# KNOWLEDGE OF WKRI MEMBERS IN PADANG CITY AGAINST HYPERTENSION 

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#### Abstract

This study aims to provide an overview of the incidence of hypertension and the knowledge of Indonesian Christian Women (WKRI) members regarding hypertension. This study uses a descriptive quantitative research method with a cross-sectional approach. The results of this study indicate that most of the respondents are in the elderly age group, with a high school education background and homemaker work. The measurement results found that several respondents had hypertension which needed to be reconfirmed by a doctor's diagnosis. In conclusion, it is necessary to carry out periodic controls for hypertension screening of members, and efforts to control consumption and increase knowledge about diet are required.


Keywords: Hypertension, Elderly, Knowledge

## INTRODUCTION

Hypertension is known as one of the most common causes of health problems. This disease is believed to be one of the leading causes of cardiovascular diseases, such as heart failure, kidney failure, stroke, and ischemic heart disease (Azizah et al., 2022; Olivia, 2022; Fitrianingsih et al., 2022). One billion people worldwide suffer from hypertension, around $67 \%$ in developing countries with average or low-moderate income. The prevalence of hypertension will continue to increase sharply, and it is predicted that by 2025 , around $29 \%$ of adults worldwide will suffer from hypertension (WHO, 2021b).

This disease is characterized by a condition where the systolic blood pressure is above the standard limit, which is more than 140 mmHg , and the diastolic blood pressure is 90 mmHg (Permata et al., 2021; Ministry of Health R1, 2019; WHO, 2021b). Systolic pressure describes the high pressure in the arteries when the heart contracts, while diastolic blood pressure describes the pressure in the arteries when the heart relaxes (Sartika et al., 2020; Hanum et al., 2018). Many of these have not been detected even though they have been for years and have no specific signs (Sari, 2017).

Therefore, there is an increase in pressure in the blood vessels, which causes the heart to work harder to meet the body's needs for oxygen and nutrients (Ministry of Health RI, 2018; Ramadhan \& Husnah, 2019). This disease can interfere with the function of other organs if left unchecked (Elivia, 2022). Hypertension has resulted in the deaths of around 8 million people each year, of which $33 \%$ or the equivalent of 1.5 million deaths occur in Southeast Asia (Andari et al., 2021; Harsismanto et al., 2020; Akbar et al., 2020).

Risk factors for this disease can be divided into two: those that can be controlled and those that cannot. This disease can be caused by genetic factors (family history), age, gender, weight, diet, and lifestyle (Apriani, 2022). If distinguished, risk factors that cannot be changed are heredity or genetics, sex, and age) and risk factors that can be changed such as overweight or obesity, lack of exercise or physical activity, smoking, stress, alcohol consumption, and salt consumption. Although some studies state no relationship between gender and hypertension, others state otherwise (Swardin et al., 2022). Family history causes individuals to have a two times greater risk of developing hypertension than those without. Individuals with obesity have a greater chance of developing hypertension, and high salt intake in dietary patterns can cause excess expenditure of natriuretic hormone, which will indirectly increase blood pressure.

Hypertension increases with age (Kuswoyo \& Tuasmu, 2022). This occurs due to changes in structure and function in cells, tissues, and organ systems with age. The elderly group will experience a process of losing the ability of the tissue to repair itself or replace and maintain its normal function slowly so that it cannot survive infection and repair the damage that has occurred. So changes occur that affect the decline in physical health, ultimately affecting disease susceptibility (Akbar et al., 2020; Putra et al., 2022). On average, many older adults do not understand the risk factors that cause hypertension, including poor food consumption patterns and a lack of awareness about blood pressure control measures (Elivia, 2022). So it is necessary to measure blood pressure regularly.

Based on the 2018 Riskesdas, in Indonesia, hypertension is the most common disease in the elderly, with a prevalence of $63.22 \%$ at the age of 65-74 years and $69.53 \%$ over the age of 75 years (Balitbangkes RI, 2018). In the province of West Sumatra, the prevalence reached $25.15 \%$, while in the city of Padang, the prevalence of hypertension reached 21.75\% (Ministry of Health RI, 2018). This shows that most adults, such as the elderly, have hypertension.

This study aimed to see an overview of the prevalence associated with the incidence of hypertension in the Indonesian Catholic Women's Association (WKRI) group. This women's organization spread throughout Indonesia, aiming to spread the social vision to others so that it is necessary to carry out medical examinations for members to maintain members health and carry out organizational activities properly in addition to measuring the blood pressure of the members who mostly come from the elderly group and to find out the knowledge of the elderly about hypertension.

## RESEARCH METHODS

This type of quantitative research and research design is the descriptive motif. This research was conducted in a cross-sectional manner which was carried out only at one particular time. The population of this study was mothers from the Republic of Indonesia Catholic Women's Association, which focused on the Regional Representative Council of the City of Padang, totaling 60 respondents. Data collection uses a questionnaire prepared in advance.

