

FACTORS ASSOCIATED WITH HYPERTENSION IN THE ELDERLY AT THE KEMBAYAN SUB-DISTRICT HEALTH CENTER, SANGGAU DISTRICT, WEST KALIMANTAN, 2018

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Abstract

Hypertension is a disease caused by blood pressure that exceeds the normal blood pressure limit. Based on a preliminary study conducted by the researchers at the Kembayan Sub-District Health Center, Sanggau District, West Kalimantan in January to April 2018, there were 79, 37% of the incidence of hypertension in the elderly of 160 elderly in the posyandu [integrated post]. The aim of the study was to find out factors associated with the incidence of hypertension in elderly at Kembayan District Health Center, Sanggau District, West Kalimantan in 2018. This study used a quantitative approach with cross sectional design data obtained using primary and secondary data, and the instruments of the research is questionnaire. The study was conducted in December 2018-January 2019. The population and sample of the study were 127 elderly. The results showed that the majority of respondents who suffered from hypertension amounted 84 people (66%), bivariate analysis with chi-square test all variables related to the incidence of hypertension namely nutritional status (0.018), gender (0.002), and history family (0,000). Recommendation: the Puskesmas conducts periodic counseling and health checks for the elderly, in order to prevent more chronic diseases.

Keywords: hypertension, nutritional status, sex, family history

1. INTRODUCTION

Central Bureau of Statistics (BPS 2017) mentioned that in almost five decades, the percentage of elderly Indonesians has doubled (1971-2017) to 8.97 percent (23.4 million). In addition, the Indonesian elderly are dominated by the age group of 60-69 years (young-old) whose percentage reaches 5.65 percent of the population of Indonesia, the rest is filled by the age group 70-79 years (middle-old) and 80+ (old-old) (BPS, 2017). In addition, less than five years from now, Indonesia is preparing to face an aging population characterized by the percentage of elderly population reaching 10 percent. According to UN projections the percentage of Indonesia's elderly population will reach 10 percent by 2021 (United Nation, Department of Economic and Social Affairs, 2017). Indonesian Law Number 13 of 1998 concerning Elderly Welfare, states that the elderly are someone who has reached the age of 60 (sixty) and above. The increasing number of elderly population presents special challenges in the field of health with the emergence of degenerative problems and non-communicable diseases such as diabetes, hypertension, and mental health disorders, namely depression, dementia, anxiety disorders, and insomnia (Ministry of Health RI, 2013).

Hypertension or high blood pressure is a disease that causes high pain and it is a disorder of the blood vessels which results in the supply of oxygen and nutrients carried by the blood blocked to the tissues of the body in need. In general, hypertension is an asymptomatic condition, where

high blood pressure in the arteries causes an increased risk of cardiovascular diseases such as stroke, kidney failure, heart attacks, and kidney damage.

According to the World Health Organization (WHO), normal blood pressure for everyone is 120/80. That means the systolic blood pressure is 120 and the diastolic blood pressure is 80. If the blood pressure does not exceed the 140/90 mmHg limit it is still categorized as normal and the condition of an increase in systolic blood pressure > 140 mmHg or Hypertension when taking blood pressure measurements and the results remain high after being examined 3 times in different times.

In the province of West Kalimantan included in the category which is ranked sixth the number of cases of hypertension reaching 30.9% is a province that has a higher prevalence of hypertension than the national figure of 25.8% (Riskasdas 2013).

According to the Sanggau District Health Profile (2015) of the number of men and women is 10.128 people and those who have hypertension or high blood pressure, men are 4.649 people and women are 5.479 people.

Based on preliminary studies conducted by researchers at the Kembayan Sub-district Health Center, Sanggau District, West Kalimantan in 2018 according to information provided by the leader of the Kembayan Health Center, in January to April 2018, there were 79.37% of hypertensive in the elderly from 160 elderly in the integrated post of elderly (posyandu lansia).

Blood pressure is the amount given by blood inside the arteries when blood is pumped throughout the bloodstream. Blood pressure is not constant and can change from a matter of seconds, adjusting to the demands at that time.

2. METHODS

This study used a quantitative approach with cross sectional design data, obtained using primary and secondary data, and the instruments of the research is questionnaire. The population used in this study was elderly in the Kembayan Public Health Center, Sanggau District, in 2018. The number of samples founded in this study were 127 elderly pperiod of study was January to April, 2018

3. RESULTS AND DISCUSSION

Table 1. Univariate Analysis Result

Variable	Category	Frequency (n)	Percentage (%)
Incidence of Hypertension	Hypertension	84	66,1
	No Hypertension	43	33,9
Nutritional Status	Normal	36	28,3
	Abnormal	91	71,7
Sex	Male	50	39,4
	Female	77	60,6
Family history	Yes	78	61,4
	No	49	38,6

Based on table 2, the results of the analysis of the relationship between nutritional status and the incidence of hypertension there were as many as 30 (83.3%) were abnormal while the normal ones were 54 (59.3%). Chi Square test results obtained P-value = 0.018, it can be concluded that there is a difference in the proportion of the incidence of hypertension between normal and abnormal nutritional status, and the results of the analysis also obtained an OR value of 3.426, meaning that the abnormal nutritional status had a chance of 3.42 times higher suffering from hypertension than the elderly who had normal nutritional status.

