. The contributions of each author are as follows:

[RW]: Developed the research concept and design, conducted data analysis, wrote the initial draft, and conducted data collection and processing.

[HS]: Conducted the literature review, developed the theoretical framework, and assisted in the preparation of the research results section.

[MJ]: Conducted the literature review, developed the theoretical framework, played a role in the validation and interpretation of the results, and supervised the overall research.

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