

Relationship Between Lifestyle And Hypertension In The Elderly In The Area Of The Upt Puskesmas Naga Kesiangan Regency Of Serdang Bedagai In 2021

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ABSTRACT

Indonesia is a country that is entering the era of aging structured population because the population aged 60 years and over is around 7.18 % . One of the medical problems that often occurs in the elderly is hypertension, even in 2013 hypertension was the main disease of the 10 disease sequences in Indonesia (Kemenkes, 2013). Hypertension is a medical problem that often occurs in the elderly. Factors that can be controlled are lifestyle, including physical activity, diet, rest habits and smoking history. This study aims to determine the relationship between lifestyle and the incidence of hypertension in the elderly at the UPT Puskesmas Naga Kesiangan, Serdang Bedagai Regency. This study used a cross sectional design with 47 respondents who were taken using purposive sampling technique. Data was collected by using a questionnaire and measuring blood pressure. The results of the chi-square analysis showed that there was no relationship between lifestyle smoking, drinking coffee and resting with the incidence of hypertension with p value > 0.05, while there was a lifestyle relationship between diet and physical activity obtained with p value < 0.05. . Suggestions for health care workers to be more proactive in providing counseling about healthy lifestyles and conducting regular visits to observe directly the implementation of a healthy lifestyle.

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1. Introduction

Indonesia is a country that is entering the era of aging structured population because the population aged 60 years and over is around 7.18 % . The number of elderly population in Indonesia in 2006 was around 19 million people. In 2011 the number of elderly people was 20 million (9.51%) with a life expectancy of 67.4 years and in 2020 it is estimated that 28.8 million (11.34%) with a life expectancy of 71 years (Ministry of Health, 2012). An increase in the number of elderly people will have an impact on various health problems, where there will be a decrease in cells due to the aging process which can result in decreased function , organ weakness , physical decline, the emergence of various diseases, especially degenerative diseases (Azizah, 2011).

One of the medical problems that often occurs in the elderly is hypertension, even in 2013 hypertension was the main disease of the 10 disease sequences in Indonesia (Kemenkes, 2013). This disease is known as the silent killer because it is fatal but usually does not cause any symptoms (Pusdatin Kemenkes RI, 2019). Blood pressure checks will produce two numbers, namely a higher number and a lower number. A higher number is obtained when the heart is contracting or systolic and a lower number is obtained when the heart is relaxed or diastolic (Gianyar District Health Office, 2020).

Factors that affect blood pressure can be divided into factors that cannot be controlled, including age, gender, genetics, and race, as well as factors that can be controlled, namely lifestyle (Rahma, 2017). Lifestyle is the most important factor that can affect people's lives (Ministry of

Health, 2015). Nationally, the prevalence of salty foods, smoking habits, drinking alcohol, drinking caffeinated drinks, lack of exercise is still quite high (Nisa et al., 2018).

Complications caused by uncontrolled hypertension include coronary heart disease, stroke, kidney disease, vision problems, to the most dangerous, namely death (Aminuddin et al., 2019). According to WHO data (2015) states that around 1.13 billion people in the world suffer from hypertension, which means that 1 in 3 people in the world is diagnosed with hypertension. The number of people with hypertension continues to increase from year to year. It is estimated that 1.5 billion people will suffer from hypertension in 2025, and it is estimated that 9.4 million people will die from hypertension and its complications every year (P2PTM Ministry of Health RI, 2019). In addition, hypertension is also the most common cause of visits to primary health care centers as many as 13.1 % of total visits (Dewi & Sudtana, 2014).

The prevalence of hypertension in North Sumatra Province is in fourth place, which is 5.80 % after joint pain, heart disease, and mental emotional disorders. The highest prevalence of hypertension in South Nias District is 9.60 % and the lowest is in Serdang Bedagai District, namely 2.40% (Ministry of Health, 2008). Then the results of observations of the Deli Serdang District Health Office report during 2005-2006 there was an increase in the number of hypertension cases with the most cases in 2006 amounting to 7.88 % (Yekti, 2011).

Research conducted by Solehatul Mahmuddah (2014) on "The Relationship of Lifestyle with Hypertension Incidence in the Elderly in Sawangun Baru Village" found the proportion of elderly who had hypertension was 26.4% and showed a relationship between physical activity, fat intake, and sodium intake. with hypertension in the elderly.

