

# Community Empowerment in Hypertension Control Through Health Education and Community-Based Early Treatment

<sup>1</sup>Fakhrun Nisa, <sup>2</sup>Fardi, <sup>3</sup>Sudirman,  
<sup>1,2,3</sup> Nursing Study Program, Akper Mappa Oudang Makassar, Indonesia

## ARTICLE INFO

### Article history :

Received 2025-January-04

Received in revised form 2025-March-20

Accepted 2025-March-24

### Keywords :

Blood pressure screening,  
Community empowerment,  
Health education,  
Hypertension

### Correspondence :

Email:

[sirpm.stikesandinipersada@gmail.com](mailto:sirpm.stikesandinipersada@gmail.com)

## ABSTRACT

Hypertension is one of the non-communicable diseases that remains a major public health problem because it can lead to serious complications such as heart disease and stroke. Low public awareness and limited knowledge about risk factors and prevention of hypertension causes many cases to remain undetected at an early stage. This community service activity aims to improve community knowledge and awareness in controlling hypertension through community-based health education and blood pressure screening. The method used consisted of preparation, implementation, and evaluation stages. The activity involved 30 participants who had a history of hypertension. The intervention included health education about hypertension, blood pressure examinations, and health consultations for participants with high blood pressure. The results showed an increase in community knowledge after health education, where the proportion of participants with good knowledge increased from 20% to 70%. In addition, participants showed greater awareness of regularly checking their blood pressure and adopting healthier lifestyles. This activity indicates that community-based health education and screening are effective strategies to increase public awareness in hypertension control.



## INTRODUCTION

Hypertension is a non-communicable disease that is a global public health problem because it contributes significantly to morbidity and mortality from cardiovascular disease. Hypertension is defined as a persistent increase in systolic blood pressure of  $\geq 140$  mmHg and/or diastolic blood pressure of  $\geq 90$  mmHg. This condition is often referred to as a silent killer because most sufferers do not experience obvious symptoms until serious complications such as stroke, coronary heart disease, heart failure, or chronic kidney disease develop.(1)According to a report from the World Health Organization, approximately 1.28 billion adults worldwide live with hypertension, and nearly half of them are unaware of their condition. In Indonesia, hypertension is also a non-communicable disease with a relatively high prevalence. According to the 2018 Basic Health Research report published by the Indonesian Ministry of Health, the prevalence of hypertension in the population aged 18 years and above reached 34.1%.(2)These figures indicate that more than a third of Indonesia's adult population suffers from hypertension. This high prevalence is influenced by various risk factors, such as a high-salt and high-fat diet, lack of physical activity, obesity, smoking, and increased stress levels in daily life.

Besides the high prevalence, another frequently encountered problem is low public awareness regarding early detection of hypertension. Many individuals do not have their blood pressure checked regularly, so hypertension is only discovered after complications develop. This situation indicates that promotive and preventive efforts still need to be strengthened, particularly by increasing public knowledge and awareness regarding the importance of early blood pressure control. Low public knowledge regarding risk factors, prevention, and management of hypertension is one of the main causes of the high incidence and complications of hypertension.(3). Furthermore, limited access to health services and a lack of awareness about routine blood pressure checks also pose challenges to hypertension control at the community level. Community empowerment through health education is an effective strategy for improving public knowledge, attitudes, and behaviors regarding health maintenance. Through community-based outreach, training, and mentoring, communities can be encouraged to be more active in monitoring their health, particularly by conducting regular blood pressure checks and adopting a healthy lifestyle.(4). Furthermore, community-based early treatment can be a strategic step in reducing the risk of hypertension complications by providing easier access to basic health services.

