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DESCRIPTION OF EARLY DETECTION AND PREVENTION OF HYPERTENSION IN BLANG MONLUNG VILLAGE IN THE WORKING AREA OF LHOK KRUET HEALTH CENTER

Lensoni[1], Hidayah[2*]
[1,2]Universitas Abulyatama
E-mail: [1)] soni@abulyatama.ac.id, [2)] hhidayah285@gmail.com

Abstract

Hypertensive disease is one of the significant health problems, both in the world and in Indonesia. Hypertension, often referred to as the "silent killer," is a deadly disease that often shows no signs or symptoms as an early warning. Over time, uncontrolled blood pressure will increase and lead to decreased organ function. Hypertension is an abnormal increase in blood pressure that is the main cause of various cardiovascular diseases. This study aims to describe the efforts of early detection and prevention of hypertension in Blang Monlung Village, Lhok Kruet Health Center working area. The research method used is quantitative with descriptive design. The population in this study were 150 respondents, who were also used as samples using the total sampling technique. Data were collected through a questionnaire that included information regarding living habits, medical history, and preventive measures taken by respondents to control hypertension. The results of the study are expected to provide a clear picture of the level of awareness and preventive actions taken by the community in detecting and preventing hypertension. In addition, these results can also help the Lhok Kruet Health Center in designing more effective health programs to address the problem of hypertension in Blang Monlung Village. Thus, this study contributes to efforts to improve public health through targeted education and interventions.

Keywords: *Coffee, Cholesterol, Polyphenols*

1. INTRODUCTION

Hypertensive disease is one of the health problems in the world that is also referred to as the silent killer, which is a deadly disease without any signs and symptoms as a warning of its danger (Pikir, 2015). The status of blood pressure will be higher as the body's organ function declines. Hypertension is an abnormal increase in blood pressure that can be a major cause of cardiovascular disease (Mufarokhah, 2020). Because the prevalence of hypertension is still quite high in Indonesia, the government launched an early detection program for non-communicable diseases (NCDs), namely Posbindu, to control existing risk factors (Sari, 2021). Nearly 70% of the causes of death in the world are NCDs. NCD risk factors include smoking and exposure to cigarette smoke, unhealthy diet, physical inactivity, alcohol consumption and family history (heredity). The intermediate risk factors for NCDs are overweight (obesity), high blood pressure, high blood sugar levels and high cholesterol and lifestyle.

One of the non-communicable diseases that is currently a priority in the world of health globally is hypertension. Based on the recommendations of the Join National Committee in The Eighth Report of Join National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure, it is stated that high blood pressure

(hypertension) is a condition where a person's blood pressure is 140 mmHg (systolic) and or 90 mmHg (diastolic). Apart from being a type of non-communicable disease, hypertension is also a major risk factor for other cardiovascular diseases. The Indonesian government pays serious attention to the prevention and control of non-communicable diseases including hypertension (Taiso et al., 2021). This can be seen through the establishment of the Directorate of Non-Communicable Disease Control based on Minister of Health Regulation No. 1575 of 2005 (DepKes.RI, 2010).

Based on (WHO) World Health Organization in 2019 Hypertension or high blood pressure in the world as many as 1.13 billion sufferers, in 2020 as many as 1.56 billion sufferers and in 2021 as many as 1.83 billion sufferers. most (two thirds) live in low and lower middle income countries and hypertension kills nearly 8 billion people every year in the world and nearly 1.5 million people every year in the East-South Asia region. About one-third of adults in East-South Asia suffer from hypertension. One of the global targets for non-communicable diseases is to reduce the prevalence of hypertension by 25% by 2025 and the number of people with hypertension is expected to continue to increase annually. (WHO 2019, 2020, 2021).

Hypertension is a health problem with high morbidity and mortality. The World Health Organization (WHO) states that in 2025 it is projected that around 29 percent of the world's citizens will be affected by hypertension, the silent killer is the right term for hypertension because this disease does not provide symptoms and complaints and rarely sufferers realize this disease (Karo SK, 2012). According to the World Health Organization in 2018 worldwide about 40% of adults aged 25 years and over have been diagnosed with hypertension with prevalence increasing from 600 million in 1980 to 1 billion in 2008. The highest prevalence of hypertension occurs in the African region at 46% while the lowest prevalence occurs in the Americas at 35% (WHO, 2018). In Indonesia, the incidence of hypertension ranges from 6-15% and there are still many sufferers who have not been reached by health services, especially in rural areas. NHANES (National Health and Nutrition Examination Survey) data shows that the risk of hypertension increases with age (Ansar et al., 2019).