Research conducted by Febriana (2017) on "The Relationship of Lifestyle with Hypertension Incidence in the Elderly in RW 007 Parigi Lama Pondok Aren South Tangerang" shows that lifestyle has a value of $(p) = 0.004$ thus there is a relationship between lifestyle and the incidence of hypertension.

From the survey data that the author obtained in the Work Area of UPT Naga Kesiangan, Serdang Bedagai Regency, it was found that in 2019 there were 85 people with hypertension who received health services for all ages and in 2020 the elderly were 63 people, while in June 2021 it showed that the prevalence increased by 87 people from 105 elderly people with the age of approximately 60 years.

Based on the above background, this study was conducted to determine the relationship between lifestyle and the incidence of hypertension in the elderly in the UPT Naga Kesiangan Region, Serdang Bedagai Regency in 2021.

2. Methods

2.1 Research design

The design used in this study is an observational , quantitative research method in the form of analytic which aims to determine the relationship of lifestyle to the risk of hypertension in the elderly in the area of UPT Naga Kesiangan, Serdang Bedagai Regency. This study uses a cross-sectional research design which means that the study only observes or takes data once on the research subject by measuring the independent variable, namely lifestyle and the dependent variable, namely the occurrence of hypertension and collected at the same time (Notoatmodjo, 2012).

2.2 Population, Research Sample and Sampling Technique

Population is the total amount consisting of on objects or subjects that have certain characteristics and qualities determined by researchers to be studied and then drawn conclusions (Sujarweni, 2014). The population in this study were all the elderly who came to visit the UPT Puskesmas Naga Kesiangan, Serdang Bedagai Regency, with data in June 2021 as many as 87 people. The sample is the object under study which is considered to represent the entire population (Natoatmodjo, 2010). If the population is large, it is impossible for researchers to take all of them for research because of limited funds , manpower, and time. Then researchers can use samples taken from the population. The samples to be taken are those who meet the criteria, namely the elderly who come for treatment at the UPT, aged 55-74 years, understand Indonesian and are willing to be respondents. Calculation of the sample size using the Isaac & Michael formula (Sugiyono, 2016):

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$$S = \frac{\lambda^2 . N . P . Q}{d^2 (N-1) + \lambda^2 . P . Q}$$

S = number of samples

N = population

= 1

d = expected predisposition limit 0.05 (5 %)

p = q = 0.5 (Sugiyono , 2015).

From the formula above, we get:

$$S = \frac{1^2 . 87 . 0,5 . 0,5}{0,05^2 (87-1) + 1^2 . 0,5 . 0,5}$$

$$S = \frac{21,75}{0,215 + 0,25}$$

$$S = \frac{21,75}{0,465}$$

S = 46.7 rounded to 47

2.3 Sampling Technique

Sampling technique is a sampling technique to determine the sample to be used in research. In this study, the sample collection technique used non-probability sampling , which is a non-random sampling method , meaning that each individual does not have the same opportunity to become a member of the sample. The type of sample used is purposive sampling (Sugiyono, 2015). The sample in this study was the elderly who in this study were members of the elderly group in the UPT area of the Naga Kesiangan Health Center who met the inclusion criteria and there were no exclusion criteria.

2.4 Research Location and Time

Held in the Work Area of the UPT Puskesmas Naga Kesiangan, Serdang Bedagai Regency. Held from August to October 2021.

2.5 Ethical Considerations

Some matters concerning research ethics are as follows: Informed consent , ie the researcher gives an application form to become a respondent and consent to become a respondent to the prospective respondent. If the respondent refuses, the researcher will not impose and respect the respondent's rights. Anonymity, meaning that the respondent's name is only known by the researcher. The publication also does not include the name of the respondent but uses a numeric code. Confidentiality , namely data or information obtained during the research will be kept confidential and only researchers can see the data.

