

Training on Anti-Hypertension Gymnastics (SENSASI) in the Community of Cibungur Village, Rancakalong, Sumedang

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ABSTRACT

Hypertension is a disease that is nicknamed the silent killer because of its nature, which is sometimes not realized by sufferers but can suddenly result in death. Through Community Service activities (PkM) at the Indonesian Christian University in one of the villages in Rancakalong District, Sumedang, West Java, namely Cibungur Village, where the activities aim to provide education and training in the practice of SENSASI to village residents as an effort to prevent and treat hypertension. From the results of the training which was attended by 27 participants (residents) consisting of 3 men and 24 women with an age range of 30-60 years, the results showed that there was a decrease in the participants' blood pressure (systole and diastole) which was measured before and after the implementation of the practice.

INTRODUCTION

Hypertension is a human condition characterized by an increase in blood pressure exceeding the specified normal limits, namely systolic ≥ 140 mmHg and diastolic ≥ 90 mmHg (Indonesian Ministry of Health, 2019). Hypertension is a health problem that threatens the world. In 2015, hypertension caused 9.4 million deaths per year worldwide, and in Southeast Asia, there were 1.5 million deaths per year (Sakinah & Nurdin, 2020). If blood pressure continues to increase over a long period, it can cause complications, including kidney and heart disease, such as heart attacks and heart failure, which can lead to stroke, which was recorded in 2016 as the leading cause of death. The main deaths worldwide are associated with ischemic heart disease and stroke (WHO 2018 in Arum, 2019). According to the World Health Organization (WHO), there are around 970 million people with hypertension worldwide, 330 million in developed countries, and 640 million in developing countries (Samson et al., 2020).

In 2025, hypertension is expected to reach 1.6 billion (29%) adults (Setyawan & Hasnah, 2020). Indonesia, one of the developing countries, cannot be separated from hypertension, which is still a severe threat to public health, and its impact still has a high prevalence rate. Riskesdas data in 2013 shows that hypertension is a chronic non-communicable disease and ranks sixth out of ten diseases with an incidence rate of 25.8% (Arum, 2019). In 2018, the prevalence of hypertension in the population aged ≥ 18 years was 34.1%. These data show an increase in the prevalence of hypertension by 8.3% (Ministry of Health of the Republic of Indonesia, 2018). The cause was hypertension in 2016 out of a total of 23 deaths, 1.5 million of whom died in Indonesia (Hariawan & Tatisina, 2020). Global cases of hypertension are estimated at 22% of the total world population. Around 2/3 of hypertension sufferers come from lower-middle economic countries (Ministry of Health of the Republic of Indonesia, 2019). In Indonesia, based on the results of Basic Health Research (Riskesdas) in 2018, it was found that the prevalence of hypertension reached 34.11% in the population >18 years. Sumedang Regency is one of the areas where the prevalence of hypertension has increased, namely in 2016 it was 69,328 people, in 2017 it was 71,506 people, and in 2018 it was 84,162 people (Subang et al. Office, 2018).

One of the causes of the increasing prevalence of hypertension is the lack of public knowledge about hypertension management (Utami et al., 2020). Methods that can be used to control hypertension are pharmacological using drugs and non-pharmacological methods including lifestyle modifications (Nurmayanti et al., 2020). According to experts, lifestyle or behavior is the main risk factor for increasing blood pressure, one of the causes is a lack of physical activity such as exercise (Herdiani et al., 2020). One of the physical activities or sports that can be done by people with high blood pressure is anti-hypertension sports. Antihypertensive exercise is an effort carried out with the aim of weight loss and stress management, both of which increase the incidence of high blood pressure (Safitri and Astuti, 2017). Efforts to prevent high blood pressure can be done by reducing risk factors for hypertension.