According to Riskesdas (2019), the prevalence of hypertension at the age of > 18 years diagnosed by health workers was 9.4%, while those who took hypertension medication were 9.5%. So, there is 0.1% of the population who have never been diagnosed with hypertension by health workers but take hypertension medication. The prevalence of hypertension in Indonesia obtained through measurement at the age of > 18 years was 34.11%, with the highest prevalence in Aceh Besar at 44.13%. Based on the results of measurements in the population aged > 18 years, the prevalence of hypertension that occurred in Bali was 29.97%.

According to the data from the annual report of the health department, the incidence of hypertension in 2019 recorded the number of hypertension in Aceh Besar as many as 283,066 people, both men and women aged >15 years and the death rate in 2019 caused by hypertension was 915 men and women aged >15 years, in 2020 hypertension sufferers were 321,500 men and women aged >15 years and the death rate caused by hypertension was 879 people and in 2021 there were 77,630 men and women aged >15 years suffering from hypertension and the number of deaths due to hypertension in 2021 was 124 people (Noor, 2018). Based on data obtained from the district health office in 2019, 21,334 people with hypertension in Banjar district. In 2020 people with hypertension in Banjar

district were 28,245 people. In 2021, hypertension sufferers in Banjar district have decreased, namely 8,735 people (DHO Banjar 2019-2021).

The important role of nurses in early detection is to screen and assess a person or refer them to a care provider for all preventive services (Rangkuti & Siregar, 2019). Early detection of hypertension focuses on screening blood pressure using a blood pressure meter to determine adult blood pressure and interviewing risk factors for hypertension such as age, gender and hereditary history.

According to WHO, hypertension can be said to be the silent killer, because it rarely causes symptoms, so to find out if someone has hypertension, early detection is very important by checking blood pressure (WHO, 2013). Early detection or screening aims to detect the onset of the disease before the disease enters the clinical phase or pathogenesis so that the pre-clinical period is longer. In the field of public health, screening is utilized as a simple examination of people who look physically healthy (asymptomatic disease). It can be said that early detection is the identification of asymptomatic disease by diagnosing risk factors (Fletcher et al, 2005).

2. RESEARCH METHODS

The research design used in this study is descriptive which is carried out through observation (observation) describing the health problems that occur (Darmawan, 2013). The population and sample were 150 residents with inclusion criteria: men and women aged 20 to 50 years, able to read and write in Blang Monlung village, and exclusion criteria: respondents who were 50 years old and did not hear the conversation (Hidayat, 2017). The data collection technique used non probability technique with purposive sampling method. This research instrument uses a questionnaire for early detection and prevention of hypertension (Setiawan et al., 2018).

3. RESULTS AND DISCUSSION

3.1. Research Results

3.1.1. Blood Pressure of Respondents

Table 1. Blood Pressure of Respondents

No	Blood Pressure	Frequency	Percentage
1	Normal (systole 120 -129 mmHg; diastole 80 -84 mmHg)	41	27,3
2	High Normal (Systole 130 -139 mmHg; Diastole 85 -89 mmHg)	26	17,3
3	Grade 1 Hypertension (Systole 140 -159 mmHg; Diastole 90 -99 mmHg)	46	30,7
4	Grade 2 Hypertension (Systole 160 -179 mmHg; Diastole 100 -109 mmHg)	15	10
5	Grade 3 Hypertension (Systole ≥ 180 mmHg; Diastole (≥ 110 mmHg))	22	14,7
	Total	150	100

Based on the table shows that the results of research in Blang Monlung Village regarding blood pressure through measurement, the highest data is in Level 1 Hypertension (BP Systole 140 -159 mmHg; Diastole 90 -99 mmHg) as many as 46 respondents with a percentage of 30.7%.

