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Community Assistance in Preventing Hypertension Emergencies Through Improving Germas Behavior in The Working Area of Pucang Sewu Health Center Surabaya City

Lembunai Tat Alberta [1], Jujuk Proboningsih [2], Dwi Utari Widyastuti[3], Anita Joeliantina [4],
[1,2,3,4,]Department of Nursing, Health Polytechnic Minister of Health of Surabaya, albertalembunaitat@gmail.com

Corresponding author: Lembunai Tat Alberta (e-mail: albertalembunaitat@gmail.com)

ABSTRACT Hypertension is one of the most common and most common heart and blood vessel diseases in the community. Death from hypertension is generally caused because in the early stages people do not understand the early symptoms of emergencies that have an impact on death from hypertension. Deaths from hypertension can be minimized, among others, by increasing public understanding in preventing hypertensive emergencies through improving Germas behavior by increased physical activity, consumption of vegetables and fruits, regular health checks and not smoking. In addition, community skills are also needed in measuring and monitoring blood pressure independently to be able to carry out early detection of the occurrence of hypertensive emergencies. This community service activity is carried out using lectures, questions and answers and training methods to measure blood pressure independently. The results of the activity were in the form of providing education on the prevention of hypertension emergencies and training on independent blood pressure measurement to 60 people with hypertension in the working area of the Pucang Sewu health center in Surabaya City. Conclusion People understand about the prevention of hypertension emergencies and are skilled in measuring blood pressure independently.
INDEX TERMS Community Assistance, Emergency Prevention, Hypertension, Germas Behavior

I. INTRODUCTION

Hypertension or high blood pressure is a medical condition that can significantly increase the risk of various diseases including heart, brain, kidney and is a major contributor to the cause of premature death. The prevalence of hypertension continues to increase and data shows only 38% of male hypertensive patients and 47% of female hypertensive patients are diagnosed and receiving treatment [1]. The Ministry of Health said that hypertension as one of the non-communicable diseases in Indonesia continues to increase. The survey results prove that only 3 out of 10 patients with non-communicable diseases are detected, and of the 3 patients detected, only 1 person is treated regularly. The reason for not taking medication is because he feels healthy, because hypertension is a disease that is asymptomatic and if left unchecked will cause complications of stroke, heart disease and other diseases. It is also said that hypertension in the community costs a lot of disease treatment. Some ways can be done to prevent emergencies due to hypertension is to live a healthy lifestyle with or without medication. The healthy living community movement or Germas is a systematic and planned action carried out jointly by all components of society through awareness, willingness, and the ability to behave healthily to improve the quality of life. The results of Riskesdas in 2018, showed the prevalence of hypertension in Indonesia 34.11%, in East Java the prevalence of hypertension 36.32%, while in the city of Surabaya the prevalence of hypertension was 32%. It is estimated that the number of people with hypertension in Indonesia reached 63,309,620 people, with a death rate due to hypertension of 427,218 deaths [2]. Pucang Sewu Health Center is one of the puskesmas located in the city of Surabaya, East Java. Pucang Sewu Health Center is located on Jalan Pucang Anom Timur No. 72, Gubeng sub-district, Surabaya city. The working area of Pucang Sewu Health Center includes: Kertajaya, Pucang Sewu and Barata Jaya Villages. As a first-level health facility, Pucang Sewu Health Center provides health services, including services and disease prevention, both infectious and non-communicable diseases, including hypertension. In addition, Pucang Sewu health center also provides health screening services for patients at risk of chronic diseases such as type 2 diabetes and hypertension. Based on the report contained in the health profile of the city of Surabaya in 2019, it shows that the number of people with hypertension in the working area of the Pucang Sewu Health Center amounted to 13,807 people, where there was an increase from 2018 which only amounted to 838 people. Of the total number of people with hypertension in the Pucang Sewu Health Center area, only 6740 people (48.82%) use health services at the puskesmas. The data shows that there are 51.18% of people with hypertension who do not check themselves at the puskesmas health facility [3]. Preventing the severity of hypertension can be done by improving the behavior of the Healthy Living

