

Determinants Of The Incident Of Hypertension In The Working Area Of The New City Puskesmas, Melawi District, 2023

Ria Damayanti¹, Dwi Saroso Libra Putra², Sohibun³, Rika Yuanita Pratama⁴, Sunarti⁵

^{1,3,4,5}Public Health Study Program Lecturers STIKes Kapuas Raya, ²Final Year Student (STIKes Kapuas Raya)

ARTICLE INFO

ABSTRACT

Keywords:

Hypertension, Knowledge, Attitude, Smoking Habits, Diet.

Hypertension occurs when systolic and diastolic blood pressure is too high. Hypertension is a condition when measured on two different days, the systolic blood pressure reading on both days is ≥ 140 mmHg and/or the diastolic blood pressure reading on both days is ≥ 90 mmHg (WHO, 2019). Objective: To determine the determinants of hypertension in the work area of the Kota Baru Health Center, Melawi Regency. Method: This research was carried out using quantitative methods with a cross sectional design, a population of 15,872, and using the Stanley Lemeshow formula, 100 samples were obtained using the Portional Random Sampling sampling technique. The instrument used was a closed questionnaire by means of an interview. Data analysis was carried out using the Chi-Square test. Results: There is a relationship between Knowledge (p-value = 0.008, OR = 3.378 95%), Attitude (p-value = 0.016, OR = 3.114), Smoking Habits (p-value = 0.012, OR = 3.194) and Diet (p-value = 0.036, OR = 2.768) with the incidence of hypertension in the working area of the Kota Baru Health Center, Melawi Regency. Conclusion: There is a relationship between knowledge, attitudes, smoking habits and patterns with the incidence of hypertension in the work area of the Kota Baru Health Center, Melawi Regency. Suggestion: The community health center health promotion program can be more active in providing education to the people of Tanah Pinoh sub-district, especially to people with hypertension. Providing information regarding the need for counseling on the prevention of hypertension and programs related to health education in the adult population so that it can prevent an increase in the prevalence rate of hypertension.

Email :
damaya.ria86@gmail.com

Copyright © 2023 Journal Eduhealth. All rights reserved is
Licensed under a Creative Commons Attribution- Non Commercial
4.0 International License (CC BY-NC 4.0)

1. INTRODUCTION

Hypertension occurs when blood pressure is too high. Hypertension is diagnosed if, when measured on two different days, the systolic blood pressure reading on both days is ≥ 140 mmHg and/or the diastolic blood pressure reading on both days is ≥ 90 mmHg. Hypertension is divided into two types, namely primary hypertension and secondary hypertension. Primary hypertension is a blood pressure disease that occurs due to other diseases. Blood pressure is written as two numbers, namely systolic represents the pressure in the blood vessels when the heart contracts or beats, and diastolic represents the pressure in the vessels when the heart rests between heartbeats (WHO, 2019).

Hypertension is a serious medical condition that significantly increases the risk of disease complications such as coronary heart disease, disorders of the brain, kidneys and other diseases. An estimated 1.13 billion people worldwide suffer from hypertension, the majority (two-thirds) living in low- and middle-income countries. It is known that in 2015 there were 1 in 4 men and 1 in 5 women suffering from hypertension, so hypertension is the main cause of premature death throughout the world. One of the global targets for non-communicable diseases is to reduce the prevalence of hypertension by 25% by 2025. (WHO, 2019).

The exact cause of hypertension is currently unknown, but lifestyle has a big influence on this case. There are several factors that increase the risk of developing hypertension, such as age, gender and smoking. Reducing these risk factors is the basis for providing interventions by health workers (Tirtasari & Kodim, 2019). Hypertension can be caused by hereditary factors. Apart from hereditary factors, hypertension can also be caused by the habits and behavior of the respondent/sufferer. Other factors that cause hypertension include lack of exercise, overweight (obesity), excessive consumption of salt, alcohol, caffeine, genetic factors, and high cholesterol (Susilo and Wulandari, 2011). Data from the World Health Organization (WHO) in 2015 shows that around 1.13 billion people in the world have hypertension, meaning that 1 in 3 people in the world are diagnosed with hypertension. Number of people Hypertension continues to increase every year, it is estimated that by 2025 there will be 1.5 billion people affected by hypertension, and it is estimated that every year 9.4 million people die from hypertension and its complications (WHO, 2020).