3.1.2. Early Detection of Hypertension

Table 2. Early Detection of Hypertension

No	Early Detection of Hypertension	Frequency	Percentage
1	Less	19	12.7
2	Fair	126	84
3	Good	5	3.3
	Total	150	100

Based on the table shows that the results of research in Blang Monlung Village regarding early detection of hypertension through questionnaires, the highest data is in early detection of moderate hypertension as many as 126 respondents with a percentage of 84%.

3.1.3. Prevention of Hypertension

Table 2. Prevention of Hypertension

No	Early Detection of Hypertension	Frequency	Percentage
1	Less	16	10.7
2	Fair	120	80
3	Good	14	9.3
	Total	150	150

Based on the table shows that the results of research in Blang Monlung Village regarding the prevention of hypertension through questionnaires, the highest data is in the prevention of moderate hypertension as many as 120 respondents with a percentage of 80%.

3.2. Discussion

3.2.1. Blood Pressure of Respondents in Blang Monlung Village

The results showed that the attitude of nurses seen in the table and with a sample of 150 respondents in Blang Monlung Village showed that the most data were respondents with grade 1 hypertension, blood pressure (systolic 140-159 mmHg; diastolic 90-99 as many as 46 respondents (30.7%). In the respondent characteristics section, the age of the respondents was mostly dominated in the age range 36-45 years as many as 54 respondents (31.3%) and age 46-50 years as many as 23 respondents (15.3%). This is in line with research from Taiso, Sudayasa & Paddo, (2021) which states that with increasing age, the risk of hypertension will also increase. Increasing age will cause several physiological changes, in old age there is an increase in peripheral resistance and

sympathetic activity. Systolic blood pressure increases due to reduced flexibility of large blood vessels with increasing age until the seventh decade while diastolic blood pressure increases until it settles or tends to decrease (Yunus et al., 2021).

This is also in line with research from Yunus et al (2021) which states that the increase in blood pressure associated with the aging process is most likely related to arterial changes. Aging causes narrowing of the lumen of blood vessels and hardening of the blood vessel wall through a process known as atherosclerosis. Atherosclerosis causes structural changes including increased vascular calcification which causes pressure waves that were previously reflected during the propagation of blood pressure waves. The pressure wave comes back from the aortic root during systole and contributes to the increase in systolic blood pressure. Diastolic blood pressure tends to increase until around 50 years of age and this increase is due to increased arteriolar resistance. The resulting stiffness of the large arteries contributes to a broader pulse pressure including a decrease in diastolic blood pressure. Increased arteriolar resistance along with large artery stiffness leads to significant increases in systolic blood pressure, pulse pressure and mean arterial pressure.

Based on the above statement, it can be concluded that hypertension or often referred to as high blood pressure can be defined as system blood pressure with systolic and diastolic BP exceeding the normal limit (120/80 mmHg) with systolic pressure> 140 mmHg and diastolic pressure> 90 mmHg. Patients with hypertension experience an increase in blood pressure beyond normal limits, where normal blood pressure is 120/80 mmHg. Hypertension can arise due to the interaction of various risk factors that a person has. Factors that trigger hypertension can be divided into those that cannot be controlled (family history, gender, and age), as well as factors that can be controlled (obesity, lack of physical activity, smoking behavior, food consumption patterns containing sodium and saturated fat).

Based on research conducted in Blang Monlung Village, it is known that respondents who have high normal systolic and diastolic blood pressure, grade 1 hypertension, grade 2 hypertension and grade 3 hypertension are caused by a family history of hypertension, besides that respondents also have a history of hypertension, as well as a high dose of salt in daily food consumption. Grade 1 hypertension, namely systolic blood pressure 140-159 mmHg and diastolic 90-99 mmHg. If the blood pressure is already in this range, it may already require treatment because the risk of damage to organs becomes higher, so it requires treatment as soon as possible so that it does not get worse.

3.2.2. Early Detection of Respondents in Blang Monlung Village

The results showed that the results of research using questionnaires regarding early detection of hypertension in Blang Monlung Village as many as 150 respondents in the table, the most data showed that early detection of hypertension was sufficient as many as 126 respondents (84%). However, there were also results of early detection of hypertension of less respondents as many as 19 respondents (12.7%) and early detection of hypertension of good respondents as many as 5 respondents (3.3%).