Table 2. Bivariate Recapitulation Table of Factors Associated with Hypertension in the Elderly at Kembayan District Health Center, Sanggau District, West Kalimantan, 2018

Variable	Category	Incidence of Hypertension				Total		P.Val ue	OR (95% CI)
		Hypertension		No		n	%		
		n	%	N	%				
Nutritional Status	abnormal	30	83,3	6	16,7	36	100	0,018	3,426 (1.297-9.048)
	Normal	54	59,3	37	40,7	91	100		
Sex	Male	41	82,0	9	18,0	54	100	0,002	3.602 (1.539-8.429)
	Female	43	55,8	34	47,9	77	100		
Family history	Yes	70	89,7	8	10,3	78	100	0,000	21.875 (8.386-57.060)
	No	14	28,6	35	71,4	49	100		

The results of the analysis between the sexes with the incidence of hypertension were obtained that there were as many as 41 (82.0%) elderly men with hypertension. while among female elderly there were 43 (55.8%) who had hypertension. Chi square test results obtained p-value = 0.002, it can be concluded that there is a difference in the proportion of hypertension between men and women. From the results of the analysis obtained OR = 3.602, meaning that female sex has an opportunity 3.60 times higher incidence of hypertension than elderly male sex.

While the results of the analysis of the relationship between family history and the incidence of hypertension obtained that there were as many as 70 (89.7%) there was a family history of suffering from hypertension. whereas between those with no family history of 14 (28.6%) who suffer from hypertension, the results of the chi square test obtained a P-value = 0,000 so it can be concluded that there is a difference in the proportion of hypertension events that have a family history with no family history, from the results The analysis also obtained an OR value of 21.87, meaning that the elderly with a family history of hypertension had a 21.8 times higher chance of hypertension compared with those without a family history of hypertension.

According to Almaster (2005), nutritional status is a state of health of an individual or group determined by the degree of physical health and energy, other nutrients obtained from food and food whose physical impact is measured by anthropometry. Nutritional status associated with body cells and the substitution of food processes that are pleasing to growth and maintenance, as well as repair and forming the whole life of body parts will result in high and low nutritional status. Nutrition is an important part of health and well-being that is quite nutritious if it is able to provide the nutrients needed for optimal growth and energy maintenance. This is in line with Asrinawaty's research (2014) which shows that there is a relationship between nutritional status and the incidence of elderly hypertension in Posyandu Kakaktua (p value <0.05). It is expected that the elderly can maintain a balanced diet and the need support from the family to raise awareness of the importance of health also expecting the elderly to be able to check their health in the nearest health center.

Meanwhile, men or women are equally likely to experience hypertension during their lives. But men are more at risk of developing hypertension compared to women when they are 46 years old. On the contrary, when the age of 65 years and above, women are more at risk of developing hypertension than men. This condition is affected by hormones. Women who enter menopause, are more at risk for obesity, which will increase the risk of hypertension (Yunita.I 2014). This is in line with the research of Kusumawaty, (2016) at the Lobok Health Center in Ciamis Regency, where the results of the research obtained P-value = 0.001 ≤ (0.05).

The history of hypertension in the family is proven to be a risk factor for hypertension, the literature states that the genetics factor is believed to have a relationship with the incidence of hypertension, if both parents, father and mother suffer from hypertension (Yunita, 2014). This is in line with the research of Ulfa (2016) with the title "Factors Associated with Hypertensive Events in the Elderly at the Cileungsi Bogor District Health Center", where the results of the study found $P\text{-value} = 0,000 \leq (0,05)$ means that there is a meaningful relationship between family history and the incidence of hypertension in the elderly. Family history with the incidence of hypertension in the elderly due to history in families suffering from hypertension such as grandmother or grandfather, it will decrease its generation, namely the children will also suffer from hypertension, this disease can not be cured but can be prevented by doing a healthy lifestyle, like enough eating nutritious foods.

4. CONCLUSION

There was a relationship between nutritional status, sex and history of hypertension in the family with the incidence of hypertension in the elderly. Based on the Chi-Square test, nutritional status has a P-value = 0.018, gender has a P-value = 0.004 and a history of hypertension in the family has a P-value = 0,000.

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