Based on Basic Health Research (Riskesdas) in 2018, it is known that the prevalence of hypertension is 34.1% for 63,309,620 people. This figure is higher than the 2013 prevalence rate, namely 25.8%, while the death rate in Indonesia due to hypertension was 427,218 deaths. Hypertension occurs in the age group 31-44 years (31.6%), pre-elderly age 45-54 years (45.3%), elderly age group 55-64 years (55.2%). (Indonesian Ministry of Health, 2018).

The West Kalimantan Health Service also carried out early detection of risk factors for non-communicable diseases in 2018. It is known that the prevalence of hypertension according to a doctor's diagnosis, doctor's diagnosis or taking medication, and measurement results in the population aged > 18 in West Kalimantan province in 2013 was 28.3% and increased in 2018, namely by 36.99%. The main results of the 2018 Riskesdas for West Kalimantan Province stated that the highest prevalence rate for hypertension based on measurement results in residents aged \geq 18 years according to cities/regencies in West Kalimantan 2018 was Melawi Regency, namely 45.27%. (Ministry of Health, 2018) In 2020, there were 1192 known cases of hypertension and there was an increase in 2021 of 1799 people spread across 12 villages in Tanah Pinoh sub-district (Kota Baru Health Center Profile, 2022). Based on this problem, researchers are interested in raising a research topic entitled "Determinants of Hypertension Incidence in the Working Area of the New City Health Center, Melawi Regency in 2023".

2. METHOD

The type of research used in this research is Quantitative research with a Cross Sectional approach. This research data collection used instruments created through questionnaires and distributed. According to Sugiono (2013:13), quantitative methods can be interpreted as research methods based on the philosophy of positivism, which are used to research populations or certain samples, sample collection techniques are generally carried out randomly, collecting data using research instruments, data analysis is quantitative/statistical with the aim of testing predetermined hypotheses. This research was conducted using quantitative methods with a cross sectional design, a population of 15,872, and using the Stanley formula emeshow obtained 100 samples using the Portional Random Sampling sampling technique. The instrument used was a closed questionnaire by means of an interview. Data analysis was carried out using the Chi-Square test.

3. RESULTS AND DISCUSSION

Table 1. Determinants of Hypertension In the Working Area of the Kota Baru Health Center MelawiRegency in 2023

Variabel	Hipertensi						P Value	PR 95% CL
	Hipertensi		Tidak Hipertensi		Total			
	n	%	n	%	n	%		
Pengetahuan								
Kurang Baik	23	51,1	22	48,9	45	100	0,008	3,378
Baik	13	23,6	42	76,4	55	100		(1,438 - 7,931)
Sikap								
Tidak	25	48,1	27	51,9	52	100	0,016	3.114

Determinants Of The Incident Of Hypertension In The Working Area Of The New City Puskesmas, Melawi District, 2023. Ria Damayanti, et.al

Mendukung								(1,311 - 7,400)
Mendukung	11	22,9	37	77,1	48	100		
Kebiasaan Meokok								
Kurang Baik	20	52,6	18	47,4	38	100	0,012	3,194
Baik	16	25,8	46	74,2	62	100		(1,360 - 7,503)
Pola Makan								
Kurang Baik	26	45,6	31	54,4	57	100	0,036	2,768
Baik	10	23,3	33	76,7	43	100		(1,149 - 6,664)
Total	36	36,0	64	64,0	36	100		

Based on table 1, it can be seen that 51.1% of respondents had low knowledge and were diagnosed with hypertension, while those who had good knowledge and were diagnosed with hypertension were 23.6%. The statistical test results obtained p-value = 0.008, meaning the p value < α value (alpha 5%) = 0.05. It was concluded that there was a relationship between knowledge and the incidence of hypertension in the Kota Baru Health Center Working Area, Melawi Regency in 2023. The results of the analysis obtained OR= 3.378 with a 95% Confidence Interval (CI) = (1.438 - 7.931), meaning that respondents who had less knowledge had a risk of 3.378 times for hypertension compared to respondents who have good knowledge. Respondents who had an unsupportive attitude towards preventing hypertension were 48.1%, while those who had a supportive attitude towards preventing hypertension were 22.9%. The statistical test results obtained p-value = 0.016, meaning the p value < α value (alpha 5%) = 0.05. It was concluded that there is a relationship between attitude and the incidence of hypertension in the Kota Baru Health Center Working Area, Melawi Regency in 2023. The results of the analysis obtained OR= 3.114 with 95% Confidence Interval (CI) = (1.311 - 7.400), meaning that respondents who have an attitude do not support the prevention of hypertension have a 3.114 times risk of developing hypertension compared to respondents who have a supportive attitude towards preventing hypertension.

