

ANALYSIS OF SELF-MANAGEMENT BEHAVIOR AMONG HYPERTENSIVE PATIENTS IN PAYUNG SEKAKI PUBLIC HEALTH CENTER

Silvia Nora Anggraini ¹, Faridah Mohd Said ²,
Awaliyah Ulfah Ayudyhta Edzha ³, Dwi Elka Fitri ⁴, Isna Ovari ⁵,
Fitra Wahyuni ⁶ and Iftiana ^{7*}

^{1,2,3,4,5} Lincoln University College, Malaysia.

⁶ Universitas Jambi, Indonesia.

⁷ Sekolah Tinggi Ilmu Kesehatan Pekanbaru Medical Center, Indonesia.

*Corresponding Author Email: visseus@gmail.com

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Abstract

Hypertension is a significant risk factor for various health problems, including heart disease, stroke, and kidney disease. If left untreated or poorly managed, it can indeed contribute to premature death. The burden of hypertension extends beyond its prevalence, as it is a leading cause of global disease burden and overall health loss. The purpose of this study was to analyze self-management behavior among hypertensive patients in Payung Sekaki Public Health Center, Pekanbaru. This research is quantitative research with a descriptive-analytic approach with a cross-sectional design. The research sample is 74 samples. Data analysis uses descriptive statistics to describe the characteristics of each variable. The results of the study were from 74 respondents, 59 respondents (79.7%) had not adhered to the hypertension diet, 42 respondents (56.8%) had good physical activity, and 55 respondents (75.3%) experienced moderate stress. A total of 55 respondents (74.3) reduced their alcohol consumption. Self-management behavior in the working area of the Payung Sekaki Public Health Center has not been implemented effectively, especially adherence to diet, there are still many people who do not control their eating well, such as reducing the amount of salt in food and not eating foods that contain fat.

Keywords: Behavior, Hypertension, Self-Management.

INTRODUCTION

Globally, high blood pressure is one of the causes of premature death. Based on data from the World Health Organization (WHO), it is estimated that the prevalence of hypertension is 22% of the world's population, of which only a fifth make efforts to control their blood pressure. In 2018, high blood pressure was fourth out of the ten biggest diseases in the Riau Provincial Hospital Inpatient Service with a total of 5148 cases. Meanwhile, in Riau Province and Pekanbaru City, hypertension is ranked first among the types of non-communicable chronic diseases suffered by the elderly group (1).

The 2018 Basic Health Research (RISKESDAS) showed that based on examination results, the prevalence of hypertension increased nationally in the population aged over 18 years by 34.11% and in Riau Province by 29.14%. The Pekanbaru City Health Service reported that in 2017 there were 35,090 cases of hypertension. The number of patients with hypertension who received health services in Pekanbaru City in 2018 increased, where in 2017 it was 18%, and increased to 21% in 2018. In 2019, Payung Sekaki Public Health Center ranked third highest in hypertension in Pekanbaru after Simpang Tiga Marpoyan Public Health Center, the most cases were in the Payung Sekaki Public Health Center, namely 1718 people. Based on data from the Health Service, the results were taken (2).

Signs of hypertension include pain in the head or a feeling of heaviness in the nape, excessive dizziness, palpitations, rapid fatigue, blurred vision, ringing in the ears, and blood coming from the nose. Hypertension is high blood pressure, where the systolic is 140 mmHg or more, and the diastolic is 90 mmHg or more. Hypertension has a high risk of causing coronary heart disease, but it can also cause other disorders such as nerves, kidneys, and blood vessels, where blood pressure increases, increasing the risk faced. (3) High blood pressure can be prevented by making various efforts such as changing lifestyle. The lifestyle of patients with hypertension includes diet, reducing body weight, exercising frequently, reducing salt, avoiding smoking, not consuming alcohol, limiting foods high in potassium and caffeine, reducing stress, and continuing to monitor blood pressure (4). Controlling lifestyle is one way to prevent hypertension and the complications that may occur, such as adhering to the diet, controlling body weight, exercising frequently, consuming salt in moderation, staying away from cigarettes, and alcohol, limiting foods that contain high potassium, and caffeine, avoiding stress, as well as blood pressure control. (4)

