

# Combination of feet soaking in warm water and deep breathing relaxation with classical music accompaniment to lower headaches' hypertensive patients

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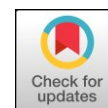
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Received 2020-08-13; accepted 2021-03-30; published 2021-04-21

## ABSTRACT

Hypertension is a problem that is found in people in both developed and developing countries, including Indonesia. One of the symptoms of hypertension is headache and neck stiffness. Management of Hypertension consists of pharmacological and non-pharmacological therapies. Non-pharmacological therapies (foot soak in warm water and breathing therapy in classical music accompaniment) can reduce hypertension. This community service aims to health the steps of Mekar Sari citizens in hypertension cases with non-pharmacological therapies it makes comfort feels. The data were obtained from the majority of residents suffering from hypertension and who had complaints of headaches and neck stiffness. The approach method is with lectures on delivery of material, then soak the feet of warm water and relaxation therapy in deep breathing with classical music accompaniment then evaluated. The results of these therapies showed the increase in knowledge about hypertension non-pharmacological therapy in Mekar Sari citizens. There was a decrease in both systolic and diastolic blood pressure and a decrease in scale after warm water foot baths and breathing therapy. Based on the service results, it is expected that this activity can be applied independently twice a week.



## KEYWORDS

Non-Pharmacological Therapy  
Pain  
Hypertension



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## 1. Introduction

Hypertension is one of the most common cardiovascular diseases and the most common in the community that one must be wary of [1]. Hypertension is a public health problem that occurs in both developed and developing countries [2]. Everyone has the possibility to suffer from high blood pressure. There are around 1.13 billion people in the world as sufferers of hypertension, meaning that 1 in 3 people in the world are diagnosed with hypertension, with the number of people with hypertension increasing every year. In adulthood, the increase in people with hypertension is estimated to be 1.5 billion people in 2025, with an estimated 9.4 million people die every year due to hypertension and its complications [3]. Treatment is needed as an effort to overcome and prevent the adverse effects of hypertension. Many of the efforts to prevent and control hypertension are synthetic chemical drugs or pharmacology. In fact, there are many developments in controlling hypertension with non-pharmacological treatment. One of the non-pharmacological treatments is foot soak in warm water and relaxation to the accompaniment of classical music. Deep breathing relaxation can overcome high blood pressure and irregular heart rate, reduce headaches, back pain and other pains and overcome sleep disorders [4]. The physiological response of relaxing deep breaths and soaking feet in warm water is to widen blood vessels so that they can lower blood pressure [5]. While classical music can give a positive effect, as well as the influence of music as an entertaining effect, learning support effect and as an enriching-mind effect, because music can affect the

heart rate of a person who listens to it so as to create calm so as to produce a very good effect on one's health [6].

The results of research conducted by Pramono obtained recommendations for health workers to provide health education, especially to hypertension patients, about the benefits of warm water foot soak therapy and deep breathing relaxation to lower blood pressure [7]. In addition, from the research results conducted by Fitama, it was concluded that if there is an increase in blood pressure, you can use warm water foot soak therapy to treat hypertension as a form of complementary therapy that is cheap and easy to do independently [8]. This is the basis for determining non-pharmacological therapy methods to assist the community in reducing hypertension symptoms. The condition of the community in the service area is that the majority of the community belongs to the community with middle to lower economic levels. This can be seen from the uncertain income of the community, which comes from agriculture and retail traders. Most of them work as farmers and farm labourers, traders and breeders. For public education, there are still many who do not continue their education for various reasons, one of which is economic reasons, and most do not know the concept of hypertension. One of the strategic solutions offered in this service activity is to increase public knowledge about introducing the basic concepts of causes, signs and symptoms, prevention, and non-pharmacological treatment in the form of foot soaks in warm water and deep breathing relaxation to reduce headaches in hypertension. Community service in Karang Kates Hamlet, Mekar Sari Village, Narmada District, West Lombok Regency aims to make the community have basic knowledge about Hypertension and are able to apply non-pharmacological interventions to reduce pain symptoms in the form of foot soaking in warm water and deep breath relaxation with classical music accompaniment. With increasing public knowledge in reducing symptoms of hypertension using non-pharmacological methods, it is hoped that the community will be able to independently control the symptoms that arise so that the public's health status can increase. With increasing health status, people's productivity will be better.

