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The Role of Self Efficacy in the Increased Motivation of Hypertension Patients in the Prevention of Hypertension Crisis in the Working Area of the Surabaya City Health Center

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ABSTRACT
Hypertension is often asymptomatic, which leads many sufferers to be unaware of or underestimate the condition, resulting in uncontrolled hypertension that can potentially lead to a hypertensive crisis. Although hypertension can be managed, it cannot be cured. Therefore, motivation to control blood pressure is crucial in preventing hypertensive crises. However, research indicates that approximately 44.4% of hypertensive patients have low motivation to adhere to treatment. This highlights the importance of efforts to increase motivation, which warrants further investigation. In relation to these issues, the aim of this study is to identify and analyze the influence of self-efficacy on the motivation of patients in preventing hypertensive crises. This study is an analytical observational research using a cross-sectional approach, involving hypertensive crisis patients in the working area of the Surabaya City Health Center. A sample of 100 respondents was selected using the Slovin formula. The independent variable is self-efficacy, while the dependent variable is motivation. Data analysis was performed using a linear regression test with the SmartPLS program. The results showed that self-efficacy had a significant effect on the motivation of hypertensive crisis patients.

Keywords: Self-efficacy, Increased Motivation, Hypertension Crisis, Surabaya Health Center

INTRODUCTION
Hypertension is a condition in which systolic blood pressure ≥ 140 mmHg and or diastolic ≥ 90 mmHg after repeated measurements are taken at least twice. Some studies show that the incidence of hypertension is usually high in upper-middle-income countries and occurs in older age groups shifting to lower-middle-income countries and in younger age groups. Hypertension does not show symptoms so a person does not realize that he has hypertension or underestimates the disease. This condition results in uncontrolled hypertension because patients do not comply with medication which will have an impact on accelerating the occurrence of hypertension complications [1].

The prevalence of hypertension will continue to increase, it is estimated that by 2025 there will be 1.5 billion cases of hypertension in developing countries including Indonesia. The World Health Organization (WHO) and The International Society of Hypertension (ISH) note that there are currently 600 million people with hypertension worldwide and 3.3 million people die every year [2]. The results of Basic Health Research [3] show that the prevalence of hypertension in Indonesia is based on the results of measurements in the population aged ≥18 years is 34.11%, while the prevalence of hypertension in East Java based on the results of measurements in the population aged ≥18 years is 36.32% [4].

Hypertension is a chronic disease that cannot be cured, meaning that when a hypertensive person's blood pressure is normal, it does not signify a cure but rather that the condition is being controlled. Uncontrolled

blood pressure in hypertensive patients can lead to hypertensive crises. Hypertensive crises are categorized into two types. The first type is a hypertensive urgency. This category is characterized by extremely high blood pressure without causing noticeable organ damage. Although there are no signs of acute organ damage, the elevated blood pressure still needs to be carefully and gradually lowered over a few hours to days to prevent further complications. The second type is a hypertensive emergency. This is a more serious situation where extremely high blood pressure has already caused damage to vital organs such as the brain, heart, kidneys, or blood vessels. Examples of complications include stroke, heart attack, heart failure, or brain hemorrhage. In a hypertensive emergency, blood pressure must be lowered immediately through intravenous treatment in a hospital setting to prevent further organ damage and save the patient's life. Hypertensive crises, whether urgent or emergent, are medical emergencies where blood pressure rises suddenly and is often accompanied by symptoms such as blurred vision, unconsciousness, confusion, weakness, shortness of breath, or chest pain. If not treated properly, these conditions can be fatal, as they may cause damage to target organs such as the heart, brain, and kidneys, and can even result in death[5].