Self-management behavior is an individual's capacity to behave well in diet, exercise, and emotional control. Self-management behavior aims to change lifestyle, such as checking blood pressure regularly, maintaining a normal weight, and eating nutritious food. (4) There are 5 Self-management behaviors including adhering to a diet, doing physical activity, controlling stress, not consuming alcohol, and not smoking (5). Self-management behavior is important to prevent health decline due to recurring illnesses. Self-management behavior is directed at carrying out good behavior in complying with diet, exercise, and controlling emotions independently. (6) Self-management behavior is a principle that prioritizes controlling behavior based on external factors. Apart from that, Self-management behavior is also a method that studies a person's behavior which was initially maladaptive and becomes adaptive. Further complications due to high blood pressure can be reduced by carrying out proper Self-management behavior. The Self-management behavior method can be carried out by providing related information, efforts to overcome problems, and providing support from various parties. Apart from that, efforts that can be taken are by implementing lifestyle changes by maintaining an ideal body weight, adjusting a diet such as a high potassium, calcium, low sodium diet, regular physical activity, exercise, not consuming alcohol, and reducing the amount of salt consumed. and stop smoking. (7)

Based on the results of research on hypertensive patients in the working area of Payung Sekaki Public Health Center, the patient said that he did not follow a hypertension diet and did not reduce salt consumption, the patient also rarely controlled his blood pressure, exercised, and did not want to quit smoking. 1 patient said that he always maintains his diet and always controls his blood pressure every month.

RESEARCH METHOD

This research is quantitative research with a descriptive research design. The technique for obtaining data is done by observation. This research was conducted at Payung Sekaki Public Health Center from December to May 2022. The population of this study was 267 hypertensive patients at the Payung Sekaki Public Health Center. The sample taken in this research was 74 people using the Slovin formula using the accidental sampling technique. Data analysis uses descriptive statistics to obtain an overview of the characteristics of each variable.

RESULTS

Characteristics of respondents such as age, gender of hypertension sufferers, and identifying self-management behavior in hypertensive patients were divided into five, including adhering to diet, physical activity controlling stress, limiting drinking alcohol, and not smoking. Data was obtained that the majority of respondents were in the early elderly category (Ministry of Health, 2009), namely 58 people (78.4%), and late elderly 16 people (21.6%). Of the 74 respondents studied in the Payung Sekaki Public Health Center working area, the majority of respondents were male, namely 32 people (43.3%), and 42 female respondents (56.7%). Of the 74 respondents studied in Payung Sekaki Public Health Center working area, the self-management behavior of hypertensive patients with indicators of adherence to diet stated that 59 people (79.7%) were non-compliant and 15 people (20.3%) were compliant. Of the 74 respondents who were studied in the working area of the Payung Sekaki Public Health Center, 32 people (43.2%) stated that with indicators of physical activity, hypertensive patients had poor activity and 42 people (56.8%) had good physical activity. Of the 74 respondents studied, the stress control indicator in hypertensive patients was in the mild stress category 13 people (17.6%), with 55 people in the moderate stress category (74.3%), with 3 people in the severe stress category (4.1%). Of the 74 respondents who were studied in the working area of the Payung Sekaki Public Health Center, the indicators of reducing alcohol consumption in hypertensive patients were 55 people (74.3%) with a low-risk category, 6 people with a moderate risk (8.1%) and 11 people with a dangerous risk (14.9%). Of the 74 respondents who were researched in the Payung Sekaki Public Health Center working area, the smoking cessation indicator in hypertension patients was in the low category of as many as 40 people (40.5%) and in the high category of as many as 44 people (59.5%).

