Relationship between a healthy lifestyle and hypertension levels in the elderly in Caben hamlet, Sumbermulyo district, Bantul

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Abstract

Hypertension is a degenerative disease that often occurs in the elderly (elderly). Unhealthy lifestyle such as lack of physical activity, diet high salt and fat, and smoking habits are important risk factors. This research aims to determine the relationship between a healthy lifestyle and the level of hypertension in the elderly in Caben Hamlet, Kalurahan Sumbermulyo, Bantul. The research uses quantitative methods with a cross-sectional design. Sample totaling 67 elderly people, taken using a purposive sampling technique according to the inclusion criteria. Lifestyle data Health was collected using a questionnaire, while the level of hypertension used a sphygmomanometer digital. Data analysis was carried out univariate and bivariate using the Chi-Square test. Research result shows that the majority of respondents have a healthy lifestyle in the good category (58.2%) and hypertension level the most common is grade I hypertension.. The bivariate test shows that there is a significant relationship between healthy lifestyle with the level of hypertension in the elderly (p-value < 0.05), where the elderly with a healthy lifestyle Good people tend to have more controlled blood pressure than elderly people with poor lifestyles. The conclusion is that adopting a healthy lifestyle contributes to controlling blood pressure in the elderly.

Keyword : Hypertension; Unhealthy; Lifestyle

1. Introduction

The elderly (seniors) are a population group that continues to experience problems globally increasing number from year to year. According to the World Helath Organization, (2022) in By 2030, almost 17% of the world's population will be aged 60 years and over, an increase from 1 billion people in 2020 it will be 1.4 billion people. Even in 2050 it is estimated that this number will be will double to reach 2.1 billion people. This condition shows that the world including Indonesia, is entering the growing population phase, where the proportion of the population elderly people are increasing. The number of elderly people increased significantly to reach 29 million people or around 12% of the total population in 2024. The government estimates this figure will continues to increase until it reaches 20% or around 50 million elderly people in 2045 (Kemenkes, 2024).

In general, elderly people will experience physical, mental and social setbacks, among others An example of physical decline in the elderly that is often found is the vulnerability of the elderly to diseases, especially degenerative diseases (Saragih et al., 2023). One example of disease degenerative is hypertension, hypertension is a serious disease that should not be considered trivial, often referred to as the "Silent Disease" because of a person's signs and symptoms those affected by this disease are not visible. Hypertension is the main cause of death worldwide, it is estimated that there are 1.28 billion adults aged 30-79 years in the world who suffer from hypertension. Then only 21% are able to control their lifestyle.

In Indonesia, the prevalence of hypertension in Indonesia is based on Basic Health Research (Riskesdas) 2018 in the population aged 18 years and over reached 34.1%, this disease is the most occurs mostly at ages 31-44 years (31.6%), ages 45-54 years (45.3%), and ages 55-64 years (55.2%) (Marlita et al., 2022) . Based on data from Basic Health Research (RinKesDas) year In 2018, the prevalence of hypertension in Indonesia, which has a population of around 260 million reached 34.1%. The highest prevalence is in South Kalimantan with a figure reaching 44.1%, while the lowest prevalence is in Papua with a figure of 22.2% (Kusumaningtias et al., 2024). The highest prevalence of hypertension in Yogyakarta is first in Mount Kidul (39.25%), second in Kulon Progo (34.70%), third in Sleman (32.01%), fourth in Bantul (29.89%), and the last one in Yogyakarta City (29.28%) (Utami & Matahari, 2024).

Many elderly people with hypertension die due to several risk factors such as stroke, dementia, diabetes, and other risk factors, so these conditions must be treated immediately handled so that the death rate of the elderly due to hypertension at least decreases. possible efforts This can be done to

reduce the death rate by improving style healthy living (Manuoutty dalam Permatasari Ananda Cahya et al., 2022). His height The prevalence of hypertension is also caused by unhealthy lifestyles, such as lack of exercise or physical activity, smoking habits, and consumption of high-fat foods (Saragih et al., 2023) . Therefore, healthy lifestyle changes are like maintaining a pattern eating well, not smoking, and getting enough physical activity can help prevent and reduce the risk of hypertension (Tanpake Rina et al., 2021). Lifestyle is an important factor that can influence people's lives overall and has an association with the incidence of hypertension (Amelia et al., 2024).

The problem of hypertension in Caben Hamlet, Sumbermulyo District, Bantul, is a concern. Various risk factors contribute to the occurrence of hypertension, one of which is style unhealthy life.

