

The Relationship Between Lifestyle Behavior And Hypertension In The Elderly St. Angela Samarinda

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Abstract

Hypertension Is A Health Problem In All Parts Of The World And A Major Cardiovascular Disease Risk Factor. The Emergence Of Non-Communicable Diseases (Ptm) Is Generally Caused By The Lifestyle Of Each Individual Who Pays Little Attention To Health. The Study Aimed To Identify The Relationship Between Elderly Behavior And The Incidence Of Hypertension And To Analyze The Relationship Between Elderly Behavior And The Incidence Of Hypertension In St. Angela Samarinda. The Research Was Conducted From March To May 2023 In St. Angela Samarinda. The Research Uses A Correlational Method With A Cross-Sectional Approach, And The Sample Is Older Adults Who Suffer From Hypertension And Are Aged Between 58-70 Years. As Much As 40 Percent; (2) There Is A Significant Relationship Between Lifestyle Behavior And The Incidence Of Hypertension, That There Are Some Unfavorable Lifestyle Behaviors That Cause Hypertension; And (3) Lifestyle Behavior That Causes Hypertension Is Consuming Excess Salt Every Day, Likes To Consume Fatty Foods, Namely Chicken And Beef, And Smoking Habits Or Smoking Status.

Keywords:Lifestyle, Hypertension, Older Adults

Date of Submission: 23-06-2023

Date of Acceptance: 13-07-2023

I. INTRODUCTION

Hypertension is a health problem in all parts of the world and a major cardiovascular disease risk factor. Hypertension is also referred to as a non-communicable disease. Non-communicable diseases are still a health problem of concern in Indonesia. This is due to the emergence of non-communicable diseases caused by the lifestyle of each individual who pays little attention to health [1]. According to data released by the Ministry of Health of the Republic of Indonesia, hypertension and other heart diseases account for more than a third of the causes of death, where hypertension is the second cause of death after stroke. According to WHO, older adults are middle-aged (45-59 years), elderly (60-74 years), old elderly (75-90 years), and very old age (over 90 years). Globally, the elderly population is predicted to continue to increase.

The Ministry of Health of the Republic of Indonesia in 2018 explained that an increase in life expectancy for the elderly population in Indonesia impacts increasing health problems experienced by older adults. At an advanced age, blood pressure tends to be high, so older adults are more at risk of developing hypertension. Hypertension is blood pressure that exceeds normal limits. One complication that arises from hypertension suffered by older adults is a stroke. Lifestyle and behavior that cause hypertension can be prevented by avoiding the factors that cause hypertension by adjusting diet, correct lifestyle, consuming 1 teaspoon of salt per day, regular physical activity such as walking/exercising 30 minutes per day, avoiding drinking coffee, don't smoke, avoid cigarette smoke and alcohol and have a balanced diet [2].

The study aimed to identify the relationship between elderly behavior and the incidence of hypertension and to analyze the relationship between elderly behavior and the incidence of hypertension in St. Angela Samarinda.

II. RESEARCH METHODS

The research was conducted from March to May 2023 in St. Angela Samarinda. The research used the correlational method, namely research aimed at finding a relationship between the independent variable, namely the behavior of older adults, and the dependent variable, namely the incidence of hypertension. The approach used is a cross-sectional approach, a type of research that emphasizes the measurement/observation of independent and dependent variable data only once, at one time [3]. Respondents in the study were all members of the elderly group at St. Angela Samarinda, as many as 42 people. The research data collection technique used

instruments, namely (1) a standardized questionnaire with indicators, namely the behavior of older adults towards the incidence of hypertension; and (2) observing or examining blood pressure to measure the researcher's hypertension using a sphygmomanometer.