Hypertension sufferers must also be aware of their lifestyle by changing their lifestyle through antihypertensive exercises to improve their health. According to research by Herdiani et al. (2020), the results show that socializing the application of Anti-Hypertension Gymnastics can increase people's knowledge, understanding, and awareness about how to prevent and control blood pressure so that they can reduce and improve their level of health. One of the antihypertensive exercises is antihypertensive exercise, hereinafter abbreviated as SENSASI. Anti-hypertension exercise is a type of physical activity that aims to increase blood flow and oxygen supply to the working muscles and skeleton, especially the heart muscle.

Sensasi is one way to maintain physical fitness or do physical activity to lose weight and control stress to increase the body's metabolic activity, stimulate heart activity and increase blood pressure, strengthen the heart muscle. The current phenomenon of hypertension sufferers is only based on pharmacology/treatment, but complementary therapy or simple treatment such as antihypertensive exercises can also reduce blood pressure in hypertension sufferers if done frequently 3 times/week with exercise time of around 10 minutes and rest \pm 15 minutes later. Blood pressure is checked again to determine the level of decrease in blood pressure in hypertensive sufferers. This antihypertensive exercise can also be used as a stand-alone nursing intervention or as a simple treatment to lower blood pressure in people with hypertension. It is hoped that hypertension sufferers can do antihypertensive exercises regularly to control their blood pressure.

The condition of hypertensive sufferers is medically different from healthy people. For this reason, you need to do special exercises. The training must be gradual and you must not force yourself. Light-intensity movements can be done slowly according to ability. According to Niniek Soetini, physiotherapist at Hospitalist Surabaya, examples of exercises that can be applied are as follows: 1) Walking in place, b) Clapping 1x8, c) Clapping 1x8 fingers, d) Intertwining hands 1x8, e) Holding the little finger 1x8, f) Fighting thumb side 1x8, g) Tap the upper arm alternately right and left 1x8, h) Tap the lower arm alternately right and left 1x8, i) Press the fingers up and down 1x8, j) Open and clench the fingers 1x8, k) Clap the upper arm 1x8, l) Pat the shoulders 1x8, m) Pat the stomach 1x8, n) Pat the waist 1x8, o) Pat the front thighs 1x8, p) Pat the back thighs 1x8, q) Injure the legs 1x8

IMPLEMENTATION AND METHODS

The method used in this community service activity is training, which begins with theory development, is then practiced by the instructor, and continues with the participants' practice. Participants were residents of Cibungur Village, Rancakalong District, Sumedang Regency, West Java who provided nursing care in the form of Anti-Hypertension Gymnastics for 10 minutes. Data collection uses assessment sheets and digital sphygmomanometers. Explain the PKM steps and implementation steps. PkM activities will be held in May 2023 with a total of 27 participants consisting of men and women with an age range of 30 to 60 years. In order to determine the level of success of implementing sensasi

in reducing blood pressure, the PkM team took a quantitative approach using a Pre-Experiment design with a one-group pretest-posttest design (blood pressure measurement data before and after SENSASI practice).

RESULTS AND DISCUSSION

Practical training on anti-hypertension gymnastics (SENSASI) for residents of Cibungur village, Rancakalong District, Sumedang, West Java, will be carried out regularly every week for one month in May 2023. Socialization is carried out once, then followed by practice twice. Blood pressure measurements, including systole and diastole, are carried out before and after the SENSASI practice. Participant characteristics based on gender and age range can be seen in Table 1 below:

Table 1. Distribution of Participants Based on Gender and Age

| Gender | Frequency (n) | Percentage (%) |
|-------------------|----------------------|-----------------------|
| Man | 3 | 11.1 % |
| Woman | 24 | 88.9 % |
| Total | 27 | 100 % |
| Age (year) | Frequency (n) | Percentage (%) |
| 30 – 39 | 5 | 18.5 % |
| 40 – 49 | 17 | 63.0 % |
| 50 - 59 | 5 | 18.5 % |
| Total | 27 | 100 % |