After measuring knowledge, blood pressure was measured based on systolic and diastolic pressure. The measurement results are then grouped based on three categories of blood pressure; 1) Normal blood pressure, if it is systolic, it is <120 $\mathrm{mmHg} ; 2$ ) Pre-hypertension if the systolic is $120-130 \mathrm{mmHg}$; 3) Hypertension, if
the systolic is> 130 mmHg . In addition to seeing systolic pressure, diastolic blood pressure also needs to be considered.

The subject of this research is the association of members of the Governing Council of the Catholic Women's Branch of the Republic of Indonesia in the city of Padang. This association consists of various age groups that focus on humanitarian activities. Data analysis was carried out to describe the incidence of hypertension in the WKRI member group. Data analysis in this study used univariate analysis. The research results were interpreted as tabulations from survey questionnaires, described using tables, and then explained graphically.

## RESEARCH RESULT

## Characteristics of Respondents

Table. 1
Frequency Distribution of Respondent Characteristics

| Characteristics of Respondents | Frequency | Percentage |
| :---: | :---: | :---: |
| Age group |  |  |
| $30-40$ | 2 | $3 \%$ |
| $40-50$ | 19 | $32 \%$ |
| $50-60$ | 11 | $18 \%$ |
| $>60$ | 28 | $47 \%$ |
| Level of education |  |  |
| SD | 2 | $3 \%$ |
| SMP | 8 | $13 \%$ |
| SMA | 35 | $58 \%$ |
| PT | 15 | $25 \%$ |
| Work |  |  |
| IRT | 47 | $78 \%$ |
| Self-employed | 5 | $8 \%$ |
| Private employees | 3 | $5 \%$ |
| Retired | 5 | $8 \%$ |

Table 1 shows that the respondents came from the age group of 30 to over 60 years, with respondents ranging in age from 38 to 81 years. Most respondents were in the age group over 60 years, as many as $47 \%$ or 28 respondents.

More than 50 respondents have high school education levels (58\%), as many as 35 people. This research was followed by respondents from various educational backgrounds, starting from elementary school, middle school, to university. Based on the occupational group, most respondents were homemakers, with a percentage of nearly $80 \%$ or as many as 47 people.

Table. 2
Blood Pressure Event Category

| Blood Pressure Category | Frequency | Percentage |
| :---: | :---: | :---: |
| Normal $(<120 \mathrm{mmHg})$ | 24 | $40 \%$ |
| Pre-Hypertension $(120-140 \mathrm{mmHg})$ | 11 | $18 \%$ |
| Hypertension $(>140 \mathrm{mmHg})$ | 25 | $42 \%$ |

Table 2 classifies blood pressure events based on the Joint National Committee on Prevention Detection, Evaluation, and Treatment of High-Pressure VII/JNC - VII in 2003, adopted by the Ministry of Health. Based on the measurement results, it is known that $42 \%$ of respondents have blood pressure above 140 mmHg . Based on this grouping, it is included in the hypertension category; however, to establish a diagnosis of hypertension according to the provisions of the guidelines for the prevention and control of non-communicable diseases of the Ministry of Health, it must be based on at least two measurements one week apart.

Table. 3
Distribution of Respondents Knowledge Answers

| Question Items | Wrong |  | Correct |  |
| :--- | :---: | :---: | :---: | :---: |
|  | f | $\%$ | f | $\%$ |
| Definition of Hypertension | 23 | $38 \%$ | 37 | $62 \%$ |
| The cause of the silent killer of hypertension | 26 | $43 \%$ | 34 | $57 \%$ |
| Hypertension Symptoms | 22 | $37 \%$ | 38 | $63 \%$ |
| Modifiable Risk Factors | 12 | $20 \%$ | 48 | $80 \%$ |
| Irreversible Risk Factors | 29 | $48 \%$ | 31 | $52 \%$ |
| Danger of hypertension | 10 | $17 \%$ | 50 | $83 \%$ |
| Prevention of hypertension | 43 | $72 \%$ | 17 | $28 \%$ |
| How to prevent hypertension | 10 | $17 \%$ | 50 | $83 \%$ |
| Recommendations for follow-up of | 6 | $10 \%$ | 54 | $90 \%$ |
| hypertension |  |  |  |  |
| Control hypertension | 50 | $83 \%$ | 10 | $17 \%$ |

Table 3 shows the distribution of respondents' answers regarding hypertensionrelated knowledge. From the table, it is known that $90 \%$ of respondents know the recommendations for follow-up of hypertension but do not know how to properly control hypertension (83\%) and prevent hypertension (72\%). The table's contents also explain that 48 respondents ( $80 \%$ ) know the modifiable risk factors for hypertension, but 43 people do not know how to prevent them ( $72 \%$ ).

## DISCUSSION

Hypertension is a lifelong disease that causes organ damage. This event is characterized by an increase in systolic/diastolic blood pressure of $20 / 10 \mathrm{mmHg}$. So this can double the risk of morbidity and mortality. Hypertension has become a global health problem resulting in increased morbidity and mortality as well as a burden on health costs worldwide and in Indonesia. Based on WHO data for 2021, it is estimated that 1.28 billion adults aged 30-79 years worldwide suffer from hypertension (Bakris et al., 2019; Rossier et al., 2017; WHO, 2021a).