2.6 Research Instruments, Validity and Reliability Measurement

Research instruments are the tools used to collect research data (Notoatmodjo , 2010). The research instrument used in this study was a sphygmomanometer and a questionnaire containing a number of questions and statements to obtain some information from the respondents. Questionnaire is a list of questions or statements that have been well structured and mature where the respondent only needs to give answers (Notoatmodjo, 2010). The questionnaire consists of 3 parts, namely: First, the respondent's demographic data questionnaire which includes the respondent's initials, age, gender, last education, and occupation. Both questionnaires about lifestyle . The third is a questionnaire on the incidence of hypertension obtained from the medical records of patients with the category of patients with hypertension and not suffering from hypertension. The lifestyle questionnaire uses a questionnaire adopted from Ni Ketut Lestari Dewi's research in 2021 with the title "The Effect of Lifestyle on Hypertension Incidence in Banjar Benawah, Petak Kelod Village, Gianyar District, Gianyar Regency in 2021". The Lifestyle Questionnaire consists of 5 aspects, namely the physical activity questionnaire which has a total of 3 questions and a total score of 6 with an assessment category of less that is <3 and sufficient is >3, the diet questionnaire has a total of 7 questions and a total score of 14 with an assessment category not good, namely < 7 and good, namely > 7, the resting habit questionnaire has a total of 4 questions and a total score of 8 with an assessment category of less < 4 and sufficient > 4, the coffee drinking habit questionnaire has a total of 1 questions and a total score of 2 with an assessment category ie rarely < 1 and often > 1, and smoking habits have a total of 2 questions and a total score of 4 with categories namely not smoking < 4 and smoking > 4 These five aspects use the Guttman scale where each question is answered "Yes" is given a score of 1 and " No" was given a score of 2.

3. Result and Discussion

This research was carried out at the UPT Puskesmas Naga Kesiangan which was held in August-October 2021. Primary data collection was obtained through examination of blood pressure and interviews using a questionnaire with a sample of 47 elderly. Meanwhile, in this study using univariate analysis to get an overview of the distribution and frequency of the variables studied, this analysis obtained the characteristics of respondents including age, gender, last education, occupation as well as independent variables and dependent variables such as physical activity, diet, rest habits, coffee drinking habits, smoking habits and the incidence of hypertension which can be seen in the following table: Characteristics of Respondents at UPT Puskesmas Naga Kesiangan, Serdang Bedagai Regency in 2021. The description of the characteristics of respondents in this study including age, gender, last education and occupation can be seen in the table below :

Table 1
Distribution of the frequency of the relationship between lifestyle and the incidence of hypertension in the elderly at UPT Puskesmas Naga Kesiangan in 2021

Characteristics	Frequency (n)	Percentage (%)
Respondent's Age		
55-64	32	68.1
65-69	9	19.1
>70	6	12.8
Total	47	100
Gender		
Man	23	48.9
Woman	24	51.1
Total	47	100
Last education		
SD	3	6.4
Junior High School	14	29.8
Senior High School	24	51.1
College	6	12.8
Total	47	100
Work		
Retired PN/TNI/Polri	3	6.4
IRT	15	31.9
Self-employed	8	17.0
Farmer	21	44.7
Total	47	100

From the table above, the results of the study show that the majority of respondents aged 55-64 years are 32 people (68.1%), female sex are 24 people (51.1), the last education level is high school as many as 24 people (51.1), and as farmers as many as 21 people (44.7%).

4. Conclusion

Based on the characteristics of respondents at the UPT Puskesmas Naga Kesiangan, Serdang Badagai Regency, the majority of elderly aged 55-64 years were 32 people, 24 people were female, 24 high school education level and 21 farmers. Based on the results of the chi square test analysis at the UPT Puskesmas Naga Kesiangan, Serdang Bedagai district, there is a relationship between physical activity and the incidence of hypertension in the elderly with p value < 0.05, which is 0.038. Based on the results of the chi square test analysis at the UPT Puskesmas Naga Kesiangan, Serdang Bedagai district, there is a relationship between diet and the incidence of hypertension in the elderly with p value < 0.05, which is 0.012. Based on the results of the chi square test analysis at the UPT Puskesmas Naga Kesiangan, Serdang Bedagai Regency, there is no relationship between resting habits and the incidence of hypertension in the elderly with p value > 0.05, which is 0.370. Based on the results of the chi square test analysis at the UPT Puskesmas Naga Kesiangan, Serdang Badagai Regency, there is no relationship between coffee drinking habits and the incidence of hypertension in the elderly with p value > 0.05 which is 0.869. Based on the results of the chi square test analysis at the UPT Puskesmas Naga Kesiangan, Serdang Bedagai Regency, there is no

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relationship between smoking habits and the incidence of hypertension in the elderly with p value > 0.05, which is 0.465.

