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ACUPRESSURE SELF-CARE AS A COMPLEMENTARY THERAPY TO MANAGE HYPERTENSION

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ABSTRACT

Background: Hypertension, often termed "the silent killer," is a major cardiovascular health issue among the elderly that requires a comprehensive approach, including both pharmacological and non-pharmacological treatments. In the Tera Gymnastics community of Klampok Village, Blitar City, 82.5% of members suffer from hypertension; however, they exhibit low treatment adherence and a lack of understanding regarding complementary therapies such as acupressure. **Objectives:** This community service activity aims to improve the knowledge and skills of partners in managing hypertension independently through acupressure therapy and to enhance their independence in monitoring blood pressure. **Methods:** The method employed was health education and participatory training involving four stages: coordination, preparation (cadre training), implementation (education, acupressure simulation, and blood pressure measurement), and evaluation using pre-tests and post-tests. The activity involved 36 participants, the majority of whom were females in the pre-elderly age group (45–60 years). **Results:** The results showed a significant increase in the participants' knowledge levels, with the "good" category increasing from 9 to 34 participants following the intervention. Regarding skills, 88% of partners were able to use digital blood pressure monitors correctly, and over 85% could practice acupressure techniques independently. Blood pressure measurements revealed an average reduction in systolic pressure by 3.86 mmHg and diastolic pressure by 1.58 mmHg after the administration of acupressure therapy. **Conclusions:** Education and acupressure training are effective in improving public knowledge, technical skills (hard skills), and self-awareness (soft skills) in managing hypertension.

Keywords: Hypertension, Acupressure, Health Education, Elderly, Blood Pressure.

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A. BACKGROUND

Hypertension is a disorder of the cardiovascular system that is affected by blood pressure instability, the most common case in the elderly group. Hypertension is a non-communicable disease that is one of the causes of death in the world. Hypertension is often referred to as “the silent killer” or “the silent killer” because people with hypertension are unaware of the disease they suffer from (Hasanah, 2019). About 1.28 billion adults aged 30–79 worldwide suffer from hypertension, and two-thirds are in developing countries. Treating hypertension is not only through pharmacological treatment, but it also requires a comprehensive approach including lifestyle changes and complementary therapies (Nu’man, 2023).

The partner group in this program is the tera gymnastics community of Klampok Village, Blitar City, which consists of 50 members, with the majority of the age over 50 years old. Of the 40 active members, as many as 33 people (82.5%) had hypertension based on blood pressure measurements and preliminary interviews. The main problems faced are low adherence to treatment and lack of understanding of treating hypertension independently. Some members tend to ignore symptoms or simply rely on rest without ongoing control efforts. This shows the importance of educational and applicative interventions.

This community service activity is of significant importance due to the fact that partners lack comprehensive understanding of the advantages associated with complementary therapies, such as acupressure, in the reduction of blood pressure. While they have been educated regarding herbal beverages, they have not been provided with information pertaining to acupressure techniques. It is essential to instruct on acupressure methods, as research has demonstrated their efficacy in lowering blood pressure through physiological mechanisms involving the autonomic nervous system and endorphins (Suwarini et al., 2021). This intervention is capable of inducing a relaxation effect, decelerating the heart rate, and reducing blood pressure in a natural manner. Prior research supports the efficacy of this method; acupressure at particular points can activate meridian pathways that impact blood circulation and promote relaxation (Pujiastuti & Azaria, 2019). It demonstrates that acupressure at specific points can stimulate meridian pathways influencing blood circulation and relaxation. Additionally, enhancing public knowledge through health education is significantly associated with the adoption of healthy behaviors (Hartaty & Menga, 2022). Educational

activities have the potential to considerably enhance knowledge within a brief timeframe. (Zakiyah et al., 2020) Therefore, educating partners about acupressure is viewed as important for enhancing their knowledge.

This community service project adopts an educational and participatory approach. It includes training sessions such as health counselling, skills development, and mentoring, aimed at empowering the community to better manage their health in line with community empowerment principles. The program's solutions rest on three main pillars: health education on hypertension and its risks, training in blood pressure measurement, and acupressure techniques as a complementary therapy. Benefits include improving the quality of life for those with hypertension through non-pharmacological methods, reducing complication risks, and strengthening community support networks to promote sustainable healthy lifestyles. The goal is for partner communities to independently monitor blood pressure and use acupressure daily, serving as a model for community empowerment in health. The main objective is to improve the knowledge and skills of partners to manage hypertension autonomously with acupressure, fostering their independence in health maintenance. It is expected that partners will become change agents, share information and promote healthy practices within their communities, leading to more effective and sustainable promotive and preventive efforts term.