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Community Movement (GERMAS), namely: increasing physical activity, consuming vegetables and fruits, regular health checks and not smoking. The results showed that the behavior of Germas with hypertension in the work area of the Pucang Sewu Health Center showed that most of them were in the sufficient category and there were still those who had not behaved according to Germas at all [4]. The purpose of this community service activity is to increase community assistance in preventing hypertension emergencies through improving Germas behavior in the Pucang Sewu Health Center Working Area of Surabaya City. Many possibilities that cause sufferers not to seek treatment at the puskesmas include feeling healed because there are no complaints, complaints are reduced due to consuming herbal medicines. On the other hand, hypertension is one of the diseases included in the 10 most common disease sequences in the Pucang Sewu health center work area. This shows that there are still many people with hypertension who do not routinely check blood pressure so that it will have an impact on uncontrolled blood pressure of people with hypertension which will certainly have an impact on the occurrence of hypertensive emergencies. In a study conducted in July 2018 on 120 people with hypertension who came for treatment to puskesmas and posyandu elderly, in general, patients came alone without being accompanied or sent by family members. Most sufferers are female, over 50 years old, and have abnormal blood pressure. The results showed that there are still around 48.3% of people who do not have a good attitude in dealing with hypertension. In addition, there are 75% of people who do not have good action in overcoming hypertension [4]. Preventing the severity of hypertension can be done by improving the behavior of the Healthy Living Community Movement (GERMAS), namely: increasing physical activity, consuming vegetables and fruits, regular health checks and not smoking. The results showed that the behavior of Germas with hypertension in the work area of the Pucang Sewu Health Center showed that most of them were in the sufficient category and there were still those who had not behaved according to Germas at all [4]. Community service is a real effort made by individuals, groups or institutions to play an active role in helping the community overcome various problems and improve the quality of life. The purpose of this community service activity is community assistance so that they can play an active role in overcoming the problem of hypertension emergencies through providing relevant knowledge about Germas behavior and improving skills in measuring blood pressure independently [5].

II. METHOD AND IMPLEMENTATION

A. METHOD

This community service activity is a form of Community Partnership Program that aims to apply science and technology to the community to improve science and skills in the health sector, form / develop independent community groups in the health sector, apply research results to improve public health to realize community welfare. The types of activities carried out are the results of research that produce results in increasing knowledge and skills to solve health problems faced by the community [6]. Community service activities on community assistance in preventing hypertension emergencies through improving Germas behavior in the Pucang Sewu Health Center work area in Surabaya city. Education to the public using lectures, questions and answers, discussions, demonstrations and demonstrations. The lecture and discussion method is used to explain and provide understanding to the public about the importance of Germas' behavior in preventing hypertensive emergencies. The demonstration and redemonstration methods are used to provide skills to the public on how to measure blood pressure independently and monitor blood pressure to conduct early detection of hypertensive emergencies. The material used in community service is the emergency prevention module through improving Germas behavior. The demonstration of blood pressure measurement was carried out by the service team and then the participants redemonstrated by measuring blood pressure between participants accompanied by the service team. independently. Participants' blood pressure was measured using a digital sphygmomanometer to make it easier for participants to read the results of blood pressure measurements. In addition, surveys and interviews were conducted about attitudes towards Germas behavior and Germas practices in daily life. Community service activities are carried out in 3 (three) locations, namely RW 7 Pucang Village, RW 7 Kertajaya Village and RW 4 Baratajaya Village. The number of participants in this community service activity was 60 people consisting of 20 people at each activity location. In addition to lectures, demonstrations and redemonstrations of blood pressure measurements, the service also handed over 2 digital sphygmomanometers at each location of community service activities.