2. Method

This research was conducted in Caben Hamlet, Sumbermulyo District, Bantul in July 2025. This research uses a descriptive analytic design, researchers use a research approach cross-sectional to identify whether there is a relationship between the independent variables and dependent variable. Cross-sectional is a type of research in which data or observations from independent and dependent variables are collected simultaneously at one particular time (Sugiyono, 2021). The population in this study were all elderly people in Caben Hamlet, with a sample of 67 people selected using purposive sampling technique.

The data collection tool used is a lifestyle questionnaire consisting of 20 items questions and a sphygmomanometer to measure blood pressure. This research uses Inclusion criteria include elderly people who are willing to be research respondents and elderly people aged ≥ 60 years. Data analysis in this research uses analysis univariate and bivariate. Univariate analysis was carried out to see the frequency distribution as well percentage of each variable. Meanwhile, bivariate analysis is used for Test the relationship between the two variables studied using the Chi Square test.

3. Results and Discussion
3.1. Respondent characteristics

In this study, 67 respondents were obtained with several characteristics of respondents in show in table 1

Table 1. Distribution of characteristics of elderly respondents based on age, gender occupatio, educatio

Research Component	Frequency	%
Respondent Characteristics		
Age		
Elderly 60-70 years	54	80.6%
Elderly (old) 75-90 years	12	17.9%
Very old age > 90 years	1	1.5%
Total	67	100%
Gender		
Man	27	40.3%
Woman	40	59.7%
Total	67	100%
Work		
Farmer	31	46.3%
Trader	6	9.0%
Doesn`t work	22	32.8%
Retired civil servant/ABRI	5	7.5%
Other	3	4.5%
Total	67	100%
Education		
Not finished eleentary school	15	22.4%
SD	15	22.4%
SMP	25	37.3%
SMA	7	10.4%
Diploma/S1	5	7.5%
Total	67	100%

Based on table 1, it can be seen that the majority of elderly people are aged 60 – 7 year as many as 54 people (80.6%). The dominant gender of the elderly is female, with a total of 40 people (59.7%), the most common occupatdominant level of education for elderly people is junior high school with a total of 25 people (37.3%ion of elderly people is farming 31 people (46.3%), while the most).

The risk of hypertension in women increases after entering menopause, because in this phase estrogen hormone levels decrease drastically and can even disappear. A decrease in the hormone estrogen causes damage to endothelial cells, which triggers the formation of plaque on the walls of blood vessels so that th3e blood vessels narrow. Besides Therefore, decreasing estrogen levels also has an impact on reducing HDL levels, namely good cholesterol which functions to maintain the elasticity of blood vessels. This condition ultimately increases blood pressure in the vessels, which then causes hypertension (Salsabila Elsa, 2024).

3.2. Healthy lifestyle

Table 2. Healthy lifestyle

Healthy lifestyle	Frequency	%
a. Good	39	(58.2%)
b. Not good	28	(41.9%)
Total	67	(100%)

Based on table 2, it shows the healthy lifestyle of the elderly in Caben hamlet, sub-district Sumbermulyo, Bantul had the most in the good category with 39 people (58.2%), meanwhile in the bad category were 28 people (41.9%).
Based on the research results, it can be concluded that the majority are elderly in Caben Hamlet have a good healthy lifestyle, such as eating balanced nutritious food, doing regular physical activity, and avoiding risky habits such as smoking or consuming excessive coffee. However, there are still 41.9% of elderly people who live their lifestyle not appropriate, which can increase the risk of degenerative diseases such as hypertension.

Diet is one of the main factors that can still be controlled in the event hypertension. Consuming red and ground meat, fast food, high fat foods, and sweet desserts can trigger an increase in blood pressure (Firdaus & CHN Suryaningrat, 2020). This is in line with research conducted by Afnam et al., (2024) that diet is one of the factors that plays a role in the occurrence of hypertension. Eating patterns are closely related to the type and amount of food consumed. By Therefore, to reduce the risk of hypertension, respondents must be more carefulchoose the food to consume.

3.3. Hypertention levels

Table 3. Hypertension levels

Hypertention levels	Frequency	%
a. Normal	12	(17.9%)
b. Prehypertension	27	(40.3%)
c. Hypertention level I	19	(28.4%)
d. Hypertention level II	9	(13.4%)
Total	67	(100%)

Based on table 3, the level of hypertension in Caben Hamlet, Sumbermulyo District, Bantul shows that some elderly people experience hypertension in the pre-hypertension category, namely as many as 27 people (40.3%). Meanwhile, the level I hypertension category follows the number was 19 people (28.4%), the normal hypertension category was 12 people (17.9%), and the hypertension category level II 9 people (13.4%). So overall, the data above shows that the majority elderly in Caben Hamlet have blood pressure above normal (prehypertension and hypertension), which is an important concern and requires health education, lifestyle changes, as well as regular monitoring of blood pressure to prevent further complications.

