

Elderly Screening and Education about Hypertension in Padang City

Bun Yurizali¹⁾, Nurmaines Adhyka^{2,a)}

¹Medical Education, Faculty of Medicine, Baiturrahmah University, Padang, Indonesia

²Hospital Administration, Faculty of Health Science, Baiturrahmah University, Padang, Indonesia

^{a)}Corresponding author: nurmaines.adhyka@staff.unbrah.ac.id

Abstract

Hypertension is a complex problem that can affect anyone over the age of 18. The problem of hypertension is still a world problem with the increasing population prevalence every year. Complications of hypertension can cause various diseases that lead to death. There are so many people who still do not know how to face this disease along with the risk factors. In society nowadays, a lot of misperceptions and myths the spread widely about this disease. Therefore, the author provides socialization regarding hypertension to the elderly from the Indonesian Catholic Women's Association. This activity was carried out for one day with 60 participants of various ages, with a range up to 81 years. Activities in the form of socialization, question and answer, and discussion which closed with blood pressure measurement. Seeing the enthusiasm of the participants even though they came from the elderly shows that there is a need to carry out routine socialization regarding health and promote regular health checks for the elderly in this organization in a wider coverage area

Keywords: Education, Elderly, Screening

INTRODUCTION

High blood pressure or better known as hypertension is a major risk factor for atherosclerotic cardiovascular disease, heart failure, stroke and kidney failure. Therefore cardiovascular problems are still a major concern in public health problems throughout the world due to high mortality rate (Apriani, 2022). This occurs when the systolic and diastolic pressure increases. This situation causes the heart to work harder to circulate blood throughout the body through blood vessels (Azizah et al., 2022). The increasing of heart beat that lasts for a long time can damage blood vessels in the heart, kidneys, brain and eyes (Brunner & Suddarth, 2020).

Hypertension is a condition of abnormal blood pressure, which is indicated by a persistent increase in arterial blood pressure above 140/90 mmHg on two measurements with an interval of five minutes in a state of rest. (Kemenkes R1, 2019). In the elderly group blood pressure can be higher because of reduced elasticity of the vessels. Hypertension complications cause around 9.4% of deaths worldwide each year. Hypertension causes at least 45% of deaths due to heart disease and 51% of deaths due to stroke. Deaths caused by cardiovascular disorders, especially coronary heart disease and stroke, are expected to continue to increase, reaching 23.3 million deaths in 2030 (Kementerian Kesehatan RI, 2018). There are many things that can be a risk factor for hypertension, one of which is genetic factors (family history), age, gender, weight, diet, and lifestyle. These conditions can cause various diseases and complications (Apriani, 2022). As a chronic disease, someone who experiences hypertension must be able to take responsibility for self-management. This is done to relieve symptoms and reduce the risk of complications. Self-management measures include managing blood pressure and medications, making lifestyle changes, and preventing complications. Therefore, early detection of hypertension needs to be done through regular blood pressure measurements. Factors that affect blood pressure are age, gender, and occupation (Swardin et al., 2022). Things that can happen if self-management cannot be done properly can cause vision problems, kidney problems, coronary heart disease, stroke, and even death (Aprillia, 2020).

Individuals with a family history of hypertension have a 2 times greater risk of suffering from hypertension than people who do not have a family history of hypertension. This will also be

exacerbated with age. Based on gender, men have a higher risk of developing hypertension earlier. Obesity can also increase the incidence of hypertension, this is because fat can cause blockages in blood vessels so that it can increase blood pressure gradually (Kuswoyo & Tuasamu, 2022). High salt intake will cause excess release of natriuretic hormone which will indirectly increase blood pressure. Salt intake between 5-15 grams per day can also increase the prevalence of hypertension by 15-20% (Kuswoyo & Tuasamu, 2022; Ramadhan & Husnah, 2019).

Hypertension is defined as a chronic condition characterized by increased blood pressure on the walls of the arteries. This disease is known as the silent killer because often the symptoms are not detected even though it has been for years (Alifariki, 2019; Sari & Dkk, 2022). Hypertension is a big and serious problem. This is shown by the large number of people with hypertension in the world. In 2019 it is estimated that 1.13 billion people suffer from hypertension, of which the majority are low-income residents and live in low- and middle-income countries. (WHO, 2021). Hypertension and its complications are the cause of 80% of deaths in low-middle-income countries (Apriani, 2022). The results of the 2018 Basic Health Research (Riskesdas) found that the prevalence of the Indonesian population suffering from hypertension over the age of 18 was 658,201 people. (Balitbangkes RI, 2018) Based on age group, the elderly is recorded to have a prevalence of more than 75,000. There are 206,300 people with hypertension in the province of West Sumatra with the highest prevalence in the city of Padang or as many as 29,199 sufferers, from various age groups (Kementrian Kesehatan RI, 2018).

