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**THE RELATIONSHIP BETWEEN SELF EFFICACY AND ADHERENCE TO
BLOOD PRESSURE CONTROL IN PATIENTS WITH HYPERTENSION IN THE
WORKING AREA OF THE REJOSARI HEALTH CENTER**

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ABSTRACT

Uncontrolled hypertension can cause complications that are dangerous for the sufferer's body. This requires adherence from the sufferer to control blood pressure. One of the things that can affect the patient's compliance in carrying out blood pressure control is self-efficacy. The purpose of this study was to determine the relationship of self-efficacy with adherence in controlling blood pressure in people with hypertension. This type of research is quantitative research with a cross sectional approach. This research was conducted in the working area of the Rejosari Health Center on July 06-16, 2022. The respondents in this study were 73 people with hypertension with purposive sampling techniques. Data collection was carried out using self-efficacy questionnaires and adherence in controlling blood pressure. The analysis carried out in the study was univariate and bivariate analysis with chi square statistical tests. The results showed that as many as 61.6% of respondents had high self-efficacy and 68.5% of respondents were obedient in controlling blood pressure. The results of the chi square obtained a p value of 0.000, so it can be concluded that there is a significant relationship between self-efficacy and adherence to controlling blood pressure in people with hypertension. The OR value was obtained at 7,238, meaning that respondents with high self-efficacy had a 7,238 times chance of being obedient in controlling blood pressure. This research can be used as a reference for future research on other factors that increase self-efficacy in controlling blood pressure such as motivation and family support.

Keywords : self efficacy, adherence to control blood pressure, hypertension

INTRODUCTION

Hypertension is one of the diseases that risks causing morbidity and mortality in the world. 22 A person is said to suffer from hypertension when the systolic blood pressure is 140 mmHg or more and the diastolic blood pressure is 90 mmHg or more. More than 90% of cases that occur in hypertension are primary hypertension. Usually primary hypertension can occur at the age between 30-50 years. In people with hypertension the severity depends on the underlying cause. Some factors that cause the occurrence of hypertension are genetics, age, gender, ethnicity, stress, obesity, lifestyles such as wrong diet, excessive consumption of alcohol and caffeine and the use of drugs. In addition, hypertension can also occur due to diseases such as, diabetes mellitus and vascular disorders (Black & Hawks, 2014).

Currently, hypertension is one of the diseases most suffered by the public. According to the World Health Organization (WHO) in 2015 about 1.13 billion people were diagnosed with hypertension worldwide. In Indonesia, based on Riskesdas in 2018, there are 69.5% of hypertension sufferers diagnosed by doctors in the age group of 75 years or more (Ministry of

Health of the Republic of Indonesia, 2019). Meanwhile, Riau province's hypertension prevalence rate in 2018 was 13.47% and increased in 2019 to 29.1%. Of the several puskesmas in Pekanbaru, Puskesmas Rejosari is one of the highest hypertension rates with the number of patients in 2021-2022 as many as 2537 hypertension sufferers (Riau Provincial Health Office, 2022).

Hypertension is often referred to as the silent killer, where sufferers often do not feel complaints due to the disease but only realize when complications have occurred. Hypertension can be prevented by controlling risky behaviors such as smoking, unhealthy diet, lack of physical activity, consuming alcohol as well as controlling stress. Several efforts have been made to prevent and control hypertension, one of which is compliance from sufferers (Ministry of Health of the Republic of Indonesia, 2019). Compliance is an increase in patient involvement voluntarily in preventing and following therapies that have been agreed with health care providers. Compliance with health recommendations is very important to do for people with chronic diseases. It is proven that healthy behaviors will have a direct impact on health. One such health behavior is adherence in carrying out treatment programs (Martos-2Méndez, 2015).

Compliance with the hypertension treatment program can be done by checking health and blood pressure regularly, consuming appropriate and regular drugs, a diet with balanced nutrition, doing physical activity and avoiding cigarettes, alcohol and other carcinogenic substances (Ministry of Health of the Republic of Indonesia, 2019). But now non-compliance with treatment is a global health problem and a barrier to management in chronic diseases including hypertension. Patients who do not comply with this treatment cause patients to fail to get therapeutic benefits that are proven to lower blood pressure and prevent the risk of other cardiovascular diseases (Tomaszewski et al., 2014). In addition, such non-compliance leads to increased utilization of health services, risk of re-hospitalization and death (Kawulusan et al., 2019).

According to data from the Ministry of Health of the Republic of Indonesia (2019) some non-compliance in the treatment of hypertension is 59.8% of people with hypertension do not take medicine because they feel healthy, 31.3% do not regularly visit health services, 14.5% use traditional medicines, 11.5% forget to take medicines and 12.5% use other therapies. One of the things that affects adherence in medicine is a change in behavior. Self-efficacy is an individual's self-regulation ability that can improve the success of treatment and self-care of people with hypertension. Self efficacy is the belief of a person that they can successfully perform certain behaviors to achieve the desired result (Lamarche et al., 2018).