## 2. Method

This activity to improve science and technology for the community was carried out on Thursday, January 23, 2020. Starting at 08.00 - finished at the house of one of the health cadres in Mekar Sari Village, Narmada District, West Lombok Regency. The target is to reach 24 people. Prior to the implementation of the activity, a site observation was carried out on January 13, 2020. Preparation of the activity was carried out by coordinating with the village head and RT head to prepare the place for the activity. One of the strategic solutions offered in this service activity is to increase public knowledge about the introduction of the basic concepts of causes, signs and symptoms, prevention, and non-pharmacological treatments in the form of foot soaks in warm water and deep breathing relaxation to reduce headaches in hypertension. The Steps of implementing this service activity is:

- PreTest: At this Step, an assessment of residents' knowledge about hypertension is carried out, an assessment of pain complaints is felt, and blood pressure measurements are carried out prior to health counselling and foot soaking in warm water, deep breath relaxation.
- Material Presentation: At this Step, the presentation of material on the basic concepts of hypertension, causes, signs and symptoms, prevention and non-pharmacological treatment methods is carried out with lecture and discussion methods using LCD media. After the presentation of the material, the next discussion was carried out. Residents are welcome to ask questions about things they do not understand about counselling materials.
- Soak the feet in warm water: After the presentation of the material, the residents together did a foot soak in warm water and deep breathing relaxation to the accompaniment of classical music, carried out for about 30 minutes.
- Post Test: At this Step, the residents' knowledge of hypertension were reviewed after being given a rest period of 10 minutes after soaking the feet. Furthermore, pain scale measurements and blood pressure measurements were carried out after the foot soak intervention.
- Monitoring and Evaluation: At this Step, the community service team evaluates and monitors the monitoring again two weeks after the implementation of community service. During monitoring,

an assessment of the complaints of pain felt by residents was also carried out as an evaluation after independently applying warm water foot soaks and deep breathing relaxation to the accompaniment of classical music. The flow of community service can be seen in Figure 1.