These results are in line with research conducted by (Rajagukguk Angelita Hosana et al., 2025) it was found that of the 91 respondents studied, the majority had hypertension uncontrolled due to an unhealthy lifestyle, namely 44 respondents (83.0%). Meanwhile, there were 24 respondents with controlled hypertension (63.2%). Hypertension has a strong relationship with lifestyle, which influences habits and behavior somebody. Several lifestyle factors that can cause hypertension include excessive salt consumption, alcohol, coffee consumption, smoking habits, and lack of it physical activity (Aryzki et al., 2022).

3.4. Relationship between a Healthy Lifestyle and Hypertension Levels

Table 4. Chi Square Test Results
Relationship between a Healthy Lifestyle and Hypertension Levels

Healthy lifestyle	Hipertention levels								Total		p-value	τ
	Normal		Prehypertension		Hypertention level I		Hipertention level II					
	F	%	F	%	F	%	F	%	F	%		
Good	10	14.9%	22	32.88%	5	7.5%	2	3.0%	39	58.2%	0.000	0.507
Not good	2	3.0%	5	7.5%	14	20.9%	7	10.4%	28	41.8%		
Total	12	17.9%	27	40.3%	19	28.4%	9	13.4%	67	100.0%		

Based on table 4, it shows that elderly people have a healthy lifestyle well, the majority had a level of hypertension (pre hypertension) as many as 22 people (32.8%). Elderly people who have unhealthy lifestyles mostly have levels There were 14 people (20.9%) with hypertension (grade I hypertension). Elderly people who have a lifestyle healthy and have at least 2 levels of hypertension (Hypertension level II) (3.0%).

Statistical test results of bivariate analysis using the chi square test regarding the relationship between styles healthy living with high levels of hypertension in the elderly in Caben Hamlet, Sumbermulyo District, Bantul obtained a p-value: 0.000 (P<0.05). These results show that there is significant relationship between a healthy lifestyle and the level of hypertension in the elderly. Besides Therefore, the coefficient of coefficient (τ) value of 0.507 indicates the strength of the relationship between Both variables are in the medium category with a positive relationship. That means playing The better the lifestyle, the lower the elderly experience of hypertension.

These results are in line with research conducted by Febriyona Rona et al., (2023) with the title "The Relationship between Lifestyle and the Incident of Hypertension in the Elderly in the Region West Limboto Community Health Center work" which states that there is a relationship between style living with the incidence of hypertension in the elderly in the West Limboto Community Health Center Working Area, with research results showing that the majority of respondents have a good lifestyle 35.5% experienced grade 2 hypertension and respondents who had a lifestyle did not well the majority experienced grade 2 hypertension amounting to 31.6%, and the p-value was 0.0006 (<(< 0.05). It can be concluded that the better the lifestyle, the higher the blood pressure of the elderly with hypertension can be controlled. From the results of research on 76 respondents, it is known as many as 25 respondents (32.9%) experienced grade 1 hypertension, with an average blood pressure systolic was 142.6 mmHg and the average diastolic was 91.1 mmHg.

These results are also in line with research conducted by Maulidia Septimar et al., (2024) who argue that there is a relationship between lifestyle and the incidence of hypertension caused by the respondent's lifestyle, such as unhealthy eating patterns with consuming salty and fatty foods, and lack of physical activity can cause people are more susceptible to increased blood pressure. Research conducted by Laeliyah et al., (2023) regarding the relationship between lifestyle and the incidence of hypertension in the elderly where this research also shows that there is a relationship between lifestyle and The incidence of hypertension among elderly people in Kedungwilut Village, Bandung District, Tulngagung Regency, with a positive correlation and very strong correlation strength, shows that The better the lifestyle, the more normal the blood pressure in the elderly.

4. Conclusion

Healthy Lifestyle for the Elderly in Caben Hamlet, Sumbermulyo District, Bantul Most of them are in the good category, namely (58.2%). Part of the level of hypertension in the elderly in Caben Hamlet, Sumbermulyo District, Bantul large in the Pre Hypertension category, namely (40.3%). There is a significant relationship between a healthy lifestyle and level hypertension in the elderly in Caben Hamlet, Sumbermulyo District, Bantul with a value of p value: 0.000 (<0.05). The close relationship between a healthy lifestyle and the level of hypertension is moderate with a value of $\tau = (0.507)$

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