Self efficacy will affect a person's ability to carry out disease prevention and management measures. Self-efficacy in people with hypertension will grow confidence in people with hypertension to be able to comply with hypertension management programs so that they can control blood pressure and prevent disease complications (Indarti, 2020). Based on this background, researchers are interested in conducting research on the relationship between

self-efficacy and adherence to controlling blood pressure in hypertensive patients in the Working Area of the Rejosari Health Center pekanbaru.

RESEARCH METHODS

This research is a quantitative research with a cross-sectional approach. The sample in this study was 73 hypertensive patients in the Working Area of the Rejosari Health Center in Pekanbaru. Sampling was carried out by purposive sampling with inclusion criteria for people with hypertension not due to pregnancy, not experiencing physical limitations and not experiencing loss of consciousness.

The instrument used to collect research data is the General Self Efficacy Scale (GSE) to measure self-efficacy and a blood pressure control compliance questionnaire taken from purwanti Nurfiti Sari (2019) research. The GSE questionnaire has been tested for validity with values between 0.76-0.90 and reliability with Cronbach Alpha 0.780. The compliance questionnaire controls the blood pressure validity test based on expert judgment stating all questions are valid as well as reliability test results with Cronbach Alpha 0.90.

Before distributing this research questionnaire, ethical clearance has been carried out to the STIKes Payung Negeri Pekanbaru ethics unit and declared to have passed the ethics test with letter number 0062/STIKES PN/KEPK/VII/2022 which is valid from July 03, 2022 to July 03, 2023. After all the data in this study were collected, univariate and bivariate data analysis was carried out. Univariate data analysis includes respondent demographic data as well as data on independent and dependent variables. Bivariate analysis was performed with chi-square statistical tests to see if there was a relationship of self-efficacy with adherence to blood pressure control in people with hypertension.

RESULTS AND DISCUSSION

The results of this study consisted of univariate analysis that explained the characteristics of respondents including age, gender, education, duration of hypertension, as well as measurement of self-efficacy and adherence to controlling blood pressure. In addition, the results of the study were also carried out in a bivariate manner which explained the relationship between self-efficacy and adherence to controlling blood pressure. The results of the characteristic analysis of respondents were as follows:

Table 1. Frequency Distribution Based on Characteristics of Hypertensive Respondents in Working Area of Health Center Rejosari Pekanbaru (n=73)

| Characteristics of Respondents | F | % |
|--|----|------|
| Age | | |
| Middle age (45-59 years old) | 32 | 43,8 |
| Elderly (60-74 years old) | 41 | 56,2 |
| Gender | | |
| Woman | 29 | 39,7 |
| Man | 44 | 60,3 |
| Education | | |
| SD | 7 | 9,6 |
| SMP | 20 | 27,4 |
| SMA | 33 | 45,2 |
| Diploma | 7 | 9,6 |
| Bachelor | 6 | 8,2 |
| Long time suffering from hypertension | | |
| 1-3 years | 39 | 53,4 |
| 4-6 years | 31 | 42,5 |
| More 7 years | 3 | 4,1 |

Table 1 shows more than half of respondents aged 41 (60-74 years) with the most gender being male at 44 (60.3%). Most of the respondents were unemployed as many as 33 (45.2%) with an average high school education level of 33 (45.2%). Most respondents have suffered from hypertension for 1-3 years, namely 39 (53.4%).

Hypertension is one of the diseases that can occur due to degenerative processes and the main risk factor for cardiovascular disease. The prevalence of hypertension increases with age. There were 22.4% of people with hypertension at the age of 18-39 years and increased to 54.5% at the age of 40-59 years and 74.5% at the age of 60 years and above (Ostchega et al., 2020). This is in accordance with the results of this study where the majority of respondents with hypertension aged 60-74 years were 56.2%. The increased risk of hypertension in the elderly is caused by a narrowing of the blood vessels so that the e-elasticity of the arteries is also reduced, not flexible and tends to become stiff. This situation causes the arteries to be unable to expand as the heart pumps and delivers blood to the arteries, resulting in little and no smooth blood volume (Ignatavicius & Workman, 2012).

Gender has a certain influence on several diseases, one of which is hypertension. In general, men suffer from hypertension faster compared to women who on average are only at risk about 7-10 years after menopause (Black & Hawks, 2014). This is because men have high systolic and diastolic blood pressure compared to women (Tri & Arum, 2019). In men aged 40-59 years there were 59.4% of people with hypertension while in women 49.9%. This figure increased in number at the age of 60 years and over to 75.2% compared to women who

only amounted to 73.9% (Ostchega et al., 2020). This is in accordance with this study where the number of male respondents is more than that of women, namely 60.3%.