Respondents who had a smoking habit and were diagnosed with hypertension were 52.6%, while those who did not smoke and were diagnosed with hypertension were 25.8%. The statistical test results obtained p-value = 0.012, meaning the p value < α value (alpha 5%) = 0.05. It was concluded that there is a relationship between smoking habits and the incidence of hypertension in the Kota Baru Health Center Working Area, Melawi Regency in 2023. The results of the analysis obtained OR= 3.194 with a 95% Confidence Interval (CI) = (1.360 - 7.503), meaning that respondents who have a smoking habit have a risk of 3.194. times to experience hypertension compared to respondents who do not smoke.

Respondents who had a poor diet and were diagnosed with hypertension were 45.6%, while those who had a good diet and diagnosed with hypertension were 23.3%. The statistical test results obtained p- value = 0.036, meaning the p value < α value (alpha 5%) = 0.05. It was concluded that there was a relationship between diet and the incidence of hypertension in the Kota Baru Health Center Working Area, Melawi Regency in 2023. The results of the analysis obtained OR= 2.768 with a 95% Confidence Interval (CI) = (1.149 - 6.664), meaning that respondents who had poor diet had 2.768 times risk of developing hypertension compared to respondents who have a good diet

The Relationship between Knowledge and the Incident of Hypertension in the Working Area of the New City Health Center, Melawi Regency in 2023

Knowledge is the result of knowing, and this occurs after someone senses a particular object. Sensing occurs through the five senses of sight, hearing, smell, taste and touch. The knowledge gained can be very useful because it can be used to predict future events, and if this is the case then another possibility is that this knowledge is used to control things or events that one might want to avoid (Notoatmodjo, 2014). One of the characteristics of humans is that they are always curious about events or phenomena that occur in the natural world around them. Curiosity can start from very simple things, such as wanting to know what, where, when, who. But curiosity becomes more complex and more complicated if you want to know about how (Wibowo, 2014).

The research results stated that 51.1% of respondents had low knowledge and were diagnosed with hypertension, while those who had good knowledge and were diagnosed with hypertension were 23.6%. The statistical test results obtained p-value = 0.008, meaning the p value < α value (alpha 5%)

= 0.05. It was concluded that there was a relationship between knowledge and the incidence of hypertension in the Kota Baru Health Center Working Area, Melawi Regency in 2023. The results of the analysis obtained OR= 3.378 with a 95% Confidence Interval (CI) = (1.438 - 7.931), meaning that respondents who had less knowledge had a risk of 3.378 times for hypertension compared to respondents who have good knowledge.

his research is in line with Maulidah's 2022 research on the Relationship between Knowledge, Attitudes and Family Support and Efforts to Control Hypertension in the Elderly in the Working Area of the Cikampek Community Health Center, Karawang Regency. The results of the research show that there is a relationship between knowledge and efforts to control hypertension in the elderly in the working area of the Cikampek Community Health Center, Karawang Regency, with p-value = 0.014 < 0.05. Another similar research was conducted by Munthe in 2023 regarding the analysis of the relationship between dietary knowledge and the incidence of hypertension in the elderly in Meurebo District. The results of analysis using the chi-square test showed that there was a relationship between knowledge (p value = 0.046) and the incidence of hypertension in the elderly in Meureuboh subdistrict, West Aceh district.

Another research was also conducted by Fajarsari in 2021 regarding the relationship between the level of knowledge about hypertension and behavior to prevent the occurrence of hypertension in Hajj pilgrims in the Kotagede I Yogyakarta Health Center work area. The results of the Spearman Rank test analysis obtained a significant value of 0.001 ($p < 0.05$) and a correlation coefficient value of 0.567, meaning that there is a relationship between the level of knowledge about hypertension and behavior to prevent hypertension among Hajj pilgrims in the working area of the Kotagede I Yogyakarta health center. Knowledge is the result of knowing, and this occurs after someone senses a particular object. Sensing occurs through the five senses of sight, hearing, smell, taste and touch. The knowledge gained can be very useful because it can be used to predict future events, and if this is the case then another possibility is that this knowledge is used to control things or events that one might want to avoid (Notoatmodjo, 2014)

Information obtained from both formal and non-formal education can have a short-term impact (immediate impact) resulting in changes or increased knowledge. As technology advances, various types of mass media will become available that can influence people's knowledge about new innovations. It is better if the voice of communication, various forms of mass media such as television, radio, newspapers, magazines and others have a big influence on the formation of people's opinions and beliefs. In conveying information as the main task. Mass media also carries messages containing suggestions that can direct someone's opinion. The existence of new information about something provides a new cognitive basis for the formation of knowledge about that thing. Most respondents have insufficient knowledge about hypertension and hypertension prevention, namely 37(74%), so it is necessary to increase respondents' knowledge through activities such as counseling.