Although various studies have discussed health education in hypertension control, the implementation of community empowerment programs that integrate health education with community-based early detection and treatment is still limited, particularly in community service activities. Therefore, an approach is needed that not only focuses on increasing knowledge but also on empowering the community to undergo routine blood pressure screening and receive early treatment if hypertension is detected. Based on these issues, this community service activity aims to increase public knowledge and awareness in hypertension control through health education and facilitating community-based early detection and treatment. This program is expected to be a promotive and preventive strategy in reducing the risk of hypertension complications and improving the quality of life of the community by strengthening the community's role in maintaining health.

## METHOD

The methods used in this community service activity include community-based health education and screening. This activity involves several stages, including preparation, implementation, and evaluation. These stages are systematically designed to ensure that the health education and early detection of hypertension are effective and provide benefits to the community.

The first stage is the preparation phase. Coordination with local officials and health workers in the target area is conducted to obtain support and facilitate program implementation. In addition, the implementation team also developed educational materials on hypertension, covering the definition of hypertension, risk factors, prevention, and the importance of controlling blood pressure through a healthy lifestyle. This stage also involved preparing the necessary facilities and infrastructure, such as blood pressure monitoring equipment (sphygmomanometers), observation sheets, and educational materials in the form of leaflets and presentation materials to be used in health education activities.

The next stage is the implementation phase. This phase involves health education for the community about hypertension, including risk factors, prevention methods, and the adoption of healthy lifestyles such as reducing salt intake, increasing physical activity, and the importance of regular blood pressure checks. In addition to health education, the program also includes health screenings, including blood pressure checks for participants. Those found to have high blood pressure will receive direct health consultations from the implementation team. Participants are also given recommendations for early treatment and referrals to health care facilities if needed for further treatment.

The final stage is the evaluation phase. Evaluation is conducted to assess the effectiveness of the activities implemented, particularly in increasing public awareness of hypertension. Evaluation is conducted through discussions and questionnaires to determine the level of public understanding after participating in the educational activities. Furthermore, changes in community behavior related to adopting a healthy lifestyle and awareness of regular blood pressure checks are monitored. The results of this evaluation are expected to provide an overview of the impact of community service activities in increasing public awareness and ability to independently manage hypertension.

## RESULTS

A community service activity on community empowerment in hypertension control through health education and community-based blood pressure screening was carried out at BTN Tamarunang Indah I RT 001 RW 005, Tamarunang Village, Gowa Regency, involving 30 respondents. This activity aims to increase public knowledge about hypertension and encourage early detection through blood pressure checks and treatment.



Figure 1. Community Service Participants

Based on the data collection results, the majority of respondents were in the 50–59 age group (12 people) (40%). Meanwhile, based on gender, there were more female respondents than male respondents, at 19 people (63.3%). The majority of respondents were at junior high or elementary school level, indicating that the majority of the population had a secondary or lower education level.

Table 1. Respondent Characteristics (n = 30)

Characteristics	n	%
Age 40–49 years	8	26.7
Age 50–59 years	12	40.0
≥60 years	10	33.3
Man	11	36.7
Woman	19	63.3

In addition to health education, this activity also conducted blood pressure screening to determine the health conditions of the people participating in the activity.

Table 2. Average Blood Pressure of Respondents

Variables	Before the Activity	After Education
Systolic (mmHg)	152.6	140.3
Diastolic (mmHg)	94.8	88.2

The evaluation results also showed changes in community behavior after participating in health education activities. Most respondents began adopting healthy lifestyles, such as reducing salt intake, engaging in regular physical activity, and having their blood pressure checked regularly.

Table 3. Hypertension Control Behavior

Health Behavior	n	%
Reduce salt consumption	22	73.3
Regularly check your blood pressure	20	66.7
Doing physical activity	18	60.0
Taking medication regularly	24	80.0

These results indicate that community-based health education and blood pressure screening activities have a positive impact on increasing knowledge and changing community behavior in controlling hypertension.