Table 1: Characteristics of Research Variables

Variable	f	%
Age		
46-55 years	58	78.4 %
56-65 years	16	21.6%
Gender		
Male	32	43.3%
Female	42	56.7%
Compliance with diet		
Obedient	59	79.7%
Not Obedient	15	20.3%
Physical activity		
Not good	32	43.2%
Good	42	56.8%
Stress control	f	%
Mild	13	17.6%
Moderate	55	74.3%
Severe	3	4.1%
Total	74	100.0%
Reduce alcohol consumption		
Low risk	55	74.3%
Moderate Risk	6	8.1%
Risk of Danger	11	14.9%
Quit smoking		
Mild	30	40.5%
High	44	59.5%

DISCUSSIONS

Characteristics by age

The results of research carried out at the Payung Sekaki Public Health Center showed that the age characteristics determined by the Ministry of Health in 2009 were 46-55 years and 56-65 years. Age is one of the aspects that influences blood pressure. Age is associated with hypertension, where increasing an individual's age will influence increasing the risk of hypertension (8). This situation proves that age is one of the things that influences a person's blood pressure, where a person's risk of experiencing hypertension is higher at the age of 46-55 years when compared to those aged <46 years. This is in line with research by Aris Sugihartono, where old age has a higher risk of causing hypertension than young age (9).

The majority of individuals will experience an increase in blood pressure as they age. Systolic pressure will always increase until a person reaches the age of 80 years, while diastolic pressure will always increase until a person reaches the age of 55-60 years, then it will slowly decrease (9). Anderson's research shows that blood pressure always increases with age. Apart from that, Anderson's research also stated that as age increases, it will affect plasma renin levels, norepinephrine, BMI, and secondary high blood pressure. Based on these problems, the results of this study conclude that as age increases, there will be an increase in blood pressure, followed by a decrease in renin levels in plasma, and an increase in norepinephrine levels, BMI, and secondary blood pressure. An increase in BMI causes creatinine to increase which results in increased blood pressure retention (9). The researcher assumes that a person's age will influence blood pressure which will put them at risk of developing hypertension. This is because as a person gets older, the elasticity of blood vessels decreases, where the blood vessels shrink and become less elastic. Besides that, the older a person gets, the lower the sensitivity of blood pressure regulation in the form of the baroreceptor reflex. This condition is the reason why the older a person gets, the more blood pressure increases.

Characteristics by gender

The results of the study showed that the prevalence of hypertension in women was greater than in men, where the prevalence rate for women was 42 people (56.8%) and men were 32 people (43.2%). This condition is in line with Rachmat's research where hypertension is more common in women (51.54%) than men (38,465). Apart from that, these results are also in line with other research which states that women are more at risk of developing hypertension than men. This happens because women are associated with hormonal factors such as estrogen which play a role in increasing HDL levels. Heart attacks have a small risk in women aged 30-40 years, but are risky in men. Nowadays, many young people are affected by hypertension and also premenopausal women. At menopause, estrogen levels in women, which play a role in protecting blood vessels, will decrease, which is physiological because as a person gets older, the estrogen levels in the blood will decrease (9). The National Health and Nutrition Agency states that hypertension is more common in women than men. The existence of the obesity factor in men makes age insignificant in influencing a person's blood pressure (10). The researcher's assumption from the research results is that women are more at risk of developing hypertension than men. This condition is caused by women going through menopause and men not. When a woman is in menopause,

she will slowly lose estrogen levels, making women more susceptible to hypertension compared to men.