Independent data processing begins with calculating the score. Each respondent's answers to all questions are added up, compared with the expected number, then multiplied by 100%, and the result is a percentage [4]. The formula used is $N = Sp/Sm \times 100\%$. Description: N = Value obtained; Sp = score obtained, and Sm = maximum score. Criteria: 40-60% (mild category), 21-39% (moderate category), and <20% (poor category). While the dependent data processing, namely after the observation was carried out, the results were obtained, namely:

1. Score 1 (mild hypertension category): Systole: 140-159 mmHg with Diastole: 120-90 mmHg
2. Score 2 (moderate hypertension category): Systole: 160-179 mmHg with Diastole: 120-90 mmHg
3. Score 3 (severe hypertension category): Systole: 180-209 mmHg and Diastole: 120-90 mmHg.

Furthermore, the questionnaire data were edited, coded, entered, and cleaned.

III. RESULTS AND DISCUSSION

A. Respondent's Lifestyle Behavior

Measurement of lifestyle behavior variables of 42 members of the St. Angela Samarinda, the respondent of this study, used a Likert scale questionnaire with 4 choices of 14 statement items so that the ideal score interval was 14-56. The measurement results were 30-50 score intervals with an average score of 40.97 and a standard deviation 5.03. Dividing the score of the measurement results of this variable consists of bad, medium, and good categories. Table 1 presents the distribution of respondents according to these three categories.

Table 1. Distribution of Respondents by Lifestyle Behavior Category

Lifestyle Behavior		Total	Percentage
Score Intervals	Category		
14 – 27	Bad	0	0,00
28 – 42	Currently	25	59,50
43 - 56	Good	17	40,50
Total		42	100,00

Source: Processed Data (2023)

Based on Table 1 above shows that there were no respondents who had lifestyle behaviors that were classified as bad, but only around 40.50% were classified as good categories, and respondents had moderate lifestyle behaviors (not classified as good and not classified as bad) as many as 59.50%. Based on this distribution and the average score, which is also not in the good category, it can be stated that several inappropriate lifestyle behavior items are causing the low lifestyle behavior score.

Table 2 presents the average score for each item of the lifestyle behavior questionnaire to reveal these behaviors.

Table 2. Average Score of Each Lifestyle Behavior Item

Behavior	Average	Behavior	Average
Items-1	2,47	Items-8	2,95
Items-2	2,50	Items-9	2,64
Items-3	2,83	Items-10	2,64
Items-4	3,00	Items-11	2,76
Items-5	2,62	Items-12	3,52
Items-6	2,71	Items-13	3,64
Items-7	3,04	Items-14	3,62

Source: Processed Data (2023)

Items with an average score of less than 2.75 are thought to have contributed greatly to the low lifestyle behavior score or to be the cause, so the lifestyle behavior score is not in the good category. It can be seen in Table 2 that in item-1 and item-2, behavior regarding excessive salt consumption, item-5 and item-6 behavior regarding preferences for consuming fatty meat and chicken, and item-9 and item-10 behavior regarding smoking habits. The results of this study are the results of research [5] that a person's behavior is very influential on the emergence of hypertension, including consuming excessive salt, smoking, coffee consumption, and obesity

B. Respondent's Blood Pressure

1. Diastolic Blood Pressure

The diastolic blood pressure measurements showed that all respondents indicated that they had hypertension at the interval of 90-128 mmHg with an average of 98.92 mmHg and a standard deviation of 8.95. How big is the potential indication? The distribution is presented in the following table 3.

Table 3. Distribution of Respondents by Diastolic Blood Pressure Category

Diastolic Blood Pressure		Total	Percentage
mmHg	Category		
90 – 99	Light	18	42,90
100 – 109	Currently	18	42,90
≥110	Heavy	6	14,20
Total		42	100,00

Source: Processed Data (2023)

Based on the data in Table 3, it can be seen that the potential for respondents to experience hypertension based on diastolic blood pressure, around 85.80% is classified as a mild category and moderate category where the potential for both categories is balanced, and the other around 14.20% has the potential to be classified as severe hypertension. This study's results align with research [6], which states that poor behavior has a 2.61 times greater risk of experiencing hypertension.

2. Systolic Blood Pressure

The respondent's potential for hypertension based on systolic blood pressure is almost the same as that of diastolic blood pressure. The results of systolic blood pressure measurements were at intervals of 130-195 mmHg with an average of 166.26 mmHg and a standard deviation of 12.48. The potential of respondents experiencing hypertension based on systolic blood pressure distribution is presented in Table 4.

