

Elements that Impact the Prevalence of Hypertension in the Senior Population

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ABSTRACT

A person is considered elderly if they are 60 years of age or older, have lost some of their capacity for adaptation, and require assistance with everyday tasks. Blood vessel pressure that frequently exceeds 140 mmHg (systole) and 90 mmHg (diastole) as a result of a primary illness or other unidentified factors is referred to be hypertension. The risk factors for hypertension are classified into two categories: risk factors that are unchangeable (genetics or inheritance), gender, and age; and risk factors that are modifiable (obesity or overweight, inactivity, stress, smoking, excessive alcohol and salt intake, and lack of exercise). This study has a cross-sectional design and a quantitative design. A questionnaire in the form of questions is the tool that is employed.

Keywords: elderly, hypertension, incidence of hypertension

BACKGROUND

A person is considered elderly if they are 60 years of age or older, have lost some of their capacity for adaptation, and require assistance with everyday tasks. Hypertension is defined as blood vessel pressure that, as a result of a primary disease or other unknown factors, frequently exceeds 140 mmHg (systole) and 90 mmHg (diastole) (Richards, 2008). According to InfoDATIN, the Indonesian Ministry of Health, hypertension, also known as high blood pressure, is defined as an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg in two measures spaced five minutes apart while the patient is sufficiently at rest or calm.

In 2015, the World Health Organization, or WHO, revealed that 1.13 billion people worldwide suffer from hypertension, which translates to 1 in 3 persons having a diagnosis of the condition. Every year, the number of individuals with hypertension rises. According to estimates, 9.4 million people die from hypertension-related causes each year, and 1.5 billion people worldwide will suffer from hypertension by 2025. More than 63 million Indonesians suffer from hypertension, according to 2018 Riskesdas data. According to measurement data, 34.1% of people in the population who are at least 18 years old have hypertension. In Indonesia, there are thought to be 63,309,620 cases of hypertension, although the death rate.

Hypertension is caused by various factors. The risk factors for hypertension are divided into risk factors that cannot be changed (heredity or genetics, gender, and age) and risk factors that can be changed such as obesity, lack of exercise, smoking, stress, excessive consumption of alcohol and salt (Ryan & Howes, 2002). Healthy lifestyle changes are carried out first before pharmacological procedures or medication processes are prescribed. What you have to do is exercise enough to lose weight, rest regularly, don't smoke, reduce coffee and alcohol consumption, have a low sodium diet, (Robinson, et al., 2013). For this reason, efforts need to

be made to provide health services for elderly people with one family member experiencing hypertension.

METHODS

This study has a cross-sectional design and a quantitative design. A basic random sample technique was used to choose the 39 senior hypertensive participants who made up the study's population. The Chi-Square statistical test was employed, followed by the usage of a question-based questionnaire. The incidence of hypertension is the dependent variable, whereas smoking behavior, family history, stress level, and food habits are the independent variables. A questionnaire is the measurement device this researcher is using. elements that affect the prevalence of hypertension in the senior population.

RESULTS

Respondent Characteristics

Respondent's Gender

Table 4.1. Gender distribution of respondents.

No	Gender	F	Percentage
1	Man	10	25,6
2	Women	29	74,4
Amount		39	100

Respondent's last education

Table 4.2. Distribution of respondents' latest education at Posyandu for the elderly

No	Last education	F	Percentage
1	Elementary School	19	48,7
2	Junior High School	8	20,5
3	Senior High School	7	17,9
4	D3/S1/S2	5	12,8
Amount		39	100

Variable characteristics

Relationship between family history and the incidence of hypertension

Table 4.3. The relationship between family history and the incidence of hypertension in Posyandu for the elderly

Variable	Asymp. Sig. (2-tailed)
Relationship between family history of hypertension and the incidence of hypertension	0,011

Based on table 4.3, it was found that from SPSS 25 calculations using the chi square test, the result was a sig (2-tailed) value of 0.011 <0.05, so it was concluded that there was a relationship between a family history of hypertension and the incidence of hypertension in the Posyandu for the elderly.

The relationship between smoking and the incidence of hypertension

Table 4.3. The relationship between smoking and the incidence of hypertension in Posyandu for the elderly.

Variable	Asymp. Sig. (2-tailed)
The relationship between smoking and the incidence of hypertension	0,000

Based on table 4.3, it was found that from SPSS 25 calculations using the chi square test, the result was a sig (2-tailed) value of 0.000 <0.05, so it was concluded that there was a relationship between smoking and the incidence of hypertension in the Posyandu for the elderly.

The relationship between diet and the incidence of hypertension

Table 4.4. The relationship between eating patterns and the incidence of hypertension in Posyandu for the elderly.