Based on table 1 shows that of the 27 participants, the number of male participants was three people, with a percentage of 11.1%, and the number of female participants was 24 people, with a percentage of 88.8%. Then, the number of respondents aged 30-39 years was five people with a percentage of 18.5%, respondents aged 40-49 years were 17 people with a percentage of 63%, and respondents aged 50-59 years were five people with a percentage of 18.5%. For blood pressure measurements, including systole and diastole, before carrying out the SENSASI practice, data was obtained from 27 participants before the anti-hypertension exercise. The lowest systolic blood pressure was 140 mmHg. In contrast, the highest systolic blood pressure was 190 mmHg, while the average (mean) systolic blood pressure in respondents was 158 mmHg with a standard deviation of 14.564. Then, for diastolic blood pressure, it showed that of the 27 respondents, the lowest diastolic blood pressure was 90 mmHg. The highest diastolic blood pressure was 110 mmHg, while the average (mean) diastolic blood pressure for respondents was 98 mmHg with a standard deviation of 7.19. This data can be described in table 2 below:

Table 2. Descriptive Blood Pressure Data Before SENSASI Practice

| Variable | n | Min | Max | Mean | Std |
|-----------------|----------|------------|------------|-------------|------------|
| Systole | 27 | 140 | 190 | 158 | 14.564 |
| Dyastole | 27 | 90 | 110 | 98 | 7.19 |

After carrying out the training, which began with a theoretical explanation, the participants listened very carefully and enthusiastically; this was proven by the results of the questionnaire given to determine the participant's level of knowledge. The results showed an increase in participants' knowledge by 24 people before receiving counseling about SENSASI. This. Meanwhile, the other 3 participants had fixed knowledge. After the SENSASI practice, blood pressure measurements were again carried out on 27 training participants. Data was obtained that the highest systolic blood pressure was 180 mmHg, and the lowest systolic was 130 mmHg. In contrast, the highest diastole was 100 mmHg, and the lowest diastole was 90 mmHg. Descriptive data is described in Table 3 below.

Table 3. Descriptive Data on Blood Pressure After SENSASI Practice

| Variable | n | Min | Max | Mean | Std |
|-----------------|----------|------------|------------|-------------|------------|
| Systole | 27 | 130 | 180 | 155 | 14.243 |
| Dyastole | 27 | 90 | 100 | 95 | 7.53 |

If you pay attention to the data from Table 3 above and then calculate the decrease in blood pressure figures for both systole and diastole, data can be obtained that the lowest systole decrease is from 140 mmHg to 130 mmHg (a decrease of 10 mmHg); In comparison, the highest systole from before was 190 mmHg to 180 mmHg after the SENSASI practice; the decrease was 10 mmHg. Meanwhile, for the lowest diastole, it can be seen that there was no decrease before and after the SENSASI practice; for the maximum diastole, there was a decrease of 10 mmHg, namely from 110 mmHg to 100 mmHg. Thus, it can be stated that antihypertension gymnastics (SENSASI) applied to residents in Cibungur Village, Rancakalong District, Sumedang, West Java, can reduce high blood pressure.

Documentation of the implementation of SENSASI training in Cibungur village, Rancakalong District, Sumedang Regency, West Java as in Figure 1 below:



Figure 1. Sensasi Training Participants during Theory Presentation

CONCLUSIONS AND RECOMMENDATIONS

Implementation of PkM activities through Anti-Hypertension Gymnastics training for residents of Cibungur Village, Rancakalong District, Sumedang Regency, West Java provided very significant benefits for the residents, especially for the participants involved. This can be seen from the results of blood pressure measurements (systole and diastole), which tend to decrease in participants before and after SENSASI training, with a decrease in minimum/lowest systole of 10 mmHg, namely from 140 mmHg to 130 mmHg; maximum/highest systole by 10 mmHg (from 190 mmHg to 180 mmHg). A decrease in diastole is also obtained by decreasing the maximum/highest diastole from 110 mmHg to 100 mmHg. It is recommended that this training activity be continued as a routine program by Health services in Cibungur village by involving cadres as anti-hypertension exercise instructors.

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