Reference

- Aisyah, Siti, et al. 2008. Development and Basic Concepts of Early Childhood Development. South Tangerang: Open University.
- Ajikwa , Muhammad, Romdhoni, Dewi, Mustika . (2018). Relationship between diet and lifestyle with the incidence of hypertension in pre- and elderly. *Jurnal.unimus.ac.id/index.php/APKKM/article/view/4561/4132*. Retrieved 15 June 2021.
- Albusalih, Fatimah , Ali ., et al. 2017. Prevalence of Self-Medication among Students of Pharmacy and Medicine Colleges of a Public Sector University in Dammam City , Saudi Arabia. *Journal of Pharmacy*.
- Almatsier S. Basic Principles of Nutrition . Jakarta: PT Gramedia Pustaka Utama ;2009 .
- Anam, K and Oktadoni Saputra. (2016). Lifestyle as a Risk Factor for Hypertension in Coastal Community Majority .Volume 5 . Number 3 | September 2016.
- Aradiansyah, M. 2012. Medical Surgery. Yogyakarta: DIVA Press.
- Arikunto, S. (2006). Research Procedure A Practical Approach . Jakarta: PT Rineka Cipta.
- Aspiani, RY (2014). Textbook of Gerontic Nursing. Jakarta: TIM. BPS. 2007. North Sumatra in Figures. Medan: Central Bureau of Statistics.
- Azizah. (2011). Elderly nursing . Yogyakarta: Graha Ilmu.
- BPS. 2007. North Sumatra in Figures. Medan: Central Bureau of Statistics.
- Bps. Indonesia 's life expectancy. Accessed on 12 June 2021; Available from: <http://www.bps.go.id/linkTabelStatis/view/id/1517> .
- Bustan, MN (2015). Epidemiology of Non-Communicable Diseases. Jakarta: Rineka Cipta. (2015). Non-Communicable Disease Control Management. Jakarta: Rineka Cipta.
- Crea, M. (2008). Hypertension. Jakarta: Medium.
- Indonesian Ministry of Health. (2008). Guidelines for the Development of Elderly Health for Health Workers . Jakarta: Ministry of Health RI. . <http://depkes.go.id/en/downloads/profile/Pro v.Sumut 2008.pdf>. Retrieved 20 June 2021.
- Febriana .(2017). Relationship of Lifestyle with Hypertension Incidence in Elderly. *Jurnal.fkm.Umi.ac.id/index.php/woph/article/view/188/56* . Retrieved 15 June 2021.
- Fatima. (2010). Nutrition for the Elderly . Jakarta: Erlangga.
- Hasdianah , et al . (2014). Nutritional Benefits of Nutrition, Diet and Obesity. Yogyakarta: Nuha Medika.
- Hypertension is the Number Three Cause of Death <http://www.depkes.go.id/index.php/berita/press-release/810>
- Relationship between lifestyle and the incidence of hypertension in the elderly (2020) *Jurnal.fkm.umi.ac.id/index.php/woph/article/view/188/56*. Retrieved 10 July 2021.
- Cardiovascular And Hematology. Jakarta: Salemba Medika.
- RI Ministry of Health, 2020. Technical Guidelines for the Discovery and Management of Hypertension. <http://p2ptm.Kemkes.go.id> . Retrieved 20 June 2020.
- Ministry of Health of the Republic of Indonesia, 2013. An overview of the health of the elderly . Data and Information Window Bulletin. Indonesian Ministry of Health. activities for the elderly. 2018.
- Indonesian Ministry of Health. Overview of Elderly Health in Indonesia : Ministry of Health of the Republic of Indonesia; 2013.
- National Commission for the Elderly. 2010. Guidelines for the Implementation of the Elderly Posyandu. Jakarta : National Commission for the Elderly
- Malara Reginus, Bidjuni, Meylen. 2014. Relationship Between Lifestyle and Hypertension Incidence at Kolongan Health Center, Kalawat District. North Minahasa Regency. *Journal of Nursing (e-Kp)*, Volume 2. Number 1. Accessed on 20 June 2021. 22:10 WIB.