Some of the causes of hypertension crises include those related to behavior, genetics or the presence of other complications. One of the things needed by hypertensive patients in preventing hypertension crises is motivation in controlling blood pressure. The results of the study show that there are still around 44.4% of hypertension patients who have low motivation in treating hypertension [6]. Other studies have also suggested that motivation is significantly related to self-care for hypertensive patients which includes medication, blood pressure measurement, low-salt diet, physical exercise, non-smoking and alcohol restriction [7]. Motivation is an encouragement or driving force that comes from within hypertensive patients to make efforts to prevent hypertension crises. Motivation serves to direct the behavior of hypertensive patients to prevent hypertension crises [8].

Based on the opinion [8] that the motivation of hypertensive patients is effective in preventing the occurrence of hypertension crises, it is necessary to further explore the factors that determine this motivation. Previous research emphasized the importance of the concept of self-efficacy [9–11]. The self-efficacy approach aims to increase individual confidence in their own abilities [12]. Using the social learning theory from Bandura, self-efficacy is seen as an important component in various models of education and health promotion [10]. Self-efficacy is a person's belief in their ability to perform actions that are in accordance with their goals, and have a significant impact on an individual's life [10]. Self-efficacy, or self-efficacy in the context of health promotion, self-efficacy plays an important role in motivating individuals to adopt and maintain healthy behaviors.

Bandura (1997)[13] explained that self-efficacy affects the way a person thinks, acts, and feels. When a person has a high level of self-efficacy, they are more likely to engage in health-promoting behaviors because they believe they have control over their health outcomes. In contrast, those with low self-efficacy tend to feel hesitant to take the necessary actions to improve their health because they feel inadequate.

Recent research shows that individuals with high levels of self-efficacy tend to have stronger motivation in achieving goals, as they are more confident in overcoming challenges and obstacles that may be encountered. For example, a study by Lestari, Mutmainna, Irmayani (2024)[9] found that there was a relationship between self-efficacy and motivation in hypertensive patients in controlling blood pressure at the Poli Interna of Dr. Tadjuddib Chalid Makassar Hospital. In addition, the latest research related to self-efficacy with the title

"Self Efficacy and Healthy Behavior in Lifestyle Modification of Hypertensive Patients" conducted by Fatmawati, Marthilda Suprayitna, Istianah, (2021)[10], then "Self-efficacy and lifestyle modification in hypertensive patients in Banda Aceh by Rahmi, Ridwan, Rizkia (2021) [11]. Then a study explored the analysis of factors related to the self-efficacy of treatment in hypertensive patients Sundari, Irawan, Palimbo (2023)[12].

The persistent issue of high hypertension rates and the behavior of hypertensive patients that leads to hypertensive crises, coupled with findings from previous research, has led this study to focus on the role of self-efficacy in motivating patients, particularly those suffering from hypertensive crises. The novelty of this research lies in its emphasis on patients experiencing hypertensive crises, as previous studies have predominantly focused on general hypertensive patients. Additionally, this study is conducted in Public Health Centers in Surabaya, an urban area where hypertension is particularly prevalent.

METHODS

This study is an analytical observational research using a cross-sectional approach. The population in this study is hypertension patients in the working area of the Surabaya City Health Center. The selected samples in this study are some hypertension patients who are domiciled in the working area of Pucang Sewu Health Center, Tambak Rejo Health Center, and Pacar Keling Health Center Mulyosari Health Center, Surabaya City. The sample size in this study using the Slovin formula was obtained with a sample size of 96 and then rounded to 100. The independent variable in this study is self-efficacy and the dependent variable is motivation. The data analysis used was a linear regression test processed with the SmartPLS program.

RESULT

The study analyzed the demographic characteristics, gender, age, education level, and length of suffering from hypertension from the sample studied.