In the characteristics of the respondent's education level, the most data were respondents with high school education as many as 90 respondents (60%), junior high

school education as many as 12 (8%) respondents and elementary school as many as 3 respondents (2%). This is in line with research conducted by Mulyono & Khasanah (2020), which states that the relationship between education level and early detection of hypertension can be said to be an indirect relationship. This is because of the role of knowledge, where the level of education will affect a person's knowledge, good knowledge will then lead to a person's awareness (Setiandari, 2022). The moderate value obtained in the table on early detection is influenced by the level of education of a respondent, so that they do not know enough about early detection.

Public awareness about the risk factors for hypertension will make them consciously change their lifestyle. The community must be able to do their job to explore knowledge about hypertension such as early detection of hypertension and being able to prevent hypertension. If the community is not skilled in detecting this, it will certainly have an impact on more severe complications. In the employment characteristics, the most data obtained is the occupation as a housewife as many as 60 respondents (40%). Students as many as 10 respondents (6.7%), private employees as many as 14 respondents (9.3%), honorary 3 respondents (2%), self-employed as many as 16 respondents (10.7%), entrepreneurs as many as 28 respondents (18.7%) and civil servants as many as 19 respondents (12.7%). This is in line with research from Setiandari, (2022) which states that hypertension is caused by modern lifestyle factors, people today are busy prioritizing work to achieve success.

Based on research conducted in Blang Monlung Village, it is known that respondents who have a history of hypertension and have a family history of hypertension rarely carry out early detection of hypertension due to busy work, financial conditions, going to health facilities which are felt to be time consuming and complicated, and respondents feel their bodies are healthy and do not feel the symptoms of hypertension. In addition, respondents also did not know the dangers of hypertension because they considered it just a normal disease, so they did not check their blood pressure at the nearest health facility.

3.2.3. Hypertension Prevention in Blang Monlung Village

The results showed that the results of research using questionnaires regarding the prevention of hypertension in Blang Monlung Village as many as 150 respondents in the data table mostly showed adequate prevention of hypertension as many as 120 respondents (80%). However, there were also results of hypertension prevention of less respondents as many as 16 respondents (10.7%) and early detection of hypertension of good respondents as many as 14 respondents (9.3%).

In the characteristics of the respondent's education level, the most data were respondents with a high school education level as many as 90 respondents (60%). A person's level of education can affect the absorption of information and knowledge gained during his formal education level. This is in line with research from Fuadah and Rahayu, (2018) which states that education is an activity or learning process to develop or improve certain abilities so that the target of education can stand alone. The sufficient value obtained in the table on early detection is influenced by the respondent's level of education, so that they do not know enough about preventing hypertension (Akbar & Tumiwa, 2020).

This is also in line with research from Sudiantara, Gama and Swandewi, (2018) which states that someone who has a high level of formal education has better and broader knowledge and insight and has a more mature personality and attitude. Broader insights and thoughts in the health sector will affect individual behavior in addressing a problem, including the prevention of hypertension (Gama, 2018).

From the results of the hypertension prevention questionnaire questions, 121 respondents answered yes to the question "do you often do physical activities such as exercise", which means that the majority of people in this study mostly do physical activities such as exercise every week to prevent hypertension and a healthier lifestyle. There were 127 respondents who answered no to the question "do you have a habit of drinking coffee every day", which means that many respondents do not have a habit of drinking coffee every day. So that in preventing hypertension, people in addition to having the habit of activity and exercise, also rarely or do not consume coffee which contains caffeine in increasing blood pressure.

It is important for people to prevent hypertension, in order to avoid hypertension and avoid complications (Kuba et al., 2021). Health workers, especially nurses at Puskesmas need to educate the community about the dangers of hypertension and its prevention so that people can know the steps in preventing hypertension, such as doing regular exercise or gymnastics and a salt diet.

4. CONCLUSION

Blood pressure of the community in Blang Monlung Village, namely the results of measuring systolic blood pressure, the highest data is in Level 1 Hypertension (systolic 140 -159 mmHg; diastolic 90 -99 as many as 46 respondents (30.7%).The results of early detection of hypertension through questionnaires in the community in Blang Monlung Village, the highest data is in early detection of hypertension enough as many as 126 respondents (84%).The results of hypertension prevention through questionnaires in the community in Blang Monlung Village, the highest data is in the prevention of hypertension enough as many as 120 respondents (80%).

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