- Maryam, RS (2008). Getting to know the elderly and their care . Jakarta: Salemba Medika.
- Muhammadun. (2010). Living With Hypertension High Blood Grinning Sang Real Killer . Yogyakarta: In-Books.
- Muttaqin , A. (2009) . Nursing Care of Clients With System Disorders.
- Ni Ketut Lestari Dewi .(2021), Lifestyle Overview of Hypertension Incidence in Banjar Benawah, Petak Kelod Village, Gianyar District, Gianyar Regency . Poltekkes. Ministry of Health. Denpasar.
- Nisa, Hainun. (2012). The Relationship between Stress Levels and Hypertension Incidence in the Elderly Di The area of Aren Jaya Village Health Center Bekasi in 2012 . Scientific Writing of the Indonesian Medical College of Health, Bekasi.
- Noorhidayah, SA, 2016. The Relationship between Compliance with Taking Antihypertensive Medications Blood Pressure of Hypertensive Patients in Salamrejo Village . Muhammadiyah University of Yogyakarta.
- Notoadmodjo, S. (2012). Health research methodology . Jakarta: Rineka Cipta.
- Nugroho W. Gerontic and Geriatric Nursing. Jakarta: EGC; 2008.
- Nugroho, W. (2008). Gerontic Nursing , Edition 3. Jakarta: EGC.
- Oktariyani (2012). Overview of Nutritional Status in the Elderly at the Tresna Werdha Social Home (PSTW) Budi Mulya 01 and 03 East Jakarta . Depok. FIK UI.
- Paddy. (2013). Internal Medicine Nursing . Yogyakarta: Nuha Medika.
- Indonesian Health Profile. JakartaKemenkes RI .
<http://www.depkes.go.id/resources/download/pusdatin/profilkesehatan-indonesia/profil-kesehatan-indonesia-2012.pdf>. Retrieved 20 June 2021.
- Princess Utami Fijriyati Puput .(2017). Relationship of Lifestyle with Hypertension Incidence in Elderly.r2kn.Litbang.kemkes.go.id.8080/handle/123456789/38938. Accessed June 15, 2021
- Purwoastuti, E. & Elisabet, SW (2015). Health Behavior and Soft Skills.Yogyakarta : New Library.
- Ramadan & Hasibuan. 2016. The Effectiveness of Potassium and Lycopene Content in Tomato (Solanum lycopersicum) Against Lowering High Blood Pressure. Majority vol. 5 No. 3 of 2016.
- Republic of Indonesia. Law of the Republic of Indonesia Number 13 years.
- Setiati, Siti, et al. (2008). Textbook of Internal Medicine . Jakarta: Internal publishing.
- Stefhan, E. 2012. " Relationship of Diet, Lifestyle, and Body Mass Index with Hypertension in Pre-Elderly and Elderly in Posbindu, Depok Jaya Village in 2012". Thesis. Depok: Faculty of Public Health, University of Indonesia.
- Sheps, Sheldon. 2005. Mayo Clinic Hypertension Overcoming High Blood Pressure . Jakarta. Prime Ambassador.
- South , M. , et al. (2014) . Journal of the Relationship of Lifestyle with Hypertension Incidence at Kolongan Health Center, Kalawat District, North Minahasa Regency . Retrieved 20 May 2016.
- Sugiyono , (2012). Research methods quantitative and qualitative R&D. Bandung : Alfabeta .(2013). Research methods quantitative and qualitative R&D. Bandung : Alfabeta .
- Sujarweni, VW (2014). Research method : Complete, practical , and easy to understand . Yogyakarta : New Library Press.
- Susilo, Yekti., Wulandari, Ari. (2011). The Right Way to Overcome Hypertension . Yogyakarta: ANDI.
- Simanullang (2011). Relationship between Lifestyle and Hypertension Incidence in the Elderly at Darussalam Health Center Medan.
- Tapan , E. , 2005, Family Health Degenerative Diseases , PT Elex Media Komputindo, Jakarta.
- Earth Medical Team. Coming to terms with Hypertension . Jakarta: Bumi Medika; 2017.
- Udjianti, WJ (2011). Cardiovascular Nursing . Jakarta: Salemba Medika.
- Widia and wayan. (2013). "The description of the risk factors for hypertension in the elderly community in the working area of the Dawan I Public Health Center for the period of May 2013". E-Jurnal Medika Udayana.
- World Health Organization Regional Office for South-East Asia. Hypertension fact sheet. Department of Sustainable Development and Healthy Environments. 2015.