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RESEARCH

The Relationship Between Knowledge of Hypertension Complications and Prevention Efforts at the Semambung Wonoayu Village Health Post

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ABSTRACT

A public health concern, hypertension is a non-communicable condition that can result in major consequences such heart disease, stroke, renal failure, and eye impairment. To effectively implement preventative measures, the public must have a thorough grasp of the difficulties associated with hypertension. The purpose of this study is to examine the connection between prevention initiatives at the Integrated Health Post (Posbindu) in Semambung Village, Wonoayu, and knowledge of hypertension problems. The study employed a cross-sectional methodology and a quantitative design. Using a complete sampling technique, 50 respondents made up the sample size. A questionnaire on awareness of hypertension complications and preventative initiatives was used to gather data. The Chi-Square test with a significance level of $\alpha = 0.05$ was used to analyze the data. The results of the survey showed that most respondents had a good level of awareness 31 respondents (62.0%) and good attempts to prevent hypertension problems 35 respondents (70.0%). According to the cross-tabulation results, 25 respondents had both good prevention actions and good knowledge. The Chi-Square test yielded a p-value of 0.036 ($p < 0.05$), indicating a strong correlation between attempts to prevent hypertension complications and knowledge of these consequences. The public's efforts to prevent hypertension will be more successful if they are better informed about its implications. To raise public awareness about preventing problems from hypertension, ongoing health education is required.

Keywords: Hypertension, Knowledge, Hypertension Complications, Prevention Efforts.

INTRODUCTION

Hypertension is a health condition classified as a non-communicable disease and a major health challenge frequently encountered in healthcare settings, particularly community health centers (Puskesmas). This disease is often referred to as a "silent killer" it can lead to life-threatening consequences.

The term hypertension refers to a condition where blood pressure is persistently elevated beyond normal limits. A person is considered to have hypertension if the measurement shows a systolic at least 140 mmHg or a diastolic at least 90 mmHg.

Based on estimates by the World Health Organization (WHO), the global prevalence of hypertension in 2024 will still be a major health problem, with approximately 1.4 billion people aged 30 to 79 years recorded as having this condition or one-third (33%) of that age group.

Public knowledge about hypertension complications plays a crucial role in shaping preventative behavior. Individuals who understand the dangers of hypertension complications tend to be more compliant with a healthy lifestyle, have regular blood pressure checks, take medication as recommended, and avoid risk

factors. Therefore, this study was conducted to determine the relationship between knowledge of hypertension complications and prevention efforts among the community at the Semambung Wonoayu Village Community Health Post.

The Non-Communicable Diseases Post (Posbindu) is a community-based health service aimed at improving early detection, education, and control of risk factors for non-communicable diseases, including hypertension. Therefore, this study was conducted to determine the relationship between knowledge of hypertension complications and hypertension prevention efforts at the Posbindu in Semambung Wonoayu Village.

METHOD

This study used a quantitative design with correlational methods and a cross-sectional approach. The aim was to determine how preventive measures at Posbindu Post 1 in Semambung Wonoayu Village relate to awareness of hypertension.

The population used is all members of the general public who are registered and actively participate in Posbindu activities in Semambung Wonoayu Village at post 1 RT 01 RW 01, which has a total of 50 people using the total sampling technique.

The independent variable was knowledge about hypertension complications, while the dependent variable was hypertension prevention efforts. The research instrument was a questionnaire that had undergone validity and reliability testing.

Univariate analysis was used to describe the characteristics of respondents and the distribution of research variables. Bivariate analysis was conducted using the Chi-Square test with a significance level of $\alpha = 0.05$ to determine the relationship between knowledge of hypertension complications and prevention efforts.