B. IMPLEMENTATION

The implementation of community service activities begins with the management of permits through the Surabaya health office. After obtaining recommendations from the health office, the service service coordinates with the community through the Puskesmas and Surabaya cadres in each activity area. Furthermore, the implementation of community service activities is carried out according to the following stages:

a. Opening

The opening of the activity was attended by community service, all activity participants and great Surabaya cadres as the person in charge at each location. The opening activity was filled with a report from the head of service, remarks from regional leaders and continued with a symbolic handover of digital sphygmomanometers to regional leaders where community service activities were carried out.

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FIGURE 1
Photo of the service team with "Kader Surabaya Hebat" RW 07 Kertajaya Village

FIGURE 2
Opening ceremony of Community Service at RW 04 Baratajaya Village

FIGURE 3
Handover of digital blood pressure measuring instrument to Head of RW 04 Kertajaya Village

b. Education on Prevention of Hypertensive Emergencies through Germas Behavior Improvement.

Education aims to increase public understanding of efforts to improve Germas behavior to prevent hypertensive emergencies. The behavior of Germas in question includes routine exercise for at least 30 minutes per day, consumption of vegetables and fruits every day, regular checking into health facilities and not smoking. Activities were carried out in 3 (three) locations of the Pucang Sewu Health Center working area in Surabaya City, namely RW 07 Pucang Sewu Village, RW 07 Kertajaya Village and RW 04 Baratajaya Village. The participants of the activity were 20 people with hypertension in each location so that the total of all participants was 60 people.

FIGURE 4
Health Education on Germas behavior improvement

FIGURE 5
Health Education on Germas behavior improvement

c. Independent Blood Pressure Measurement Training

Independent measurement of blood pressure is carried out by family members of hypertensive patients. This is done to provide skills to the community / family members to be able to measure blood pressure independently. After being educated about the gravity of hypertension, hypertensive patients must be able to identify signs of hypertensive emergencies, among others, through blood pressure monitors. By providing training on blood pressure measurement, it is hoped that hypertensive patients and their family members will be able to carry out blood pressure measurements independently and be able to identify hypertensive emergencies through signs of increased blood pressure. Blood pressure measurement training is conducted with digital sphygmomanometers to make it easier for participants to use them.

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FIGURE 6
Training on self-measuring blood pressure

FIGURE 7
Training on self-measuring blood pressure

FIGURE 8
Training on self-measuring blood pressure

V. RESULT

Data on community service participants were obtained through interviews and filling out questionnaires guided by the community service team. Participant data includes participant characteristics, participant attitudes towards Germas and Germas practices in daily life. The characteristics of participants in Community Service activities regarding community assistance in preventing hypertensive emergencies through improving Germas behavior in the work area of Pucang Sewu Health Center in Surabaya are as follows:

TABLE 1. Distribution of Characteristics of Community Service Participants on community assistance in preventing hypertension emergencies through improving Germas behavior in the work area of Pucang Sewu Health Center in Surabaya city 2023

Description	Frequency	Precentage (%)
Education		
College	8	13,3
Senior High School	30	50
Junior High School	9	15
Elementary School	13	21,7
Total	60	100
Age		
30-40 years	1	1,6
41-50 years	7	11,7
51-60 years	16	26,7
>60 years	36	60
Total	60	100
Gender		
Male	13	21,7
Female	47	78,3
Total	60	100

Based on TABLE 1, the characteristics of participants in Community Service activities regarding community assistance in preventing hypertension emergencies through improving Germas behavior in the Pucang Sewu Health Center work area in Surabaya are mostly women, over 60 years old and have high school education. The results of surveys and interviews about participants' attitudes towards Germas behavior and Germas practices in daily life are as follows:

TABLE 2. The attitude of participants in Community Service activities towards Germas behavior in the work area of the Pucang Sewu Health Center in Surabaya 2023

Attitude	Strongly disagree	Disagree	Agree	Totally Agree
Exercise Routine	0	0	39 (65%)	21 (35%)
Consumption of vegetables and fruits	0	0	40 (66,7%)	20 (33,3%)
Regular health check-ups	1 (1,7%)	2 (3,3%)	35 (58,3%)	22 (36,7%0
Smoking is harmful to health	0	4 (6,7%)	27 (45%0	29 (48,3%)

Based on table 2, it shows that most participants agree that hypertensive patients should exercise regularly, regularly consume vegetables and fruits and must check their health regularly at health facilities. In addition, the survey results

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showed that there were 4 people (6.7%) of hypertensive patients who expressed disagreement that smoking is harmful to people with hypertension.