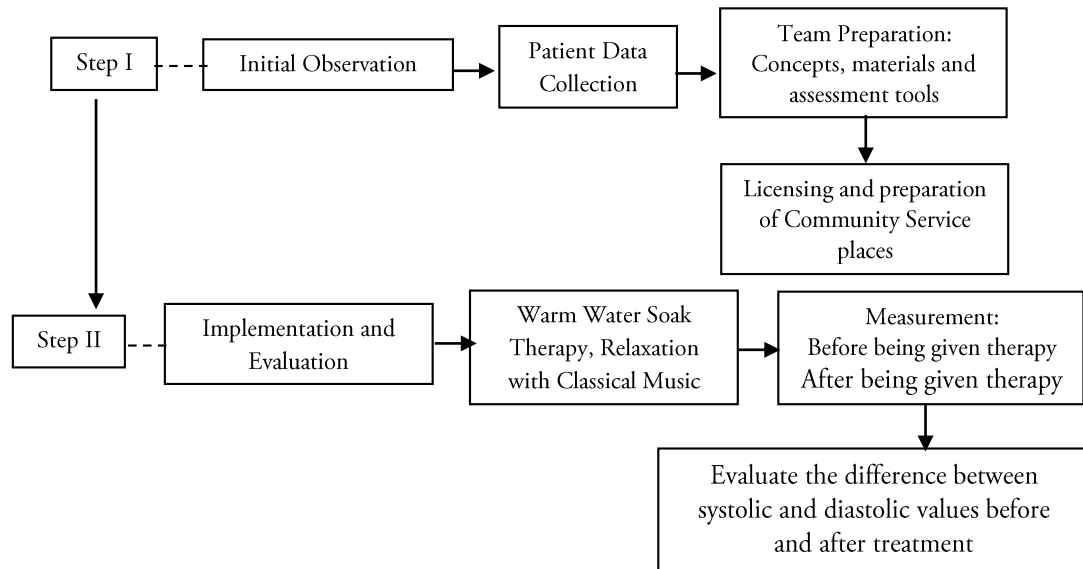


Fig. 1. The flow of the implementation of the community service program

### 3. Results and Discussion

Based on Table 1, it can be seen that the level of knowledge of residents about hypertension before being given counselling in the less category was 15 people (62.5%). After being given counselling, there was an increase in knowledge into the Enough category by ten people (41.7%). Table 2 shows that most of the Hypertension pain felt by residents both before and after the foot soak was in the mild pain category as many as ten people (41.7%) before the foot soak and increased to 16 people (66.7%) after the foot soak. This shows a decrease in pain after soaking the feet in warm water and relaxing deep breaths to the accompaniment of classical music. This community service activity is dominated by respondents aged between 50-64 years, as many as 20 people (83.3%). According to Rahajeng and Tuminah (2009), high cases of hypertension are in line with increasing age caused by structural changes in large blood vessels, so that blood vessels become narrower and blood vessel walls become stiff, as a result of which is an increase in systolic blood pressure. In addition to pre-elderly age (45 years), early adulthood (20-25 years) were also found to suffer from hypertension. This can be influenced by high stressors. In addition, there are other factors that may have an effect on how patients respond to the stressors they experience. Judging from the age of the respondents in the elderly group, the older a person is, the more experience they have in dealing with stressors. Education also contributes to overcoming stressors; the higher a person's education, the higher his knowledge so that the ability to deal with problems, analyze situations, and ultimately choose the right action in dealing with a problem [9].

Table 1. Distribution of the frequency of residents' knowledge about hypertension in Karang Kates Hamlet, Mekar Sari Village, Narmada District, West Lombok

<i>Pretest Knowledge</i>	<i>Frequency</i>	<i>%</i>
less	15	62,5
fair	5	20,8
good	4	16,7
<b>Total</b>	<b>24</b>	<b>100</b>
<i>Posttest Knowledge</i>	<i>Frequency</i>	<i>%</i>
less	9	37,5
fair	10	41,7
good	5	20,8
<b>Total</b>	<b>24</b>	<b>100</b>

**Table 2.** Distribution of the frequency of pain in Hypertensive residents in Karang Kates Hamlet, Mekar Sari Village, District before and after the foot soak

<i>Pretest Pain</i>	<i>Frequency</i>	<i>%</i>
undemanding	10	41,7
moderate	11	45,8
severe	3	12,5
<b>Total</b>	<b>24</b>	<b>100</b>
<i>Pretest Pain</i>	<i>Frequency</i>	<i>%</i>
undemanding	16	66,7
moderate	5	20,8
severe	3	12,5
<b>Total</b>	<b>24</b>	<b>100</b>

Family support also contributes to improving the patient's adaptability, where the respondent's family always accompanies and provides support to clients so that they remain enthusiastic about undergoing treatment. Efforts that have been made in the prevention and control of hypertension can be in the form of pharmacological and non-pharmacological therapy. Pharmacological therapy is in the form of drugs which are chemical substances that, although the goal is to treat if consumed in the long term, will have a detrimental effect on the body [10]. Meanwhile, non-pharmacologically the management includes exercising (elderly gymnastics), foot soaks in warm water and deep breath relaxation, and giving classical music. Deep breathing relaxation can overcome high blood pressure and irregular heart rate, reduce headaches, back pain and other pains and overcome sleep disorders. The response of deep breathing relaxation and foot soaking in warm water in lowering blood pressure is to widen blood vessels. While classical music can give a positive effect, as well as the influence of music as an entertaining effect, learning support effect and as an enriching-mind effect, because music can affect the heart rate of a person who listens to it so as to create calm so as to produce an effect. Figure 2 is a foot soaking activity as a community empowerment program.



**Fig. 2.** Implementation of Service Activities

#### 4. Conclusion

The provision of non-pharmacological therapy in patients with hypertension using the method of soaking the feet with warm water combined with deep breathing relaxation is expected to be a therapeutic solution for reducing blood pressure in patients. This increases public knowledge in handling and controlling hypertension symptoms. From the results of the service, the average age of participants who take part in community service activities is in the range of 50 - 64 years. It is hoped that there will be an increase in knowledge about Hypertension and non-pharmacological treatment in Mekar Sari Village residents after being given counselling. There is a decrease in the Hypertension headache scale after soaking the feet in warm water and relaxing deep breaths to the accompaniment of classical music.

### Acknowledgement

The implementation of community service in Mekar Sari Village cannot be separated from the help of many parties. We would like to thank the cadres, hamlet heads, STIKES YARSI Mataram students and the team for contributing their energy, thoughts, time and materials so that this service runs as expected. Hopefully, this community service can be followed up by the community as an effort to improve community health status.

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