Low knowledge can be caused by various factors that influence a person, the higher a person's level of education, the easier it is to receive information so that he can gain more knowledge. The elderly's knowledge about hypertension is relatively low so it is hoped that the participation of various parties, both from the Nanga Pinoh Health Center, health cadres and the family, can take a personal approach to the elderly, improve the quality of service at the posyandu so that the elderly are motivated to visit the elderly posyandu and it is hoped that regular blood pressure checks will be carried out. regularly every month.

The Relationship between Attitudes and the Incident of Hypertension in the Working Area of the New City Health Center, Melawi Regency in 2023

Attitude is also a person's closed response to a particular stimulus or object, which involves the relevant opinion and emotional factors of happy-unhappy, agree-disagree, good-bad, and so on. Attitude is a plan to act or behave openly (action). (Notoatmodjo 2014). The highest level attitude is being responsible for what one believes in. A person who has taken a certain attitude based on his beliefs must have the courage to take risks if other people ridicule him or there are other risks.

The results of the research showed that 48.1% of respondents had an unsupportive attitude towards preventing hypertension, while 22.9% had a supportive attitude towards preventing

hypertension. The statistical test results obtained p -value = 0.016, meaning the p value $< \alpha$ value (α 5%) = 0.05. It was concluded that there is a relationship between attitude and the incidence of hypertension in the Kota Baru Health Center Working Area, Melawi Regency in 2023. The results of the analysis obtained OR= 3.114 with 95% Confidence Interval (CI) = (1.311 - 7.400), meaning that respondents who have an attitude do not support the prevention of hypertension have a 3.114 times risk of developing hypertension compared to respondents who have a supportive attitude towards preventing hypertension.

This research is in line with Maulidah's 2022 research on the Relationship between Knowledge, Attitudes and Family Support and Efforts to Control Hypertension in the Elderly in the Working Area of the Cikampek Community Health Center, Karawang Regency. The results of the research show that there is a relationship between attitude (p -value=0.028<0.05) and efforts to control hypertension in the elderly in the working area of the Cikampek Community Health Center, Karawang Regency.

Another similar research was conducted by Munthe in 2023 regarding the analysis of the relationship between dietary knowledge and the incidence of hypertension in the elderly in Meurebo District. The results of analysis using the chi-square test revealed that there was a relationship between attitude (p value = 0.034), and the incidence of hypertension in the elderly in Meureuboh subdistrict, West Aceh district. Another similar research was conducted by Anggreani in 2020 regarding the relationship between knowledge and attitudes of the elderly and a history of hypertension in controlling blood pressure in the elderly at the Sibolangit Community Health Center, Deli Serdang Regency. The research results show that there is a significant relationship between attitudes about hypertension and blood pressure control in the elderly, p -value 0.004 (<0.05).

Attitude is a description of a person's likes or dislikes towards an object or stimulation. A person's still closed reaction or response to a stimulation or object. Attitude clearly shows the connotation of appropriate reactions to certain stimulation, which in everyday life is an emotional reaction to social stimulation. Attitude is not yet an action or activity, but is a predisposition to a behavior (Notoatmodjo, 2014). According to Suprianto (2017), a person's knowledge about an object also contains two aspects, namely positive and negative aspects. These two aspects will ultimately determine a person's attitude towards a particular object. The more positive aspects of an object that are known, the more positive attitudes towards the object will grow. the.

A person's attitude is an important component that influences the home environment, especially attitudes in preventing hypertension. A positive attitude towards health may not always have a positive impact on people's behavior, but a negative attitude towards health will almost certainly have an impact on their behavior. (Notoatmodjo, 2012). Participation from various parties, including New City Health Center health workers, health cadres and families to be more active in taking a personal approach to hypertension sufferers. Health officers and cadres can carry out regular checks on the community, especially on hypertension sufferers in the working area of the Kota Baru Health Center, Melawi Regency.

