

## Conference Paper

# Proportion of Hypertension Cases by Gender in the North Buton Regency, Southeast Sulawesi Province

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### Abstract.

Hypertension is one of the main risk factors for cardiovascular diseases such as heart attack, heart failure, stroke and kidney disease. This study was conducted to examine the proportion of hypertension by gender in North Buton Regency in the period of 2018-2020. This is a survey research utilizing the health report data of the North Buton District Health Office in the 2017-2020 period, more specifically data on hypertension cases by gender. The research sample is hypertension patients. The type of research data is numerical. The research data is presented in the form of a graph accompanied by a narration. The highest number of cases of hypertension in North Buton Regency for the years 2018-2020 belonged to the female group that spread across 3 health centers namely Lakansai, Kambawo, Kulisusu.

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**Keywords:** Hypertension, Gender, Female, Male

## 1. INTRODUCTION

Hypertension is blood pressure of 140/90 mmHg and above which can be measured in both arms three times over a period of several weeks [1, 2]. Hypertension is often called as The Silent Disease or a hidden disease. People who are not aware may have hypertension before doing blood pressure checks [3–5]. Hypertension may affect anyone from various age groups and socioeconomic status. Hypertension is an asymptomatic condition where high blood pressure in the arteries causes an increased risk of cardiovascular-related diseases such as stroke, heart failure, heart attack, kidney damage [6–8].

On the same year, the hypertension case was higher in developing countries than in developed countries. Nearly 75% of patients with hypertension lived in developing countries [9] and there was an increase of 8.1%. Meanwhile, according to the results of the 2013 Riskesdas, the hypertension cases in Indonesia is ranked 6th out of 10 categories of chronic non-communicable diseases. The prevalence of hypertension in

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Indonesia obtained from the results of blood pressure measurements of people aged 18 years has decreased from 31.7% in 2007 to 25.8% [10].

Some of the hypertension triggering factors include smoking, lack of exercise, obesity (obesity), gender, excess salt intake, alcohol, caffeine, genetic factors, age, and high cholesterol. In general, the cases of hypertension often occur in the elderly population, but it is possible that the population aged teenagers to adults can also experience hypertension. Adolescents and young adults who are in the age range of 15-25 years have a hypertension prevalence rate of 1 in 10 people.

Based on this fact this study was conducted to describe the proportion of hypertension by gender in North Buton Regency for the year 2018-2020.

## 2. METHODOLOGY

This research is a survey research by utilizing the health report data of the North Buton District Health Office for the year 2017-2020 involving data on the cases of hypertension by gender. The research sample is hypertension patients. The type of research data is numerical. The research data is presented in the form of graphs along with narration.

## 3. RESULT OF THE STUDY

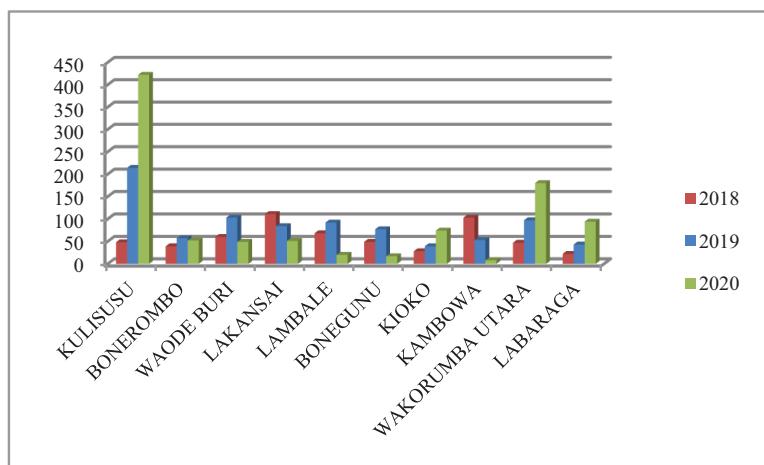
The research result is presented using a bar chart accompanied by an explanation that can be presented as follows:

Figure 1 show that cases of hypertension based on male gender in North Buton Regency in 2018 were highest at Lakansai and Kambawo Health Centers and in the year 2019 the highest was at Kulicusu Health Center. In the year 2020 the highest was at Kulicusu Health Center.

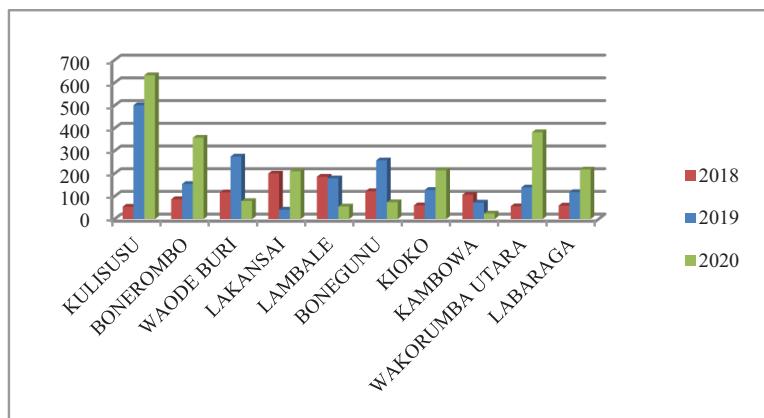
Figure 2 showed that the case of hypertension by female gender in North Buton Regency in 2018 was highest at Lakansai Health Center and in 2019 and 2020 the highest at Kulicusu Health Center.

## 4. DISCUSSIONS

The highest number of hypertension cases by gender in North Buton Regency for the 2018-2020 period was female. It spread across 3 health centers namely Lakansai, Kambawo, Kulicusu Health Centers. This can be related to the age of the respondents



**Figure 1:** Hypertension Cases Rate by Male in North Buton Regency for the year 2018-2020.



**Figure 2:** The Hypertension cases by Female in North Buton Regency for the year 2018-2020.

who are predominantly elderly. The menopause phase cause the production of the hormone estrogen in women has begun to decrease. It can be result the decrease the blood protection vessels so that blood vessels begin to lose elasticity and are at risk of contracting which in turn increases blood pressure.

Based on the percentage of the elderly population by gender, the life expectancy of elderly women is greater than that of elderly men [11]. The results of a National Health Agency survey and nutrition research, said that hypertension affects more women than men [12].

Hypertension by gender can also be influenced by psychological factors. Women often adopt unhealthy behaviors such as smoking and an unbalanced diet, leading to overweight, depression, and low work status. Meanwhile mostly men, hypertension is more closely related to work such as feeling less comfortable with work and unemployment.

The research by Lili Sundari et al. [13], state that 94 women were got hypertension more than men. There is (60.6%) based on the results of data analysis, it was found that there was a relationship between sex factors and a p-value of 0.04. Research by La Ode Alifariki [14] found that the proportion of hypertension was higher in women due to the influence of old age, excessive eating patterns in women, many female respondents suffered from moderate anxiety. Yuniar [15] found that different gender had an effect on the occurrence of certain non-communicable diseases such as hypertension where men suffered from hypertension more than women because men had higher systolic and diastolic blood pressure than women.

Juan-Juan Song et al [16] stated that gender differences is related to the prevalence, awareness, treatment, and prognosis of hypertension and the pathomechanisms underlying the development of hypertension.

## 5. CONCLUSIONS

The highest number of hypertension cases by gender in North Buton Regency for the year 2018-2020 was female. The spread out across 3 health centers namely Lakansai, Kambawo, Kulisusu Health Centers.

## 6. AUTHOR' CONTRIBUTION

The authors have contributed to the preparation of this article.

## 7. ACKNOWLEDGMENTS

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