The level of education can affect the onset of the disease. This is because a person who has a higher level of education has better cognitive abilities in receiving information and shaping behavior. The higher the education, the better a person's knowledge related to hypertension will be so as to increase their participation in the control of the disease (Sutrisno et al., 2018). This is in accordance with research that the prevalence rate of hyperteny in college graduates is lower at 38.5% compared to high school, which is 47.0% (Ostchega et al., 2020). The results of the study on self-efficacy measurement and adherence to controlling blood pressure can be seen in the following table:

Table 2. Frequency Distribution Based on Self Efficacy and Adherence to Control Blood Pressure of Hypertension Patients in the Working Area of the Pekanbaru Rejosari Health Center (n=73)

| Characteristics of Respondents | F | % |
|--|----|------|
| Self efficacy | | |
| Tall | 45 | 61,6 |
| Low | 28 | 38,4 |
| Compliance with blood pressure control | | |
| Obedient | 50 | 68,5 |
| Disobedient | 23 | 31,5 |

Table 2 shows that most respondents had high self-efficacy of 45 (61.6%) and were obedient in controlling blood pressure by 50 (68.5%).

Self efficacy can improve adherence in treatment programs. In addition, high self-efficacy can generate motivation from patients in adherence to treatment, thereby reducing treatment failure. Self-efficacy can also encourage individual control to maintain the behaviors that sufferers need in self-care according to their abilities and confidence to achieve treatment success (Soeparyani et al., 2022).

Self-efficacy is very important in improving adherence in hypertensive patients related to behavior so that it can be a mediator to change the quality of life, reduce symptoms and changes in physiological function. In addition, self-efficacy can also predict a person's compliance in self-care (Soeparyani et al., 2022). This is evident from the results of this study where some respondents have high self-efficacy as much as 61.6% and are obedient in controlling blood pressure as much as 68.5%.

The results of this study were also supported by a study on 84 hypertension respondents where 57.1% had high self-efficacy with a high level of adherence in taking medications as much as 38.1% (Kendu et al., 2021). Another study on 94 hypertension respondents also

stated that as many as 46.8% had high self-efficacy having a good category in the management of hypertension recurrence prevention, namely 44.7% (Annalia et al., 2019).

Bivariate analysis to see the relationship of self efficacy with adherence to controlling blood pressure with chi square test analysis is as follows:

Table 3. The Relationship of Self Efficacy with Blood Pressure Control Adherence Hypertension Patients in the Working Area of the Pekanbaru Rejosari Health Center

| Self Efficacy | Blood Pressure Control Compliance | | | | Total | | <i>p value</i> | OR |
|---------------|-----------------------------------|------|-------------|------|-------|-----|----------------|-------|
| | Obedient | | Disobedient | | N | % | | |
| | N | % | N | % | | | | |
| Tall | 38 | 84,4 | 7 | 15,6 | 45 | 100 | 0,000 | 7,238 |
| Low | 12 | 42,9 | 16 | 57,1 | 28 | 100 | | |
| Total | 50 | 68,5 | 23 | 31,5 | 73 | 100 | | |

Table 3 states that of the 45 respondents who have high self-efficacy, 38 (84.4%) are obedient in controlling blood pressure while as many as 28 respondents who have low self-efficacy there are 16 (57.1%) who are not obedient in controlling blood pressure. The results of the statistical test obtained a p value of 0.000 ($\alpha > 0.05$) meaning that there is a significant relationship between self-efficacy and adherence to controlling blood pressure. The OR value in this study was obtained 7,238, meaning that respondents with high self-efficacy had a 7,238 times chance of being obedient in controlling blood pressure.

Research conducted at the Ranotana Weru Manado Health Center in 2019 on 85 hypertension sufferers stated that there was a significant association of self-efficacy with adherence to taking medications with a p value of 0.000 (Kawulusan et al., 2019). This is supported by a study conducted on 48 people with diabetes mellitus stated that self-efficacy training has a significant influence on dietary adherence of people with diabetes mellitus with $p=0.000$ (Yaqin et al., 2018).

Self-efficacy plays a role in changing the confidence of individuals with high blood pressure so that sufferers can be motivated to always control blood pressure, where previously an unhealthy lifestyle became healthy, by managing and regulating a healthy lifestyle this habit what if successful will become a belief for hypertensive patients to be consistent in maintaining blood pressure.

CONCLUSION

Based on the results of self-efficacy studies in hypertensive patients in the high category (61.6%) and obedient in controlling blood pressure (68.5%). The results of the statistical test obtained a p value of 0.000 ($\alpha > 0.05$) meaning that there is a significant relationship between self-efficacy and adherence to controlling blood pressure. The OR value in this study was obtained 7,238, meaning that respondents with high self-efficacy had a 7,238 times chance of being obedient in controlling blood pressure.

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