The Relationship between Smoking Habits and the Incident of Hypertension in the Working Area of the New City Health Center, Melawi Regency in 2023

Cigarettes are also associated with hypertension and increased cardiovascular risk, apart from the duration of smoking as well as the number of cigarettes smoked per day. Toxic chemicals such as nicotine and carbon monoxide inhaled through cigarettes that enter the bloodstream can damage the endothelial lining of arteries and cause atherosclerosis and hypertension. Nicotine in tobacco is a cause of increased blood pressure, like other chemicals in cigarette smoke, nicotine is absorbed by very small blood vessels in the lungs and circulated into the bloodstream. nicotine that has reached the brain reacts by signaling the adrenal glands to release epinephrine (adrenaline), this powerful hormone will constrict blood vessels and force the heart to work harder because of the higher pressure. Blood pressure will remain at this level for up to 30 minutes. After stopping smoking cigarettes, while the effects of nicotine cigarettes slowly disappear, blood pressure will also slowly decrease. However, in heavy smokers, blood pressure will be at a high level throughout the day.

The research results showed that 52.6% of respondents had a smoking habit and were diagnosed with hypertension, while 25.8% of respondents did not smoke and were diagnosed with

hypertension. The statistical test results obtained p -value = 0.012, meaning the p value $< \alpha$ value (alpha 5%) = 0.05. It was concluded that there is a relationship between smoking habits and the incidence of hypertension in the Kota Baru Health Center Working Area, Melawi Regency in 2023. The results of the analysis obtained OR=

3.194 with a 95% Confidence Interval (CI) = (1.360 - 7.503), meaning that respondents who have a smoking habit have a risk of 3.194. times to experience hypertension compared to respondents who do not smoke. Another similar research was conducted by Faisal in 2022 regarding the relationship between eating patterns and smoking behavior and the incidence of hypertension in young men in the Nambo Community Health Center working area. The results of the study show that there is a relationship between smoking behavior and the incidence of hypertension in young men in the Nambo health center working area, indicated by a value of $p = 0.000$. Another research was conducted by Yunita in 2014 regarding the relationship between lifestyle and the incidence of hypertension in the inpatient room at RSUD Labung Baji Makassar. The results of bivariate analysis showed that there was a relationship between smoking habits and hypertension ($p < 0.011$) at RSUD Labung Baji Makassar.

Inconsistent research was conducted by Suprihatin (2016) regarding the relationship between smoking habits, physical activity, family history and the incidence of hypertension in the Nguter Community Health Center working area. The results of the study showed that there was no relationship between smoking habits ($p=0.603$; OR=0.763; 95%CI = 0.274-2.123) and the incidence of hypertension in the Nguter Community Health Center working area.

A family is a group of two or more living people who live together with a legal and emotional relationship, where each has a role in it. Family support is also the family's actions and acceptance of hypertensive sufferers (Notoatmodjo, 2014). Families can also provide support to hypertension sufferers to avoid smoking, not consume alcohol, and have sufficient physical activity, so that they are not at risk of hypertension. The family also provides support and makes decisions regarding the care of the sick member. The degree to which a person is isolated from the assistance of others, social isolation, is negatively related to obedience (Notoatmodjo, 2014).

Hypertension is often found in monozygotic twins (one egg), if one of them suffers from hypertension, the other is at risk of developing hypertension too. Family history is a problem that triggers hypertension. If one of our parents has a history of hypertension then throughout our life we have a 25% chance of developing hypertension, for this reason we need a contribution from health services to prevent hypertension. Based on information obtained from the Nguter Community Health Center, efforts have been made to provide education about hypertension through lecture and question and answer methods, but not all of the public are aware of early detection of hypertension. Other efforts that can be made are comprehensive prevention of hypertension, through primordial prevention, health promotion, specific protection, increasing community motivation for early diagnosis (screening, check-up examinations), appropriate treatment (immediately getting comprehensive treatment and early causal complaints), rehabilitation (efforts to improve the late effects of hypertension that cannot be treated).

The relationship between eating patterns and the incidence of hypertension in the elderly in the Nanga Pinoh Health Center working area, Melawi Regency

The body needs sodium to maintain fluid balance and regulate blood pressure. However, if the intake is excessive, blood pressure will increase due to fluid retention and increased blood volume. Excess sodium results from the habit of eating instant food which has replaced fresh food ingredients. A fast-paced lifestyle demands everything be instant, including food consumption. Even though instant food tends to use preservatives such as sodium benzoate and flavorings such as monosodium glutamate (MSG). Types of food that contain these substances, if consumed continuously, will cause an increase in blood pressure due to the presence of excessive sodium in the body. (Hidayat, 2012).