TABLE 3. Germas practice of Community Service participants in daily life in the working area of Pucang Sewu Health Center in Surabaya city 2023

Practice	Less	Enough	Good
Do Exercise Routine every day at least 30 minutes	3 (5%)	25 (41,7%)	32 (53,3%)
Consume vegetables and fruits every day	1 (1,7%)	11 (18,3%)	48 (80%)
Conduct regular health checks	0	15 (25%)	45 (75%)
Smoking habits	8 (13,3%)	11 (18,3%)	41 (68,4%)

Table .3 shows the results that there are still hypertensive patients who lack regular exercise (5%) and 1 hypertensive patient who lacks in consuming vegetables and fruits (1.7%). Most hypertensive patients always check their health regularly at health facilities and do not have a habit of smoking.

IV. CONCLUSION

The purpose of this community service activity is to provide community assistance in preventing hypertension emergencies through improving Germas behavior in the Pucang Sewu Health Center Working Area, Surabaya City. The results obtained from community service activities are that the community understands the prevention of hypertensive emergencies and is able to measure blood pressure independently to monitor blood pressure and can find out early the occurrence of hypertensive emergencies. It is hoped that this community service activity can be carried out in other areas with a larger number of targets.

V. REFERENCES

[1] H. C. Kim *et al.*, "Korea Hypertension Fact Sheet 2023: analysis of nationwide population-based data with a particular focus on hypertension in special populations," *Clin. Hypertens.*, vol. 30, no. 1, pp. 1–12, 2024.

[2] Kemenkes RI, "Laporan Riskesdas 2018 Kementrian Kesehatan Republik Indonesia (Riskesdas Report 2018 Ministry of Health of the Republic of Indonesia)," *Laporan Nasional Riskesdas 2018 (Riskesdas National Report 2018)*, vol. 53, no. 9. pp. 154–165, 2018.

[3] Dinas Kesehatan Kota Surabaya (Surabaya City Health Office), "Profil Kesehatan tahun 2019 (Health Profile in 2019)," 2019.

[4] L. T. Alberta and D. U. Widyastuti, "The influence of knowledge, attitude and action on family health tasks in controlling hypertension through the germas approach," *Medico-Legal Updat.*, vol. 19, no. 1, pp. 244–248, 2019.

[5] T. S. Rusli *et al.*, *Pengantar Metodologi Pengabdian Masyarakat (Introduction to Community Service Methodology)*, no. March. 2024.

[6] Pusat Pendidikan SDM kesehatan (Health HR Education Center), *Pedoman Pengabdian Kepada Masyarakat di Polteknik Kesehatan kementerian Kesehatan (Community Service Guidelines at the Health Polytechnic of the Ministry of Health)*. Jakarta, 2018.

[7] P. G. Park, E. Park, and H. G. Kang, "Increasing trend in hypertension prevalence among Korean adolescents from 2007 to 2020," *BMC Public Health*, vol. 24, no. 1, pp. 1–8, 2024.

[8] I. F. Kamara *et al.*, "Prevalence of hypertension , diabetes mellitus , and their risk factors in an informal settlement in Freetown , Sierra Leone : a cross-sectional study," pp. 1–12, 2024.

[9] A. R. Weare, Z. Feng, and N. McGrath, "The prevalence of hypertension and hypertension control among married Namibian couples," *PLoS One*, vol. 18, no. 8 August, pp. 1–21, 2023.

[10] E. Oliveros *et al.*, "Hypertension in older adults: Assessment, management, and challenges," *Clin. Cardiol.*, vol. 43, no. 2, pp. 99–107, 2020.