Variable	<i>Asymp. Sig. (2-tailed)</i>
The relationship between diet and the incidence of hypertension	0,001

Based on table 4.4, it was found that from SPSS 25 calculations using the chi square test, the result was a sig (2-tailed) value of 0.001 <0.05, so it was concluded that there was a relationship between diet and the incidence of hypertension in the Posyandu for the elderly.

The relationship between exercise habits and the incidence of hypertension

Table 4.5. The relationship between exercise habits and the incidence of hypertension in the Posyandu for the elderly.

Variable	<i>Asymp. Sig. (2-tailed)</i>
The relationship between exercise habits and the incidence of hypertension	0,000

Based on table 4.5, it was found that from SPSS 25 calculations using the chi square test, the result was a sig (2-tailed) value of 0.000 <0.05, so it was concluded that there was a relationship between exercise habits and the incidence of hypertension in the Posyandu for the elderly.

The relationship between stress and the incidence of hypertension

Table 4.6. The relationship between stress and the incidence of hypertension in Posyandu for the elderly.

Variable	<i>Asymp. Sig. (2-tailed)</i>
The relationship between stress and the incidence of hypertension	0,000

Based on table 4.6, it was found that from SPSS 25 calculations using the chi square test, the result was a sig (2-tailed) value of 0.000 <0.05, so it was concluded that there was a relationship between stress and the incidence of hypertension in the Posyandu for the elderly.

The relationship between family history and the incidence of hypertension in the elderly

From the results of the research, SPSS 25 calculations using the chi square test obtained a sig (2-tailed) value of 0.011 <0.05, it was concluded that there was a relationship between a family history of hypertension and the incidence of hypertension in the Posyandu for the elderly.

DISCUSSION

This is in line with the theory put forward by (Riley & Bluhm, 2012) which states that a person tends to suffer from high blood pressure if both parents also suffer from high blood pressure. According to WHO, a family history indicating high blood pressure is the strongest risk factor for someone to develop hypertension in the future. This suggests that inherited genes, and not just environmental factors (such as diet or social status), play a large role in determining blood pressure.

In the researcher's opinion, the results of the study prove that heredity does not play an important role and determines how likely people are to suffer from hypertension, but if left unchecked it will cause signs and symptoms. Knowing that parents have hypertension, you

should regularly check your blood pressure and avoid lifestyles that can increase blood pressure. According to researchers' assumptions, even if you have a family history of hypertension, if you have good physical activity, the symptoms of hypertension will be reduced.

Based on the research results, it was found that the majority of respondents at the Posyandu for the elderly did not have a family history of hypertension, 24 people or 61.5% of the total respondents, 39 people. The results of filling out questionnaires and in-depth interviews with respondents (elderly) at the Posyandu for the elderly most of the respondents said they did not know whether their parents suffered from high blood pressure or not. It's just that respondents differentiated between high blood pressure and complaints of dizziness or not. If we look at the level of education, almost half of the respondents at the Posyandu for the elderly have elementary school education, 19 people or 48.7% of the total respondents of 39 people. So, in the researcher's opinion, it is possible that this has an influence on the level of knowledge of respondents regarding hypertension.

The relationship between exercise habits and the incidence of hypertension in the elderly

From the results of SPSS 25 calculations using the chi square test, a sig (2-tailed) value of $0.000 < 0.05$ was obtained, it was concluded that there was a relationship between smoking and the incidence of hypertension in the Posyandu for the elderly.

This is in line with what was stated by Sheps (2015), namely that people with an inactive lifestyle are more susceptible to high blood pressure. Doing regular exercise not only maintains body shape and weight, but can also lower blood pressure. Apart from that, by doing regular exercise, especially yoga, brisk walking, jogging, cycling, swimming and gymnastics, you can reduce blood pressure by 5-10 mmHg.

In the opinion of researchers, exercise habits are very important in preventing hypertension. Regular exercise can improve overall physical and spiritual health. The exercise you do doesn't need to be heavy exercise, just light exercise, for example brisk walking, jogging, cycling or swimming. Sport is a form of planned and structured physical activity, which involves repetitive body movements and is aimed at improving physical fitness. Regular exercise can improve overall physical and spiritual health. The body's metabolism will improve physically and mentally.

Based on the research results, it shows that the majority of respondents at the Posyandu for the elderly do not exercise regularly every day and suffer from moderate hypertension, 20 people or 50.3% of the total respondents of 39 people.

This is in accordance with the theory put forward by (Vandrey, Umbricht, & Strain, 2011) that blood pressure will increase during exercise, but if you exercise regularly your body will be healthier and may have lower blood pressure than those who do not do light or heavy exercise.