Table 1. Patient Demographic Characteristics

Demography	Category	Frequency	Pesentase
Gender	Male	27	27
	Female	73	73
	Total	100	100
Age	30-40 years old	9	9
	41-50 years old	19	19
	51-60 years old	29	29
	>60 years old	43	43
	Total	100	100
Education	Elementary school	13	13
	Junior High School	18	18
	Senior high school	48	48
	College	21	21
	Total	100	100
HT duration	< 2 years	32	32
	2-5 years	30	30
	> 5 years	38	38
	Total	100	100

In this study, data were collected to assess the gender distribution within the sampled population. The results indicate that out of the total respondents, 27% were male and 73% were female. In other words, females dominated the sample population, with a significantly higher percentage than males. This distribution provides a clear picture of the gender proportion disparity within the studied group, showing that the number of females is nearly three times greater than the number of males.

In the age category, there are 9 people aged 30-40 years, 19 people aged 41-50 years, 29 people aged 51-60 years, and 43 people over 60 years old. Based on the level of education, there are 13 people with elementary education, 18 people with junior high school education, 48 people with high school education, and 21 people with higher education education. Based on the length of time suffering from hypertension, 32 people had suffered from hypertension for less than 2 years, 30 people who had hypertension for a long time between 2-5 years, and 38 people who had suffered from hypertension for more than 5 years.

In addition to the characteristics of the respondents, research variables will also be explained. The research variables in this study will be categorized into 3 categories. This categorization is only carried out on the description of the variables, but the processing of the linear regression test is carried out using the total score of the respondents' answers. The first step is to convert the answer score into a percentage. The percentage is obtained by dividing the respondent's total score by the maximum total score that the respondent should have obtained. Then continue with the categorization of variables using the following rules:

1. The high category if the respondent gets a score of more than 75% to 100% of the total answer score if the respondent fills in with the highest score
2. Medium category if it gets a score of 51% to 75% of the total answer score if the respondent fills in with the highest score
3. Low category if it gets less than or equal to a score of 50% of the total answer score if the respondent fills in with the highest score

Table 2. Description of Research Variables

Variable	Category	Frequency	Percentage
Self Efficacy	Fair	51	51
	Good	49	49
	Total	100	100
Increased Motivation	Fair	49	49
	Good	51	51
	Total	100	100

This data describes the level of self-efficacy or self-confidence of the population studied. Based on the results of the analysis, there were 51 people who had a sufficient level of self-efficacy, and 49 people who had a good level of self-efficacy. This data shows an almost balanced distribution between those who feel quite confident in their abilities and those who feel very confident.
This data illustrates the level of motivation within the studied population. According to the analysis, 49 individuals exhibited a sufficient level of motivation, while 51 individuals demonstrated a good level of motivation. This distribution indicates that motivation is fairly evenly spread between those with sufficient and good levels. Understanding these levels of motivation is crucial for evaluating the effectiveness of current interventions and strategies aimed at motivating individuals, as well as for designing improved programs to enhance motivation in the future.

Then by cross-tabulation to determine the relationship between self-efficacy and motivation with the full table as follows:

Table 3. Cross-tabulation of the Relationship between Self Efficacy and Motivation

Category		Increased Motivation		Total
		Fair	Good	
Self Efficacy	Fair	30 58.80 %	21 41.20 %	51 51.00%
	Good	19 38.80 %	30 61.20 %	49 49.00%
Total		49 49.00 %	51 51.00 %	100 100.00 %

The results of the analysis showed variations in motivation based on the respondents' self-efficacy categories. In the

"Enough" category, there were 51 respondents with 30 of them showing sufficient motivation (58.80%) and 21 respondents showing good motivation (41.20%). In the "Good" category, out of 49 respondents, 19 respondents (38.80%) showed sufficient motivation, while the majority, namely 30 respondents (61.20%), showed good motivation. These results indicate that good self-efficacy is positively correlated with high motivation, with the largest proportion of the "Good" category indicating good motivation

Furthermore, to ensure the presence or absence of influence, a simple linear regression test is carried out. Here are the full results:

Table 4. Results of self-efficacy linear regression test with motivation

Variable	Coefficient	Test t	Significance	R square
Self Efficacy	0.588	5.939	0.000	0.265
Intercept	24.874	6.849	0.000	