The results of the research showed that 45.6% of respondents had a poor diet and were diagnosed with hypertension, while 23.3% of those who had a good diet were diagnosed with hypertension. The statistical test results obtained p -value = 0.036, meaning the p value $< \alpha$ value (alpha 5%) = 0.05. It was concluded that there was a relationship between diet and the incidence of

hypertension in the Kota Baru Health Center Working Area, Melawi Regency in 2023. The results of the analysis obtained OR= 2.768 with a 95% Confidence Interval (CI) = (1.149 - 6.664), meaning that respondents who had a poor diet had 2.768 times risk of developing hypertension compared to respondents who have a good diet.

Similar research was carried out by Munthe in 2023 regarding the analysis of the relationship between dietary knowledge and the incidence of hypertension in the elderly in Meurebo District. The results of analysis using the chi-square test showed that there was a relationship between dietary behavior (p value = 0.024) and the incidence of hypertension in the elderly in Meureuboh subdistrict, West Aceh district. This research is in line with that carried out by Hamzah in 2021 regarding the analysis of the relationship between diet and the incidence of hypertension in the elderly. The statistical test results showed that there was a relationship between diet and the incidence of hypertension ($p=0.014$, smaller than 0.05). So it can be concluded that there is a relationship between diet and the incidence of hypertension in the Molibagu Community Health Center working area, South Bolaang Mongondow Regency. Another research was conducted by Yunita in 2014 regarding the relationship between lifestyle and the incidence of hypertension in the inpatient room at RSDU Labung Baji Makassar. The results of the bivariate analysis showed that there was a relationship between diet and hypertension ($p < 0.035$) at RUSD Labung Baji Makassar.

Discordant research was conducted by Faisal in 2022 regarding the relationship between eating patterns and smoking behavior and the incidence of hypertension in young men in the Nambo Community Health Center working area. The results of the study show that there is no relationship between diet and the incidence of hypertension in young men in the Nambo health center working area, as shown by a value of $p = 0.284$. Diet is a behavior that can influence a person's nutritional condition. This is because the quantity and quality of food and drinks consumed will affect nutritional intake, thereby affecting the health of individuals and society. Optimal nutrition is very important for normal growth as well as physical and intelligent development of all age groups. (Permenkes RI, 2014) Research results show that diet can have an influence on the incidence of hypertension. Research conducted in the Dungaliyo Community Health Center work area shows that there is an influence of diet on the incidence of hypertension (Kadir, 2019). Uncontrolled eating patterns can increase blood pressure, such as the habit of consuming fatty foods, especially the intake of saturated fat and cholesterol, this must be the focus of intervention by related parties considering that society's behavior today has shifted to instant food consumption, including the elderly age group. who are very susceptible to the risk of hypertension. (Ramayulis, 2015).

4. CONCLUSION

There is a relationship between knowledge, attitudes, smoking habits and patterns with the incidence of hypertension in the work area of the Kota Baru Health Center, Melawi Regency. The community health center health promotion program can be more active in providing education to the people of Tanah Pinoh sub-district, especially to people with hypertension. Providing information regarding the need for counseling on the prevention of hypertension and programs related to health education in the adult population so that it can prevent an increase in the prevalence rate of hypertension.

REFERENCES

- [1] Anggreani N, 2020. Hubungan Pengetahuan Dan Sikap Lansia Dengan Riwayat Hipertensi Dalam Pengendalian Tekanan Darah Pada Lansia Di Puskesmas Sibolangit Kabupaten Deli Serdang Tahun 2019. Jurnal DSpace JSPUI Publikasi Poltekkes Medan. <http://180.250.18.58/jspui/handle/123456789/2065>
- [2] Arikunto, S. 2013. Prosedur Penelitian Suatu Pendekatan Praktik . Jakarta: PT. Rineka Cipta.
- [3] Hamzah, B., Akbar, H., & Langingi, A. R. C. (2021). Analisis Hubungan Pola Makan Dengan Kejadian Hipertensi Pada Lansia. *Journal Health & Science: Gorontalo Journal Health and ScienceCommunity*, 5(1), 194-201. <https://ejurnal.ung.ac.id/index.php/gojhhs/article/view/10039>