Table 4. Distribution of Respondents According to the Systolic Blood Pressure Category

Systolic Blood Pressure		Total	Percentage
mmHg	Category		
<140	Normal High	1	2,40
140 – 159	Light	5	11,90
160 – 179	Currently	28	66,70
≥180	Heavy	8	19,00
Total		42	100,00

Source: Processed Data (2023)

Table 4 shows that there was only 1 respondent who had normal (high normal) systolic blood pressure; 19.00% had severe hypertension, most of which around 66.70% had moderate hypertension, and the rest, around 11.90 % classified as a mild hypertension category. This study's results align with the results of research [6] that poor behavior has a 2.61 times greater risk of experiencing hypertension.

C. Trends in the Relationship between Lifestyle Behavior and Blood Pressure

The trend of the relationship between lifestyle behavior and blood pressure using the average cell is presented in Table 5.

Table 5. Average Cell Table for the Relationship between Lifestyle Behavior and Blood Pressure

Lifestyle Behavior	Average Diastolic Blood Pressure	Average Systolic Blood Pressure
Currently	100,16	166,72
Good	97,11	164,11

Table 5 shows that the average diastolic and systolic blood pressure is lower in the good category of lifestyle behavior compared to the moderate category. This shows a tendency for a negative relationship between lifestyle behavior and blood pressure, that the better the lifestyle behavior, the lower the pressure tends to be.

Computational analysis results using the SPSS program; Lifestyle behavior with diastolic blood pressure has a value of $r=-0.338$ with probability= 0.028 , and lifestyle behavior with systolic blood pressure has a value of $r=-0.407$ with probability= 0.007 . Because the probability value is less than 0.05 , it can be stated that there is a significant relationship between lifestyle behavior and diastolic blood pressure, and systolic blood pressure. The negative correlation coefficient means that the worse the lifestyle behavior, the higher the blood pressure. The result of this inferential analysis is just that there is a relationship between lifestyle behavior and the incidence of hypertension, that some respondents' unhealthy lifestyle behaviors cause them to experience hypertension. This is in line with research conducted at the WilkerPeukan Bada Health Center, Aceh Besar District, which obtained results similar to this study which stated that smoking behavior is related to hypertension in hypertensive patients [7]. Another similar study conducted at the Palembang Pembina Health Center on patients with hypertension stated that there was a relationship between smoking behavior and hypertension [8].

D. Analysis of the Causes of Hypertension

To find out the lifestyle behavior that causes hypertension in the respondent group, a search was carried out on the scores of the questionnaire items on the results of measuring the lifestyle behavior variables. In the previous description, it was stated that 6 behavioral items had an average score of less than 2.75 which could be divided into 3 behavioral groups, namely: (1) consuming excess salt every day; (2) liking to consume fatty foods, namely chicken and beef; and (3) smoking habit or smoking status.

The following describes the potential of respondents for each lifestyle behavior that causes them to experience hypertension, namely as follows:

1. Behavior related to salt consumption is measured by 2 question items. All respondents admitted to consuming more than 6 grams of salt daily; 4.80% said it was always, 42.90% said it was often, and 52.40% said it was sometimes. Likes to consume foods containing salt, such as salted fish, all respondents said they liked to consume; 2.40% admit that they always; 45.20% admitted often; and 52.40% admitted sometimes.
2. Behavior related to preferences for consuming fatty foods, for consumption of chicken meat all respondents like; 4.80% admit that they always; 28.60% admitted often; and 66.70% admitted sometimes. All respondents also like beef consumption; 28.60% often admitted, 71.40% admit that they sometimes, and no one admits that they consume it daily.
3. Behavior related to smoking; 16.70% said they had never smoked; 38.10% admitted to being smokers, and 45.20% smoked only occasionally.