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Table 1 Distribution of Respondents Based on Age, Gender, Last Education and History of Hypertension at the Semambung Wonoayu Village Health Post on February 2026

General Information	Frequency	Persentase
A. Age		
a. < 60 Years	17	34,0
b. 60-70 Years	25	50,0
c. > 70 Years	8	16,0
B. Gender		
a. Man	12	24,0
b. Woman	38	76,0
C. Education		
a. Not in school	5	10,0
b. Elementary School	4	8,0
c. Junior High School	18	22,0
d. Senior High School	22	36,0
e. Diploma	9	18,0
f. Bachelor	3	6,0
D. Riwayat Hipertensi		
a. Yes	23	46,0
b. No	27	54,0

Distribution of respondent characteristics is listed in Table 1. Based on age distribution, the largest proportion came from the 60–70 year group, namely 25 respondents (50.0%). The age group under 60 years old was next with 17 respondents (34.0%), while the age group over 70 years old had the lowest proportion, namely 8 respondents (16.0%). When viewed by gender, the majority of respondents were women with a total of 38 respondents (76.0%), while men numbered 12 respondents (24.0%).

The distribution of respondents by education level shows that the highest educational level is high school (22 respondents) with 22 (36.0%). Next are

respondents with junior high school education (18 respondents) and diploma graduates (9 respondents) with 18 (18.0%). Respondents who did not attend school numbered 5 (10.0%), while elementary school graduates numbered 4 (8.0%). The smallest proportion was among respondents with a bachelor's degree, namely 3 (6.0%). When viewed from the history of hypertension, the majority of respondents did not have a history of hypertension, with a total of 27 respondents (54.0%). Conversely, respondents who did have a history of hypertension numbered 23 (46.0%).

Table 2 Distribution of Respondents Based on Knowledge of Hypertension Complications at the Semambung Wonoayu Village Health Post on February 2026

Hypertension Knowledge	Frekuensi	Persentase
Enough	19	38,0%
Good	31	62,0%
Not Enough	0	0%
Total	50	100%

Based on the results of Table 2, the majority of respondents fell into the good knowledge category, with 31 respondents (62.0%). Meanwhile, 19 respondents (38.0%) fell into the adequate knowledge category.

Table 3 Distribution of Respondents Based on Efforts to Prevent Hypertension Complications at the Semambung Wonoayu Village Health Post on February 18, 2026

Hypertension Prevention Efforts	Frekuensi	Persentase
Enough	15	30,0%
Good	35	70,0%
Not Enough	0	0%
Total	50	100%

In table 3, it is known that the majority of respondents had good efforts to prevent hypertension complications, namely 35 people (70.0%), while respondents with adequate prevention efforts were 15 people (30.0%).

Table 4 Results of Data Analysis on the Relationship between Knowledge of Hypertension Complications and Prevention Efforts at the Semambung Wonoayu Village Health Post on February 2026

Hypertension Knowledge	Hypertension Prevention Efforts		N	P Value
	Enough	Good		
	n	n		
Enough	9	10	19	0,036
Good	6	25	31	
Total	15	35	50	

The results of the Chi-Square test indicate that 25 respondents have a good level of knowledge and prevention efforts in the good category. On the other hand, 10 respondents with a sufficient level of knowledge also showed good prevention behavior. A total of 9 respondents are in the sufficient category for both knowledge and prevention efforts, while 6 respondents have good knowledge, but prevention is in the sufficient category. Based on the results, it is known that there is a significant correlation between the level of knowledge about hypertension and efforts to prevent hypertension complications at the Posbindu Semambung Village, Wonoayu, as evidenced by the p value = 0.036 ($p < 0.05$).

DISCUSSION

Overview of Respondents' Knowledge About Hypertension Complications

The study results showed that of the 50 respondents, 31 (62%) had a good level of knowledge regarding hypertension

complications, while 19 (38%) had a fair level of knowledge. These findings indicate that most respondents understood the definition of hypertension, the complications it can cause, and the various measures that can be taken to prevent complications.

Individual behavior in maintaining and improving their health status is greatly influenced by the knowledge they have. Individuals who have adequate knowledge tend to be better able to recognize risk factors, understand the impact of the disease, and determine appropriate actions to prevent complications of hypertension.

The findings of this study align with those of a study conducted by Rahayu, Hoedayana, and Inriyana (2024). This study revealed that the majority of individuals with hypertension have a good level of knowledge regarding the various complications of the disease. Furthermore, it was explained that knowledge is influenced by ease of access to information.