- [4] Ismail S, Sastroasmoro S. 2014. Dasar-Dasar Metodologi Penelitian Klinis ; Edisi Ke-5 CV. SagungSeto.
- [5] Kemenkes RI. 2018. Hasil Utama Riskesdas 2018 Kementerian Kesehatan Badan Penelitian Dan Pengembangan Kesehatan Provinsi Kalimantan Barat. Badan Penelitian dan Pengembangan Kesehatan Kementerian RI tahun 2018. <https://dinkes.kalbarprov.go.id/wp-content/uploads/2019/03/Hasil-Utama-RISKESDAS-2018.pdf>
- [6] Kemenkes RI. 2018. Riset Kesehatan Dasar (Riskesdas). Badan Penelitian dan Pengembangan Kesehatan Kementerian RI tahun 2018. <http://www.depkes.go.id/resources/download/infoterkini/materirakorpop2018/Hasil%20Riskesdas%202018.pdf> . Diakses 21 Desember 2020
- [7] Kemenkes RI. 2020. Profil Puskesmas Kota Baru tahun 2019. Dinas Kesehatan Kabupaten Melawi
- [8] Masyudi M. 2018. Faktor yang berhubungan dengan perilaku lansia dalam mengendalikan hipertensi. Jurnal AcTion Aceh Nutrition Journal. Volume 3 Nomor 1: Halaman 57-64. Fakultas Kesehatan Masyarakat, Universitas Serambi Mekkah Aceh, Indonesia. <http://www.ejournal.poltekkesaceh.ac.id/index.php/an/article/view/100>
- [9] Notoatmodjo, S 2012. Metodologi Penelitian Kesehatan .Jakarta : Rineka
- [10] Notoatmodjo, S. 2014. Ilmu Perilaku Kesehatan. Jakarta: Rineka Cipta..
- [11] Nursalam. 2013. Konsep Penerapan Metode Penelitian Ilmu Keperawatan . Jakarta: Salemba Medika.
- [12] Suprihatin, A., Bejo Raharjo, S. K. M., Wijayanti, A. C., & SKM, M. (2016). Hubungan antara kebiasaan merokok, aktivitas fisik, riwayat keluarga dengan kejadian hipertensi di wilayah kerja Puskesmas Nguter (Doctoral dissertation, Universitas Muhammadiyah Surakarta).<http://eprints.ums.ac.id/46230/27/Naskah%20publikasi%20rev.pdf>
- [13] Taslima T. 2017. Hubungan Riwayat Keluarga Dan Gaya Hidup Dengan Hipertensi Di Puskesmas Kuta Alam Banda Aceh. Journal of Healthcare Technology and Medicine Vol. 3 No. 1 April 2017 Universitas Ubudiyah Indonesia. <http://jurnal.uui.ac.id/index.php/JHTM/article/view/264>
- [14] Tateli Kabupaten Minahasa. Jurnal Kesmas, Volume 7 Nomor 4. Fakultas Kesehatan Masyarakat Universitas Sam Ratulangi. Manado.<https://ejournal.unsrat.ac.id/index.php/kesmas/article/view/23122>
- [15] Tirtasari dan Kodim. 2019. Prevalensi dan karakteristik hipertensi pada usia dewasa muda di Indonesia. Magister Epidemiologi Fakultas Kesehatan Masyarakat Universitas Indonesia, Jakarta, Indonesia. Tarumanagara Med. J. 1, 2, 395-402, April 2019
- [16] Valdano A. Limbong, Adisti R, Grace D.K. 2018. Hubungan Pengetahuan Dan Sikap Dengan Kejadian Hipertensi Di Wilayah Kerja Puskesmas
- [17] Wawan, A dan Dewi, M. 2011. Teori dan Pengukuran Pengetahuan , Sikap dan Perilaku Manusia..Yogyakarta : Nuha Medika.
- [18] Wibowo. 2014. Manajemen Kinerja. Edisi keenpat, Rajawali Pers, Jakarta.
- [19] Widyastuti, Y., dkk. 2009. Kesehatan Reproduksi. Yogyakarta: Fitrimaya.
- [20] World Health Organization (W019). Hypertension. Geneva: WHO Press; 2019. Diakses pada tanggal 13 Desember 2020. <https://www.who.int/news-room/fact-sheets/detail/hypertension>