



**HIGH SELF-EFFICACY STRONGLY PREDICTED SELF-MANAGEMENT
AMONG HYPERTENSIVE PATIENTS IN PALEMBANG**

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ABSTRACT

Hypertension as a chronic disease with a major sign of increased blood pressure is becoming a problem globally. Increased blood pressure can be the cause of various other chronic diseases such as coronary artery disease and stroke. As an effort to prevent these complications, hypertensive patients need good and sustainable self-care. Self-efficacy is one of the factors that contribute to good self-care. This study aims to determine the effectiveness of self-efficacy on self-management in hypertensive patients. This study was conducted in Palembang with 35 respondents with hypertension aged >17 years. Data was taken through self-efficacy and self-management questionnaires that have been declared valid and reliable. Most 35 respondents have elementary and high-school education backgrounds, high self-efficacy, and moderate self-management. Self-efficacy strongly predicts self-management, although age and educational background do not significantly influence it.

Keywords: hypertension; self-efficacy; self-management

How to cite (in APA style)

Pristya, I. Y., Nurachmah, E., & Maria, R. (2025). Effectiveness of Cold Compress in Preventing Hematoma in Post Percutaneous Coronary Intervention (PCI) Patients: A Systematic Literature Review. *Indonesian Journal of Global Health Research*, 7(2), 1165-1172. <https://doi.org/10.37287/ijghr.v7i2.5807>.

INTRODUCTION

Globally, cardiovascular health is an indicator of individual health. Cardiovascular problems will increase the mortality rate related to cardiovascular diseases and strokes (Tsao et al., 2023). Hypertension is a cardiovascular disease characterized by an increase in blood pressure as a result of systemic disorders of the circulatory system (Harding & Kwong, 2019). Some factors that can contribute are smoking habits, irregular physical activity, poor sleep quality, unhealthy nutrient intake, increased blood sugar, and increased cholesterol (Hinton et al., 2018; Tsao et al., 2023). Uncontrolled blood pressure (increased) is the top 3 factors (47.5%) of health indicators that can increase mortality (Roser, 2021; Tsao et al., 2023).

Increased blood pressure is associated with the occurrence of cardiovascular diseases (coronary arteries, heart failure, and stroke) (DeWit et al., 2017; Lewis et al., 2017). In individuals with systolic pressure exceeding 139mmHg and diastole exceeding 89mmHg can be categorized as individuals with hypertension. Even with a systolic pressure of 120-139mmHg and a diastolic pressure of 80-89, it has led to hypertension problems (Dattani & Roser, 2023; Tsao et al., 2023). It is found in many individuals with unhealthy lifestyles and obesity problems being the main cause (Rush & Yan, 2017; Tsao et al., 2023).

Hypertensive heart disease occurs due to increased heart work in pumping blood throughout the body. Increased heart work is influenced by increased peripheral resistance. The heart works harder to accommodate blood that is well distributed throughout the body to the peripheral areas. Peripheral resistance can increase with an increase in the number of blood vessels due to obesity so that the distribution becomes wider and requires a higher working

capacity of the heart. The next factor is that blood flow to the heart in a circulatory condition is disturbed, so the heart pump work decreases (Harding & Kwong, 2019).

The prevalence of hypertension reaches 1.29 billion adult individuals (>29-78 years old), 46% of whom are unaware of an increase in blood pressure (World Health Organization, 2021). The incidence of hypertension is spread in various parts of the world with the prevalence of Asia in the top 10. While the top 3 countries are China, India, and the US, although apart from India, the other two countries have experienced a declining prevalence in the last 25 years (Boateng & Ampofo, 2023). Of the 90 countries that have hypertension patients, it is estimated that around 31.1% carry out hypertension treatment management (Mills et al., 2020).

Hypertension with various consequences can increase the rate of illness and death, especially in poor blood pressure control. Treatment of hypertension includes a healthy lifestyle through improved food intake, increased physical activity of at least 30 minutes per week, medication compliance management, and adequate sleep time (Hu et al., 2003; Tsao et al., 2023). To have optimal blood pressure, individuals with hypertension need to do good hypertension management. Self-management is an individual's habit in managing their health effectively, in research related to blood pressure management. Some of the things that must be managed by individuals with hypertension related to lifestyle are increased physical activity, control of stress, control of weight, do not consuming alcohol and cigarettes (Brugnara et al., 2016; Rush & Yan, 2017).

Success in self-management can be attributed to several factors, namely family support, financial support, availability of health services, disease-related information, and individual confidence. Individuals with hypertension can live with this disease for a long time, so self-management of hypertension management must be able to be done independently (Zhang et al., 2020). Good hypertension management can significantly control blood pressure in patients (ALkautsar & Kartinah, 2023; Kurnia et al., 2023; Silvanasari et al., 2024). Self-management apps require confidence to maintain a healthier lifestyle. One way to improve self-management is through increasing self-efficacy in patients.

Self-efficacy is an individual's belief and ability to do habits to do various activities. Self-efficacy in patients with chronic diseases is urgently needed to improve hypertension care management (Agastiya et al., 2020; Warren-Findlow, Jan; Seymour, Rachel B.; Huber, 2012). Self-efficacy is significantly related to self-care (Kurdi et al., 2024; Warren-Findlow, Jan; Seymour, Rachel B.; Huber, 2012). Significantly, self-efficacy is strongly and positively correlated with hypertension self-management (Kurdi et al., 2024). In patients with good self-efficacy, controlled blood pressure is also found (Asnaniar et al., 2021). For that reason, aim of this research is to find correlation between self-efficacy and self-management in hypertension patient.