According to the researchers, the high level of knowledge among respondents in this study was likely influenced by the community's active participation in Posbindu (Community Health Post) activities. Through these activities, the community received education about hypertension, its risk factors, complications, and prevention methods. Furthermore, easy access to information through electronic media and healthcare providers also contributed to the community's increased understanding of hypertension complications.

Overview of Hypertension Complication Prevention Efforts

The study results showed that of the 50 respondents, 35 (70%) had taken steps to prevent hypertension complications, categorizing them as good, while 15 (30%) were considered adequate. These data indicate that the majority of respondents had implemented various measures to reduce the risk of complications from hypertension.

These efforts include regular blood pressure monitoring, use of antihypertensive medications as directed by a healthcare professional, limiting salt intake, maintaining a healthy weight, engaging in regular exercise or physical activity, managing stress levels well, and avoiding smoking and alcohol consumption. If these preventive measures are consistently implemented, the risk of complications can be reduced.

The findings of this study indicate consistency with the results of a study conducted by (Rahayu, Hoedayana and Inriyana, 2024) which found that hypertension sufferers who have a good understanding of the dangers of hypertension complications tend to be more compliant with a low-salt diet, carry out regular health checks, and adopt a healthy lifestyle as an effort to prevent complications.

The high level of preventive efforts undertaken by respondents indicates public awareness of the importance of maintaining health and preventing hypertension complications.

The Relationship Between Knowledge and Efforts to Prevent Complications

The high level of preventive efforts undertaken by respondents indicates public awareness of the importance of maintaining health and preventing hypertension complications. The results of a study conducted on 50 respondents at the Semambung Wonoayu Village Posbindu showed that most respondents had a good level of knowledge regarding hypertension complications. A total of 31 respondents (62%) were classified as having good knowledge, while 35 respondents (70%)

showed efforts to prevent hypertension complications that were also in the good category. Statistical testing using the Chi-Square test produced a p-value of 0.036 ($p < 0.05$). This value indicates that there is a significant relationship between the level of knowledge regarding hypertension complications and efforts to prevent hypertension complications.

Based on the research results, increasing levels of knowledge regarding hypertension complications are related to improving efforts to prevent complications made by individuals.

The results of this study support the findings reported by (Oktavia, M and Fernandez, 2023). In this study, a significant relationship was found between the level of patient knowledge and efforts to prevent hypertension complications in hypertension patients at the Bahu Community Health Center in Manado City. Statistical testing produced a p-value of 0.036 ($p < 0.05$), indicating a significant relationship between the two variables. Based on these findings, it can be concluded that increasing patient knowledge plays a role in improving efforts to prevent hypertension complications.

According to the researchers' analysis, the results of this study demonstrate the important role of knowledge in influencing health behaviors in the community. Respondents who understood the risks of hypertension complications, including stroke, heart failure, and kidney failure, were more likely to take various preventive measures.

CONCLUSION AND SUGGESTIONS

CONCLUSION

Based on research conducted at the Semambung Wonoayu Village Integrated Health Post (Posyandu) regarding the relationship between hypertension knowledge and efforts to prevent hypertension complications, the following conclusions can be drawn:

1. Most respondents' knowledge of hypertension complications was classified as good.
2. Most respondents' efforts to prevent hypertension complications were classified as good.
3. A relationship was found between hypertension knowledge and efforts to prevent hypertension complications at the Semambung Wonoayu Village Community Health Post (Posbindu).

SUGGESTIONS

1. For the Community

The results of this study are expected to encourage the public to increase their knowledge about hypertension and implement various sustainable complication prevention efforts. Adopting a healthy diet, limiting salt intake, regular physical activity, and regular blood pressure monitoring are all steps that can be taken to reduce the risk of hypertension complications.

2. For Health Workers

Health workers are expected to be able to increase the intensity of health promotion activities through education and counseling and prevention of complications to the community, especially through Posbindu activities, so that the community can better maintain normal blood pressure.

3. For Future Researchers

Further research is recommended to explore factors related to preventing hypertension complications to obtain more comprehensive results. Potential variables include attitudes, behaviors, family support, medication adherence, and lifestyle.

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