Characteristics of Self-Management Behavior indicators

Compliance with diet

The research results showed that of the 74 respondents, 15 (20.3%) of them stated that they adhered to the diet, and 59 (79.7%) of them admitted that they did not comply. respondent. Apart from that, it was also discovered that respondents were less compliant with the hypertension diet and did not control their diet and limit salt. This is by Indriati's research, where 26 people (43.3%) stated that they adhered to the hypertension diet and 34 people (56.7%) did not comply with the hypertension diet. In addition, non-compliant behavior in implementing a hypertension diet indicates repeated recurrences (11). A total of 80 people (57.2%) stated that they did not adhere to the diet. This is because not all respondents limit their salt consumption, and there are still many who say they often eat fast food because it is more practical and also more tasty (12).

It was also found that what causes a lack of adherence to the hypertension diet is a consistent lifestyle such as still consuming food that has a high fat and salt content. Compliance is a form of attitude that is formed due to the relationship between health workers and patients, where the patient has a plan for the future, understands the consequences, agrees to the plan made, and carries it out (12). Compliance is a person's behavior such as taking medication, following a diet, or changing lifestyle by treatment recommendations, and a person's adherence to the diet is motivated by the individual himself. Respondents with hypertension can recover according to their belief in the goals of the hypertension diet, such as not consuming foods high in fat and high in salt (12).

Physical activity

The research results showed that of the 74 respondents who had good activity, 42 people (56.8%) and those who had poor physical activity 32 people (43.2%), which means that patients who came to Payung Sekaki Public Health Center had implemented good physical activity. Good physical activity is carried out regularly every day for at least 30 minutes so that it can provide health to the body's organs. If you frequently do physical activity every day, it will also be beneficial for your body's health, and the results can be seen within 3 months (12). Physical activity is a series of muscle movements that can form energy from burning calories. Insufficient physical activity will increase the risk of hypertension and obesity. Apart from that, someone who does not do enough physical movement will have a fast heart rhythm and the heart muscle will function harder and often contract, so the harder and more often the heart works, the greater the pressure that will put pressure on the arteries. (12)

This research is in line with (13), namely that there is a significant correlation between physical activity and blood pressure (Pvalue 0.002), where people who do less physical activity have a 4,449 times greater risk of suffering from hypertension than people who do a lot of physical activity. Another study (14) also reported that there was a significant association between physical activity and blood pressure (Pvalue 0.000), where people who did minimal physical activity and exercise had a 44.1 times greater risk of suffering from hypertension than people who frequently did physical activity and exercise. This condition was supported when researchers carried out

research at the Sekaki Payung Sekaki Public Health Center including good and bad physical activity. The results of the questionnaire questions showed that around (56.8%) of the respondents who came to the Payung Sekaki Public Health Center had done good physical activity, while (43.2%) had not done good physical activity so it could be a risk factor for hypertension.

Stress control

The results of the research of 74 respondents at the Payung Sekaki Public Health Center showed that 13 respondents were mildly stressed, 55 respondents were moderately stressed, and 3 respondents were severely stressed. Stress is a physiological and psychological reaction shown by the body to emotional stimuli which is associated with environmental factors and the individual's living conditions. (12) Stress can cause high blood pressure due to sympathetic nerve activity which causes blood pressure to increase uncontrollably. (12) When individuals face stress, the hormone adrenaline can cause an increase in blood pressure through the narrowing of blood vessels and an increase in heart rhythm. If this condition continues, blood pressure will continue to increase. (12) Age is said to be one of the factors that causes stress, where increasing age will cause a person to experience stress more often. This condition is caused by a decrease in an individual's abilities such as vision, thinking, memory, and hearing.