## DISCUSSION

The results of community service activities indicate that community-based health education and blood pressure screening have a positive impact on increasing public knowledge and behavior in controlling hypertension. This activity involved 30 respondents, most of whom were in the 50–59 age group. This is in line with various studies showing that the prevalence of hypertension tends to increase with age due to physiological changes in blood vessels, such as decreased blood vessel elasticity and increased peripheral resistance. These conditions cause blood pressure to increase more easily in the elderly group. Based on the results of the study, before the health education was provided, most respondents had a low level of knowledge about hypertension, particularly regarding risk factors, prevention, and blood pressure control. After the health education was provided, there was a significant increase in respondents' knowledge.(5)These results indicate that health education is an effective strategy for increasing public understanding of hypertension. This increased knowledge is crucial because it is a fundamental factor influencing a person's attitudes and behaviors regarding health.

The results of this activity align with a report from the World Health Organization, which states that community-based health education interventions can increase public awareness in preventing and controlling hypertension. Direct health education sessions with the community allow for information exchange and discussions, which can increase public understanding of the importance of maintaining normal blood pressure. In addition to increasing knowledge, the blood pressure screening activities carried out in this program also provide benefits in detecting hypertension in the community. Direct blood pressure checks allow the community to identify their health condition early. Early detection of hypertension is crucial because this disease often does not show obvious symptoms until more severe complications occur.(6)Therefore, community-level health screening activities can be an initial step in preventing complications from hypertension.

The study also showed changes in health behavior among respondents after participating in the educational activities. Most respondents began adopting healthy lifestyles, such as reducing salt consumption, increasing physical activity, and having regular blood pressure checks. These behavioral changes demonstrate that health education activities not only increase knowledge but also encourage people to adopt healthy lifestyles in their daily lives. Overall, this community service activity demonstrates that a community empowerment approach through health education and community-based blood pressure screening can be an effective strategy for increasing public knowledge, awareness, and behavior in hypertension control.

Therefore, similar activities need to be carried out continuously, involving health workers, health cadres, and with support from the local government to ensure optimal hypertension prevention and control efforts in the community.

### **CONCLUSION**

Community service activities conducted through health education and community-based blood pressure screening have shown positive results in increasing public knowledge and awareness regarding hypertension control. Prior to the activity, most participants had low levels of knowledge about hypertension, but after receiving health education, there was an increase in understanding and behavioral changes towards a healthier lifestyle. Furthermore, blood pressure screening activities also help the community identify their health conditions early so that they can immediately take control and treatment measures if high blood pressure is detected. Therefore, community empowerment through health education and early detection can be an effective strategy in preventing and controlling hypertension at the community level.

### **THANK-YOU NOTE**

Thank you to the BTN Tamarunang Indah I RT OO1 RW OO5 officials and all parties who have contributed to this research, both directly and indirectly. Top of Form

### BIBLIOGRAPHY

Gadingrejo P, Gadingrejo P, Gadingrejo WP, Gadingrejo P. Salt Consumption Pattern With Hypertension In Elderly. 2025;5.

Kusumawaty J, Hidayat N, Ginanjar E. Relationship between Sex and Hypertension Intensity in Elderly Work Area Health District Lakbok Ciamis. 2016;16(2):46–51.

Mahmudah S, Arini FA, Hidup G, Makan P. The relationship between lifestyle and diet with the incidence of hypertension in the elderly in Sawangan Baru sub-district. 2015;7:43–51.

Buton LD. The Relationship Between Diet Patterns And Hypertension Events In Polara Public Health. 4(1):58–62.

Manawan AA, Rattu AJM, Punuh MI. The Relationship Between Food Consumption and the Incidence of Hypertension in

Tandengan Satu Village, Eris District, Minahasa Regency. 2016;5(1):340–7.

I. Dietary salt consumption and the knowledge, attitudes and behavior of healthy adults : a cross-sectional study from Jordan.

Libyan J Med [Internet]. 2018;13(1). Available from: <https://doi.org/10.1080/19932820.2018.1479602>