Basically, if not treated immediately hypertension can lead to fatal complications such as blood vessel abnormalities, heart (cardiovascular) and kidney disorders, even rupture of the capillaries in the brain or more commonly referred to as a stroke and ending in death. Hypertension can be controlled with pharmacological and nonpharmacological treatment. Pharmacological treatment is treatment using anti-hypertensive drugs to lower blood pressure (Nirmolo, 2018).

Hypertension can happen to anyone, especially those over the age of 18. Therefore, it is necessary to do screening and adding knowledge, especially the elderly, about the hypertension. So that this service activity is carried out with the aim of empowering the community through counseling for the elderly. This is intended so that in the future the community can maintain the condition of their blood pressure, understand the problem of hypertension and treatment efforts in an effort to prevent complications due to hypertension.

METHOD

The service method used is counseling accompanied by a health examination. The service partners are mothers who are members of the Indonesian Catholic Women's (ICW) movement which is focused on the Regional Representative Council of the City of Padang, totaling 100 people. The stages of community service activities include:

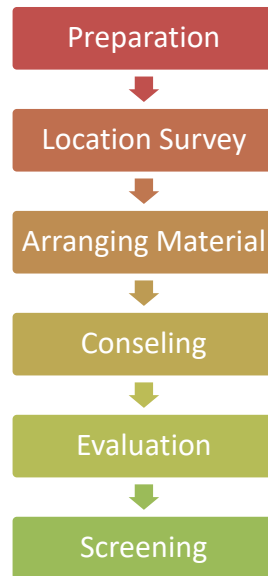


Figure 1. Activity Flowchart

- **Preparation**
This stage starts with cooperation between the sponsor, Hermina Padang Hospital and the chairman of the ICW representative council from each district.
- **Survey the location**
Site inspection is carried out simultaneously with the implementation of activities. The previous location had been prepared by the ICW Regional Representative Council of Padang City.
- **Arranging counseling materials in the form of power point**
The material was prepared based on guidelines from the Indonesia ministry of health
- **Implementation stage**
Furthermore, socialization was carried out which was accompanied by questions and answers which were greeted enthusiastically by the participants. The material presented is in the form of an introduction to hypertension, its effects, symptoms and prevention. The material also conveys myths and facts about hypertension. The purpose of implementation is to see the level of participants' understanding of hypertension and to correct facts and myths about hypertension in society.
- **Evaluation Stage**
In this evaluation phase, an interactive quiz was given which was supplemented with a discussion about hypertension.
- **Screening Stage.**
After counseling, a free health check was carried out, namely a blood pressure check. This aims to attract residents' interest in attending and participating in counseling properly so that it is hoped that the material can be absorbed properly and implemented in everyday life.

RESULT

This community service was carried out for 1 day on May 16, 2023. This community service was carried out at the Arau Water Park where the location had been prepared by the chairman of the regional representative council icw West Sumatra. Counseling was carried out by the Baiturrahmah University Research and Community Service team, which was assisted by medical students.



Figure 2. Material Presentation Session



Figure 3. Discussion Session

Knowledge enhancement activities are led directly by experts from the medical faculty. Next, questions were asked to the participants. The enthusiasm of the participants made this implementation longer than the originally planned implementation time.



Figure 4. Group photo of participants, expert and students



Figure 5. Evaluation Activities

In the evaluation activities are given in the form of interactive questions accompanied by discussion and question-answer from the expert to the participants. This activity was welcomed by the participants because of the door prizes from the sponsors. The enthusiasm of the participants was evident from the large number of participants who wanted to discuss

myths and facts about hypertension and the prevention and control of hypertension in the household.



Figure 6. Blood Pressure Measurement

In the last session, a medical student conducted a medical examination by measuring the participant's blood pressure. This is used as a place for student practice in implementing the knowledge that has been obtained in lectures.

DISCUSSION

From the results of the activity, it can be seen that most of the counseling participants came from the elderly. The average age of the respondents was 57 years with an age range of 38-81 years. The target participants were originally planned to be 100 people but only reached 60 people, and all participants were women. From the respondents it is known that 47 people are housewives (78.3%).

The presenter is an expert from medicine, especially in the internal medicine section. In his material, the narrator explains about a healthy lifestyle by limiting consumption of sugar, salt and fat. This limitation is also explained by the minimum amount of consumption allowed in one day.

Furthermore, the material introduces hypertension, blood pressure, blood pressure categories and the difference between systolic and diastolic blood pressure. Next, the speaker explained the risk factors for hypertension. There are two types of risk factors, namely risk factors that cannot be changed such as family history, gender and age and risk factors that can be changed. Risk factors that cannot be changed include being overweight or obese, diabetes, chronic obstructive pulmonary disease (COPD), and lifestyle.