[11] A. E. El-Agroudy *et al.*, "Pre-hypertension and Hypertension Among University Students in Bahrain: A Study of Prevalence and Associated Risk Factors," *Cureus*, vol. 16, no. 3, pp. 1–11, 2024.

[12] P. J. Connelly, G. Currie, and C. Delles, "Sex Differences in the Prevalence, Outcomes and Management of Hypertension," *Curr. Hypertens. Rep.*, vol. 24, no. 6, pp. 185–192, 2022.

[13] S. R. Defianna, A. Santosa, A. Probandari, and F. S. T. Dewi, "Gender differences in prevalence and risk factors for hypertension among adult populations: A cross-sectional study in indonesia," *Int. J. Environ. Res. Public Health*, vol. 18, no. 12, 2021.

[14] Z. Zhu, W. Yan, Q. Yu, P. Wu, F. M. Bigambo, and J. Chen, "Association between Exercise and Blood Pressure in Hypertensive Residents: A Meta-Analysis," *Evidence-based Complement. Altern. Med.*, vol. 2022, 2022.

[15] H. Madsen, A. Sen, and D. Aune, "Fruit and vegetable consumption and the risk of hypertension: a systematic review and meta-analysis of prospective studies," *Eur. J. Nutr.*, vol. 62, no. 5, pp. 1941–1955, 2023.

[16] A. Sutriyawan, Y. Endah, and T. G. Miranda, "Relationship between Physical Activity and Routine Health Checks with Incidence of Hypertension," *Int. J. Heal. Sci. Med. Res.*, vol. 1, no. 1, pp. 1–5, 2021.

[17] N. Fukushima, S. Amagasa, H. Kikuchi, S. S. Sawada, M. Machida, and S. Inoue, "Descriptive epidemiology of prevalence of exercise habits among participants with hypertension: The National Health and Nutrition Survey 2013–2018," *J. Gen. Fam. Med.*, vol. 25, no. 3, pp. 128–139, 2024.

[18] A. Wattanapisit, C. J. Ng, C. Angkurawaranon, S. Wattanapisit, S. Chaovalit, and M. Stoutenberg, "Summary and application of the WHO 2020 physical activity guidelines for patients with essential hypertension in primary care," *Heliyon*, vol. 8, no. 10, p. e11259, 2022.

[19] F. M. A. Islam, C. K. Wong, M. A. Hosen, and J. Bhowmik, "Perception of and Practice in Salt and Fruit Consumption and Their Associations with High Blood Pressure: A Study in a Rural Area in Bangladesh," *Appl. Sci.*, vol. 13, no. 3, 2023.

[20] M. Kiggwe, J. Ntayi, A. K. Nabatanzi-Muyimba, J. Byarugaba, E. Timothy, and J. C. Munene, "Lifestyle and fruit consumption: an investigation of university students in Uganda," *Nutrire*, vol. 49, no. 1, 2024.

[21] M. wei Liu *et al.*, "Association between fruit and vegetable intake and the risk of hypertension among Chinese adults: a longitudinal study," *Eur. J. Nutr.*, vol. 57, no. 7, pp. 2639–2647, 2018.

[22] R. Cardarelli, "High blood pressure (hypertension)," *Essent. Fam. Med. Fundam. Cases With STUDENT Consult Online Access*, pp. 320–324, 2006.

[23] J. J. Noubiap *et al.*, "Active smoking among people with diabetes mellitus or hypertension in Africa: a systematic review and meta-analysis," *Sci. Rep.*, vol. 9, no. 1, pp. 1–12, 2019.

[24] M. Tariq *et al.*, "A s s e s s m e n t o f t h e R i s k F a c t o r s o f H y p e r t e n s i o n A m o n g A d u l t s i n P a k i s t a n," vol. 73, pp. 119–124, 2023.

[25] K. T. Mills, A. Stefanescu, and J. He, "The global epidemiology of hypertension," *Nat. Rev. Nephrol.*, vol. 16, no. 4, pp. 223–237, 2020.