METHOD

Design of research is quantitative survey analytic research. Data on self-efficacy and self-management of hypertension were obtained through a questionnaire made by the researcher and declared valid (r calculative > r table) and reliable (Cronbach's $\alpha=0.88$). Data collection was carried out in the work area of the health centre for 37 respondents who had met the set criteria, namely suffering from hypertension, being >17 years old, and being able to fill out questionnaires well. Self-efficacy questionnaires (24 statements) and self-management (25 statements) about hypertension management include diet, medication adherence, alcohol drinking habits, smoking habits, blood pressure checks, stress, and weight control. The results

of the study were analyzed univariate, bivariate (Kendall's tau-b), and multivariate (logistic regression) using Jamovi.

RESULT

Table 1.
Characteristics Respondent's (n=35)

Variables	Median (years old)	Min-Max (years old)
Age	52	32-59
	f	%
Education		
Elementary	15	42.86
Middle high school	4	11.43
High School	12	34.29
College	4	11.43
Self-efficacy		
Low	0	0
Moderate	16	45.71
High	19	54.29
Self-management		
Less	0	0
Moderate	18	51.43
Good	17	48.57

The results showed that most respondents had an elementary school education (15, 42.86%), a middle age of 52 years, good self-efficacy (19, 54.29%), and moderate self-management (18, 51.43%).

Table 2.
Bivariate and Multivariate Analysis of Self-Efficacy and Self-Management

Independent variables	Correlation*		Regression**		R ²
	τ	p-value	β	p-value	
Age	-0.183	0.212	-0.252	0.088	0.578
Education	0.218	0.175	0.198	0.727	
Self-efficacy	0.777	<0.001	6.498	0.010	
Intercept	-	-	-4.584	0.293	

*correlation analysis with Kendall's tau-b with self-management as dependent variable

**multivariate analysis with logistic regression with self-management as dependent variable

Based on the correlation data from the characteristics of the respondents, it can be seen that age and education level are not significantly correlated (p<0.001) with self-management. Meanwhile, a significant correlation was seen between self-efficacy and self-management. The correlation between the two is also strong with a correlation coefficient of 0.777 and is positive, meaning that self-efficacy and self-management increase in the same direction. Self-efficacy also significantly affects self-management (p= 0.010) and can increase self-management by 6.498%.

DISCUSSION

Hypertension as a chronic disease requires good management in controlling the causes of increased blood pressure (Anjani et al., 2023; Hutomo et al., 2021; Jainurakhma et al., 2021). Several factors are related to blood pressure, such as proper nutritional intake, regular blood pressure checks, control of alcohol and cigarette intake, routine medication management (Frisca et al., 2024). Proper nutritional intake is needed when treating hypertensive patients. The recommended diet is high in fiber, low in fat and glucose. Apart from that, weight reduction in patients who are obese is also needed because obesity is one of the causes of increased blood pressure.

Hypertension management in the context of behavior change models, one of which is the Pender health promotion model, which shows factors that can influence behavior include self-efficacy and commitment to managing oneself in the behavior change process (Jainurakhma et al., 2021; Koerniawan & Frisca, 2023). Self-efficacy in hypertension management is an individual's belief in the hypertension management that will be carried out. Belief is the basis for individuals to take various actions to control blood pressure. This is necessary because hypertension management is carried out continuously throughout the patient's lifetime. Respondents have high self-confidence regarding the effects of alcohol and cigarettes and all respondents can avoid both in an effort to control blood pressure. However, in the aspects of exercise, diet and weight control, respondents are still not confident that they can follow a proper diet and exercise regularly. Respondents monitor blood pressure by checking with health services during monthly check-ups or when there are complaints regarding increased blood pressure.

Self-confidence in this study was mostly good, in line with this, research by Asnaniar's (2021) showed that 58.8% of respondents had good self-confidence and could significantly control blood pressure in patients. Self-efficacy related to self-management is the result of this research. The same thing was found in research (Agastiya et al., 2020; Tan et al., 2021a) that self-efficacy is significantly related to the self-management behavior of hypertensive patients (p -value=0.000) and the better the self-efficacy, the better as well as patient self-management. Community-based education programs have been proven to be effective in increasing awareness among hypertension sufferers (Koerniawan et al., 2022; Zethira et al., 2024), including several alternative complementary therapies that can be an option in lowering blood pressure (Koerniawan et al., 2019, 2021). Increasing this belief as an attitude of hypertensive patients is one of the supporting factors in increasing routine control behavior (Koerniawan et al., 2019).

The results of the regression analysis show that self-management is significantly influenced by self-efficacy. The same results were also obtained in Bahari's (2019) research, showing that self-efficacy can have an influence (p -value=0.000) on the self-management behavior of hypertensive patients by 0.681. Tan et.al conducted a comprehensive and thorough synthesis of the available literature evaluating the association between self-efficacy and the performance of self-care behaviors in hypertension so that nurses can improve self-care through improving self-efficacy (Tan et al., 2021b). Self-efficacy is a crucial factor affecting patients' commitment to self-management by adjusting awareness and self-confidence with the capacity of individual confidence to manage health (Liu et al., 2024; Zimbudzi et al., 2017). Hypertension as a health-related stimulus, disease perception as an understanding of stimuli, self-efficacy as an intermediary factor, and self-management as a critical health behavior associated with positive health outcomes (Liu et al., 2024). Good self-efficacy based on previous practice can lower perceived barriers, hinder commitment (Koerniawan & Frisca, 2023) as well as self-management.

CONCLUSION

Self-efficacy influences the self-management of hypertensive patients. Increasing self-efficacy can improve self-management.

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