In the opinion of researchers, physical activity and exercise that is good, correct, measurable and regular will increase physical fitness which is important for maintaining body stamina. The habit of exercising from an early age will help good bone growth, thereby reducing the risk of developing hypertension, especially in old age.

The relationship between smoking behavior and the incidence of hypertension in the elderly

Based on the research results, it was found that from SPSS 25 calculations using the chi square test, a sig (2-tailed) value of $0.000 < 0.05$ was obtained, so it was concluded that there was a relationship between smoking and the incidence of hypertension in the Posyandu for the elderly.

This is in line with what was stated by (McInnes, 1995) that smoking and hypertension are the two most important risk factors for atherosclerosis, coronary heart disease, acute

myocardial infarction and sudden death. Smoking causes 5.4 million people to die every year. In many studies that have been carried out, it is explained that the acute effects caused by smoking include increasing heart rate and blood pressure with increasing levels of the hormones epinephrine and norepinephrine due to activation of the sympathetic nervous system. Many studies also say that the long-term effects of smoking are increased blood pressure due to increased inflammatory substances, endothelial dysfunction, plaque formation, and vascular damage.

In the opinion of researchers, smoking habits in society are very difficult to avoid. The very dangerous impact of smoking can mainly cause hypertension, which is not yet widely recognized by the general public. Reducing smoking requires the support of many parties. Not only smokers, but family and the environment are also important.

The relationship between stress levels and the incidence of hypertension in the elderly

Based on the research results, it was found that from SPSS 25 calculations using the chi square test, a sig (2-tailed) value of $0.000 < 0.05$ was obtained, so it was concluded that there was a relationship between stress and the incidence of hypertension in the Posyandu for the elderly.

This is in line with what was stated by (Schneiderman, Ironson, & Siegel, 2005) that stress is a non-specific condition experienced by sufferers due to emotional, physical or environmental demands that exceed the power and ability to cope effectively. Stress is thought to occur through sympathetic nerve activity (nerves that work during activity). Increased sympathetic nerve activity results in intermittent (erratic) blood pressure. Temporary personality disorders can occur in people who face stressful situations. If stress lasts for a long time it can result in a persistent increase in blood pressure.

In the opinion of researchers, factors that can cause elderly people to experience stress are due to feeling dissatisfied with daily activities, being dissatisfied with their role as parents, not telling their family about problems and always thinking about the problems they have. Therefore, to control each individual's stress level, this can be done by carrying out activities that entertain him or herself and trying to open up the various burdens of thought experienced by people around him and who can be trusted, such as grandchildren or relatives, so that the burden of thought can be resolved and there is no pressure. excess in the elderly.

The relationship between eating patterns and the incidence of hypertension in the elderly

Based on the research results, it was found that from SPSS 25 calculations using the chi square test, a sig (2-tailed) value of $0.001 < 0.05$ was obtained, so it was concluded that there was a relationship between diet and the incidence of hypertension in the Posyandu for the elderly.

According to (McInnes, 1995), hypertension is related to a combination of lifestyle factors such as lack of movement (inactivity) and diet. Diet is an important factor that determines blood pressure. Increasingly consume foods that contain lots of salt and foods that contain saturated fats such as red meat, poultry, butter, whole milk, coconut and palm oil. Increasing your intake of fresh fruit and vegetables can lower blood pressure. Adopting a diet that is low in saturated fat can clinically lower blood pressure.

In the opinion of researchers, diet is important in the health of the elderly. If diet is not regulated properly it will affect human health. The diet of elderly people at the Posyandu for the elderly is not good. This can be seen from the habit of eating fatty and salty foods (43.6%). This is possibly due to the habit patterns of elderly people which are difficult to change since they sometimes actually cause hypertension or even poor nutritional balance. The problem of malnutrition is often experienced by the elderly as a result of decreased appetite due to the disease they suffer from. This also occurs because the activities of this group have decreased while their food intake has not been reduced or even excessive.

Nutritional intake is very necessary for healthy elderly people to maintain their quality of life. Meanwhile, for sick elderly people, nutritional intake is needed for the healing process and to prevent further complications from the disease they suffer from, such as hypertension.

CONCLUSION

There was a relationship between family history (p value = 0.011), smoking (p value = 0.000), eating patterns (p value = 0.001), exercise habits (p value = 0.000), and stress (p value = 0.000), according to research done by researchers with 39 respondents. Health professionals are advised to suggest community health promotion regarding hypertension. Since more public awareness leads to greater adherence to hypertension treatment. There should be regular and ongoing counseling in order to lower the amount of hypertension patients at the Community Health Center.

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