Elderly people are more susceptible to stress caused by various things. This can be prevented with various efforts such as always taking care of your physical and psychological well-being and creating a comfortable environment. Apart from that, the family also has an important role in preventing the elderly from experiencing stress. Elderly women can limit their work because heavy work can risk causing stress. An elderly person should be able to carry out daily activities more relaxed. The research results show that 13 people (17.6%) experienced mild stress, 55 people (74.3%) experienced moderate stress, and 3 people (4.1%) experienced severe stress, s. From these results, 74 respondents at the Payung Sekaki Public Health Center found that stress can affect hypertension. This is in line with research where stress is significantly related to hypertension. (14) Other research also states that psychological stress is related to an increased risk of hypertension. (10)

When stress strikes, the body will carry out allostasis to maintain homeostasis in the body. The primary process that often occurs is the physical activity of the sympathetic nerves and the Hypothalamus-Pituitary-Adrenocortical axis (HPA-axis) which releases CRH, ACTH, and Glucocorticoids. This is one of the sources that stimulates the production of pro-inflammatory cytokines in the body. The release of cytokines and ROS disrupts endothelial function which can result in a narrowing of blood vessels which results in high blood pressure. (10)

Reduce alcohol consumption

Based on the results of research 4.6, respondents who consumed alcohol were low (74.3%), moderate (24.3%), and dangerous (14.9%). So the level of respondents' desire to reduce alcohol is high. These results are by the 2007 Riskesdas research (4), where various factors cause hypertension in individuals in urban areas, but alcohol consumption is stated to have no significant relationship to high blood pressure in Indonesia.

The results of the study show that consuming alcohol does not have a significant relationship to the incidence of hypertension in the working area of the Payung Sekaki Public Health Center. The respondents were elderly, so only a few respondents consumed alcohol, but the hypertensive respondents who consumed alcohol were known to have started hypertension when they were under 20 years old and consumed alcohol more than < 3 glasses/day thereby increasing the risk of developing hypertension. So at the Payung Sekaki Public Health Center, many respondents have reduced their alcohol consumption due to age and health factors.

Stop smoking

Based on the research results, table 4.7 shows that 74 respondents showed that research results showed that respondents who wanted to stop smoking were (59.5%) of the average respondents who wanted to stop smoking were men, while women rarely smoked.

Smoking is a modifiable factor. Cigarettes are associated with hypertension because the nicotine element in cigarettes has an impact on increasing blood pressure. Nicotine will seep into the blood vessels in the lungs and then be distributed to the brain. Next, the brain will respond to the adrenal glands to release adrenaline. This hormone will also play a role in constricting blood vessels, as a result the heart will work harder than usual. Oxygen in the blood will be replaced by carbon monoxide. This has an impact on blood pressure where the heart will work continuously to pump oxygen into the organs and other body tissues. (4)

Toxic substances contained in cigarettes cause an increase in high blood pressure. One of the substances in question is nicotine, where nicotine will create adrenaline and causes the heart to beat faster than usual. The frequency of heart rate and heart contractions will increase which in turn causes hypertension (4)

Based on the results of research at the Payung Sekaki Public Health Center (59.5%) people want to stop smoking due to health factors and want to maintain a better lifestyle. This condition is in line with the theory of planned behavior and Mc's research. Caul considers motivation to be an important thing that causes someone not to smoke for health reasons. This reason is directly related to smoking behavior.

CONCLUSION

It can be concluded that age influences the risk of developing hypertension with the age category 46-55, namely 47 (78.3%), and age 56-60, namely 13 people (21.7%). Women are more likely to suffer from hypertension, 34 people (56.7%) than men, 26 people (43.3%). Self-management behavior in hypertensive patients based on diet compliance was in the poor category for 21 respondents (44.7%) and in the good diet compliance category for 26 respondents (55.3%). Self-management behavior in hypertensive patients based on physical activity was in the poor category for 14 respondents (29.8%) and in the good category for 33 respondents (70.2%). Self-management behavior in hypertensive patients based on stress control was in the normal category 5 (10.6%), in the mild category 6 respondents (12.8%), and in the moderate category 27 respondents (57.4%). Self-management behavior in hypertensive patients is based on reducing alcohol consumption in the low category 39 respondents (83.0%), medium category 3 (6.4%), and dangerous category (10.6%). Self-management behavior in hypertensive patients is based on smoking

cessation in the low category of 22 respondents (46.8%) and the high category of 25 respondents (53.2%).

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