The results of this study demonstrate that self-efficacy significantly influences motivation in hypertensive crisis patients. The regression coefficient of 0.588 indicates that an increase in self-efficacy is accompanied by a corresponding increase in the motivation of these patients. The t-test yielded a value of 5.939 with a significance level of 0.000, confirming that the effect of self-efficacy on motivation is statistically significant at a 95% confidence level. An R-square value of 0.265 suggests that self-efficacy accounts for approximately 26.5% of the variation in motivation among hypertensive crisis sufferers. Therefore, self-efficacy is a crucial factor to consider when aiming to enhance motivation for treatment and disease management in hypertensive crisis patients.

DISCUSSION

The results of this study show that self-efficacy has a significant influence on motivation in hypertensive crisis patients. The regression coefficient of 0.588 indicates that increasing self-efficacy can substantially increase the motivation of hypertensive crisis patients in managing their health conditions. This result is in line with Bandura's theory (1997)[13] which states that self-efficacy is the main predictor in determining how strong an individual's efforts are in facing challenges and how long they can survive in difficult situations. With a high level of self-efficacy, people with hypertensive crises are more likely to feel able to adhere to their treatment plan, which in turn increases motivation in undergoing treatment.

In addition, a significant t-test (5.939) with a p-value of <0.001 showed that the influence of self-efficacy on motivation was not a coincidence, but rather a very strong and consistent relationship. This emphasizes the importance of self-efficacy in the management of hypertension crises, which supports previous research that has found that self-efficacy is closely related to health behaviors, including adherence to medication and lifestyle changes [14]. In this context, interventions aimed at improving self-efficacy, such as coping skills training or patient education, can have a significant impact and need to be carried out to increase the motivation of people with hypertensive crises to comply with their medication.

However, an R square value of 0.265 indicates that although self-efficiency plays an important role, other factors also affect the motivation of hypertensive crisis patients that this model does not reach. These factors may include social support, perception of illness, as well as other psychological factors such as anxiety or depression [15]. Therefore, while increasing self-efficacy is a crucial step, a more holistic approach that considers a variety of other psychosocial factors may be more effective in increasing overall motivation in people with hypertensive crisis.

Bandura (2016)[16] said that three aspects in self-efficacy need to be understood because self-efficacy has an

important role in the patient's healing process, namely: 1) Magnitude related to the degree of difficulty of health conditions, 2) Strength, which is the patient's expectations in relying on his or her abilities, and 3) Generality, which is the patient's confidence in his abilities. According to Pervin & John, Bandura (2016)[16], individuals will have high self-efficacy when they are motivated to undergo treatment. If this condition is met, then high self-efficacy will affect one's motivation for treatment; The higher the self-efficacy, the stronger the motivation to achieve healing. This is reflected in great efforts and perseverance in facing the obstacles that exist. Patients who have high self-efficacy will undergo a therapy program consistently, and despite the difficulties, they do not give up easily, but rather persist to find the right solution. They will also try harder to face challenges in the future.

In addition, high self-efficacy also helps patients overcome obstacles that may arise, such as discomfort due to lifestyle changes or challenges in maintaining adherence to drug therapy. When patients have strong confidence in their ability to manage hypertension, they tend to be more proactive in seeking information, following medical recommendations, and motivating themselves to achieve optimal health outcomes.

CONCLUSION

In addition, high self-efficacy also helps patients overcome obstacles that may arise, such as discomfort due to lifestyle changes or challenges in maintaining adherence to drug therapy. When patients have strong confidence in their ability to manage hypertension, they tend to be more proactive in seeking information, following medical recommendations, and motivating themselves to achieve optimal health outcomes.

Self-efficacy is a key factor that contributes to the motivation of hypertensive crisis sufferers. Interventions that focus on improving self-efficacy, such as skills training and patient education, are needed to help people with hypertensive crises increase motivation, which can ultimately prevent hypertensive crises from occurring.

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