The results showed that the respondents came from the age group above 60 years. Based on various studies, it is known that the prevalence of hypertension in women aged over 45-55 years is higher. As we age, the body experiences several health problems, often called degenerative diseases (Indrayani et al., 2022; Marbun \& Hutapea, 2022). This occurs due to physiological changes due to the aging process. As a result, heart valves thicken and become stiff, and the heart's ability to pump blood decreases by $1 \%$ per year after age 20 (Putri et al., 2023). This causes decreased contraction and volume, loss of elasticity of blood vessels, and increased blood pressure due to increased peripheral vascular resistance ( $\pm 170 / 95 \mathrm{mmHg}$ ) (Muhith \&

Siyoto, 2016). In addition, the increased risk of hypertension in women over 50 is also due to the menopause process, where hormonal changes occur (Ayu \& Ardillah, 2022).

Based on the level of education, respondents were known to come from various levels of education, from elementary school to university. More than $50 \%$ of respondents can be categorized as having a good education because they have graduated at least at the high school level ( 35 respondents graduated from high school and 15 people at university). The level of education indirectly affects blood pressure in the elderly because the level of education influences a person's lifestyle, such as smoking habits and physical activity (Sudin et al., 2023).

The results of primary health research conducted in 2018 stated that hypertension tends to be high in low education and decreases according to increased education (Ministry of Health RI, 2018). This relationship is not solely due to differences in education level, but education level influences a healthy lifestyle by not smoking, not drinking alcohol, and exercising more often. The high risk of developing hypertension with low education may be due to a need for more patient knowledge. This also makes it difficult or slow to receive information (counseling) related to hypertension and its prevention provided by officers so that it impacts healthy behavior/lifestyle (Akbar et al., 2020).

Most respondents were primarily housewives, with a percentage reaching $78 \%$ or 47 people. Ayu's research in 2013 stated that the prevalence of hypertension in homemakers who live around the port, especially those who have entered menopause, is higher (Ayu \& Ardillah, 2022). The relationship between work and hypertension is more focused on increasing physical activity. Occupation affects a person's physical activity, mainly in people who do not have a permanent job, especially mothers, will be detected to have minimal physical activity, which can increase the incidence of hypertension (Akbar et al., 2020).

Physical activity is an independent risk factor for hypertension. Any bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure. Several previous studies have stated that regular exercise can reduce blood pressure in hypertensive patients (Andini et al., 2019). Risk factors that cause hypertension should also be avoided, such as obesity, exposure to cigarette smoke, and stress management (Kartika et al., 2021; Sartik et al., 2017).

In this study, the incidence of hypertension was grouped into three categories which were known after measurement. Based on the measurement results, it is known that 25 respondents, or $42 \%$ had hypertension, with diastolic blood pressure above 140 mmHg . Meanwhile, 11 other people had pre-hypertension, with diastolic blood pressure between $120-140 \mathrm{mmHg}$. Based on the results of several studies, it is stated that excessive salt consumption has significance for the incidence of hypertension. Apart from that, stress also influences this disease; this is because when you are stressed, the hormone adrenaline will increase, causing your heart to pump blood faster (Linggariyana et al., 2023; Putra et al., 2022; Rahmadhani, 2021).

Knowledge is the result of knowing something both old and new, which in this effort to know involves a person's various senses. When someone uses the senses that are owned either intentionally or unintentionally, and as a result of using these senses, someone becomes aware of everything. However, the level of knowledge one has about something is the lowest level in the cognitive dimension (Darsini et al., 2019).

Respondents who have good knowledge and actions occur because respondents already have good knowledge regarding hypertension, so it can be a means to assist respondents in controlling hypertension. The more the respondent understands his disease, the more he understands the actions that must be maintained or changed. Respondents' knowledge is essential in determining hypertension control measures (Maulidah et al., 2022).

## CONCLUSION

Based on the research results, it is known about the description of the characteristics of members of the Women's Organization of the Catholic Church of the Republic of Indonesia. Most of the members are homemakers with an age range of 38 to 81 years. From the questionnaire results, it is known that the respondents have a variety of education ranging from elementary school to university. Most respondents are housewives, retirees, entrepreneurs, and private employees. Based on the measurement results, it is known that almost $50 \%$ of the respondents suffer from hypertension which needs to be tested again in the second measurement with a doctor's diagnosis. From the measurement of knowledge, it can be seen that respondents are generally familiar with hypertension but still do not know what to do if they have hypertension and how to control it.

## SUGGESTION

It is necessary to carry out periodic control regarding the examination results, and it must be diagnosed by a doctor to establish a diagnosis of the disease. This needs to be coupled with education to increase public knowledge, especially the elderly, related to hypertension. Increasing public knowledge about hypertension will encourage someone to behave better in controlling hypertension so that their blood pressure remains under control; public knowledge about hypertension also affects people's adherence to treatment.

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