After explaining the risk factors, respondents were explained about the dangers of hypertension, so why hypertension is considered a silent killer. It also explains how some complications of hypertension such as cerebral (brain) disorders, vision problems, heart problems, kidney and nerve function disorders.

The remainder of the presentation explains the myths and facts of hypertension in society. It was explained in the material that high salt consumption is associated with an increase in blood pressure, therefore it is not true that the recommendation to drink lots of white water can dissolve the salt that has been consumed. Furthermore, the facts regarding the benefits of beets are good for people with hypertension and those who like salty foods are more at risk of developing hypertension.

CONCLUSION

Socialization regarding hypertension was carried out to mothers from GKRI with a total of 60 participants. The implementation started with counseling on hypertension by experts, followed by interactive question and answer. The enthusiasm of the participants was evident

from the many questions asked regarding hypertension. The activity was closed with a basic health check carried out by students.

ACKNOWLEDGEMENTS

Thank you to Baiturrahmah University for supporting the implementation of this community service activity. The author also thanks the sponsors, Hermina Padang Hospital and the Ladies of the Catholic Republic of Indonesia and all those who have supported the implementation of this service so that it can run well from the beginning to the end. Thank you to the committee and students involved in this service.

REFERENCES

- Alifariki, L. . (2019). *Epidemiologi Hipertensi (Sebuah Tinjauan Berbasis Riset)*. LeutikaPrio.
- Apriani. (2022). *Pemberdayaan Kesehatan Masyarakat Melalui Edukasi "Jatekdarsi" bagi Warga Desa Raharja Kota Banjar*. 3(3), 515–522.
- Aprillia, Y. (2020). Gaya Hidup dan Pola Makan Terhadap Kejadian Hipertensi. *Jurnal Ilmiah Kesehatan Sandi Husada*, 12(2), 1044–1050. <https://doi.org/10.35816/jiskh.v12i2.459>
- Azizah, W., Hasanah, U., & Pakarti, A. T. (2022). Penerapan Slow Deep Breathing Terhadap Tekanan Darah Pada Pasien Hipertensi Implementation of Slow Deep Breathing on Blood Pressure in Hypertension Patients. *Jurnal Cendikia Muda*, 2(4), 607–616.
- Balitbangkes RI. (2018). Laporan Riskesdas 2018 Nasional.pdf. In *Lembaga Penerbit Balitbangkes*.
- Brunner, & Suddarth. (2020). *Keperawatan Medikal-Bedah* (A. Yulianti, D & Kimin (ed.); 12th ed.). EGC.
- Kemkes R1. (2019). Profil Kesehatan Indonesia 2019. In *Kementrian Kesehatan Republik Indonesia*. <https://pusdatin.kemkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-indonesia-2019.pdf>
- Kementerian Kesehatan RI. (2018). *Profil Kesehatan Indonesia 2014* (Vol. 1227, Issue July). <https://doi.org/10.1002/qj>
- Kementrian Kesehatan RI. (2018). Riset Kesehatan Dasar Provinsi Sumatera Barat Tahun 2018. In *Laporan Riskesdas Nasional 2018*.
- Kuswoyo, D., & Tuasamu, S. M. A. (2022). Hubungan Pengetahuan Dan Sikap Dengan Kejadian Hipertensi Pada Lansia. *Journal of Language and Health*, 3(2), 71–78.
- Nirmolo, G. D. (2018). Faktor-Faktor yang Mempengaruhi Kejadian Penyakit Jantung Koroner Pada Masyarakat yang Berobat di Puskesmas Madiun Kabupaten Madiun Tahun 2018. In *Stikes BhaktuiHusada Mulia Madiun* (Skripsi). <http://journals.sagepub.com/doi/10.1177/1120700020921110>
- Ramadhan, M. H., & Husnah. (2019). *Faktor Risiko Penyakit Jantung Koroner (PJK)*. 1–15.
- Sari, N. P., & Dkk. (2022). PENANGGULANGAN HIPERTENSI MELALUI EDUKASI HIPERTENSI DAN SCREENING TEKanan DARAH DI KOTA TASIKMALAYA. *Jurnal Pengabdian Masyarakat Balarea*, 1(1), 89–91. <https://doi.org/10.7868/s0424857017050036>
- Swardin, L. O., Asrianto, L. O., Hasiu, T. S., & Fitri, M. (2022). Analisis Faktor yang Mempengaruhi Hipertensi di Desa Pamanto Kecamatan Empang Kabupaten Sumbawa Tahun 2020. *Jurnal Ilmiah Obsgin : Jurnal Ilmiah Ilmu Kebidanan & Kandungan*, 14(2), 11–20. <https://stikes-nhm.e-journal.id/JOB/article/view/663/620>
- WHO. (2021). *Hypertension*. <https://www.who.int/>
-