The results of this study are the results of research [9] that there is a relationship between lifestyle and the incidence of hypertension in the working area of the Batalaiworu Health Center, Muna Regency. Furthermore, the study's results [10] showed a relationship between the lifestyle factor of smoking and the occurrence of hypertension in hypertensive patients in Environment III Sei Putih Timur II Working Area of the Rantang Medan Health Center. Thus, the findings in this study also reinforce how important it is to maintain lifestyle behavior to control blood pressure, which can prevent dangerous diseases such as hypertension.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusion

Based on the results of research and discussion, it can be concluded as follows:

1. There are 60% of respondents have moderate behavior, which causes a low lifestyle behavior score, and 40 percent good behavior;
2. There is a significant relationship between lifestyle behavior and the incidence of hypertension, and the existence of some unfavorable lifestyle behaviors causes hypertension.
3. Lifestyle behavior that causes hypertension is consuming excess salt daily, eating fatty foods like chicken and beef, and smoking habits or smoking status.

B. Suggestion

1. For older adults, pay attention to the following.
 - a. Stop consuming excess salt by cooking yourself or not eating at stalls, reducing the use of salt in cooking by highlighting other flavors, namely using chilies and spices, avoiding canned food, and salted fish.
 - b. In consuming meat, you should choose white meat or chicken without skin; meat is processed by roasting, boiling, or steaming, and maintaining ideal portions, namely not too often and limiting portions to taste.
 - c. For those with a smoking habit to stop or reduce, namely smoking only at certain moments.
2. For the families of older people to help develop (and supervise) a diet program for salt, meat fat, and smoking habits.
3. To the advisors of the elderly group and health workers at the local Health Center to continue to provide education and motivation about the importance of maintaining lifestyle behaviors to prevent hypertension which can cause other dangerous diseases.

4. To other researchers, to improve this research by conducting research involving other hypertension factors or researching different topics to improve the health status of the elderly population.

BIBLIOGRAPHY

- [1]. Main Results Of Riskesdas 2018.
https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/hasil-riskesdas-2018_1274.pdf.
- [2]. Ministry Of Health Of The Republic Of Indonesia Directorate Of Health Promotion And Community Empowerment In 2023.
- [3]. Nursalam. 2011. The Concept And Application Of Nursing Research Methodology, Thesis Guidelines, Thesis, And Nursing Research Instruments. Salemba Medica, Jakarta.
- [4]. Arikunto, S. 2008. Research Procedures A Practice Approach. Rineka Cipta, Jakarta.
- [5]. Nurhidayat. 2016. Family Behavior In Controlling Risk Factors For Hypertension In Village Communities In Ponorogo. *Journal Of K. Mesencephalon*, 2 (4): 260-266.
- [6]. Anggraeny, N. And S. Martini. 2020. The Relationship Between Smoking Behavior And Systolic Blood Pressure And Diastolic Blood Pressure In Ship Crews In The Work Area Of The Palangkaraya Port Health Office. *MTPH Journal* 4 (2): 191-202.
- [7]. Fitria, Amin GM, Khaira N. 2014. Retrospective Study Of Smokers' Risk Factors In Patients With Hypertension In The Work Area Of The Peukan Bada Public Health Center, Aceh Besar District, Year. *Nasuwakes Team Health Journal*. 2015;8(1):14-22.
- [8]. Firmansyah, M.R. 2017. Relationship Between Smoking And Coffee Consumption With Blood Pressure In Hypertension Patients. *J Health*. 8(2):263- 268
- [9]. Hamria. 2020. The Relationship Between The Lifestyle Of Hypertension Patients And The Incidence Of Hypertension In The Working Area Of The Batalaiworu Health Center, Muna Regency. *Journal Of Nursing* Volume 4 No. 01.
<https://stikes-kendari.e-journal.id/jk/article/view/239> (Accessed January 15, 2023)
- [10]. Sitorus, R.S. 2018. The Relationship Between Lifestyle And Hypertension In Hypertension Patients In Environment III Sei Putih Timur II Working Area Of The Rantang Medan Health Center. *Journal Of Nursing Priority* 1 (2).