B. METHOD

The method applied in community service in the Klampok village gymnastics group is a health education method with the following steps:

1. **Coordination / Pre-Activity Stage**

   Prior to initiating the activity, the author consults with the partner's chairman with the primary objective of securing an official permit, discussing health concerns related to the partner, and collecting pertinent information to support the intervention.

2. **Preparation Stage**

   Prior to conducting health counselling, skills training, and mentoring sessions, the service coordinator collaborates with the partner's team to instruct on blood pressure measurement, with the objective of enabling the partner to independently monitor blood pressure.

3. Implementation stage

The implementation of the activity commenced with a pre-test and blood pressure measurement to evaluate the participants' knowledge and skills regarding hypertension and acupressure therapy aimed at reducing blood pressure, as well as to determine any reduction in blood pressure. This pre-test encompassed questions concerning the definition of hypertension, its symptoms, complications, and the application of acupressure for blood pressure reduction. Following the pre-test, an educational session and acupressure simulation were conducted to demonstrate methods for lowering blood pressure.

4. Final Stage of Evaluation and Post-Test

At the conclusion of each session, an evaluation and discussion were conducted collectively. This process includes a question-and-answer segment. Following the session, an assessment involving the completion of a post-test concerning knowledge, skills, and blood pressure measurement is performed again. The educational process is systematically organized, beginning with the dissemination of material via leaflets and acupressure simulations. The delivery of information through these diverse media enhances participants' understanding of the correct function and techniques of acupressure massage (Endah & Patriyani, 2022). Theoretically, this aligns with the concept that knowledge underpins the development of skills (Herman et al., 2025).

C. RESULTS AND DISCUSSION

The activity was conducted at the village hall of Klampok Village, Blitar City, during two sessions. The initial session took place on Friday, July 25, 2025, at 15:00, with the participation of eight cadre representatives. The purpose of this session was to instruct participants in the proper use of digital sphygmomanometers for blood pressure measurement. Following the training and demonstration on blood pressure measurement techniques. The results of the evaluation showed that the partner representatives had experienced increased understanding and skills in conducting blood pressure checks independently. 85% of partners understand factors that can affect the results of blood pressure measurements, such as body position, measurement time, and emotional state. Practical Ability 88% of partners are able to use digital blood

pressure monitors correctly, from cuff fitting to reading the measurement results. 75% of partners were able to demonstrate digital blood pressure measurement procedures. Independence Level Around 80% of partners expressed confidence to conduct blood pressure checks independently at home or during group activities.

Figure 1. Teaching blood pressure measurement

Blood pressure measurement training has significantly improved the knowledge and skills of partners. To maintain and improve these skills, it is recommended that there be regular follow-up training, as well as the provision of adequate blood pressure measuring devices in the partner group environment.

The second meeting was held on Sunday, July 27, 2025 at 15.00-17.00, and was attended by 36 participants. The implementation of the activity began with a pre-test and blood pressure measurement to assess the level of knowledge and skills about hypertension and acupressure therapy to lower blood pressure and whether or not there is a decrease in blood pressure. This pre-test includes questions related to the definition of hypertension, signs of hypertension symptoms, complications of hypertension, and acupressure to lower blood pressure after the pre-test session is educational and acupressure simulation to lower blood pressure.

Figure 2. Acupressure Simulation

At the end of each session, evaluation and discussion were carried out together. This process involves a question-and-answer segment. After the session is over, an evaluation of filling out the post-test related to knowledge, skills and blood pressure measurement is carried out again. The educational process is carried out in a structured manner, starting from the delivery of material in the form of leaflets, acupressure simulations. The delivery of information in these various media is able to increase participants' understanding of the proper function and method of acupressure massage(Endah & Patriyani, 2022).

Characteristics of participants based on age

Table 1. Characteristics of activity participants based on age

Age (Years)	Frequency (f)	Percentage (%)
Adults (19-44 years)	3	8.3%
Pre-elderly (45-60 years old)	17	47.2%
Senior (>60 years old)	16	44.5%
Total	**36**	**100%**

Based on Table 1. It is known that most of the pre-elderly participants aged 45-60 years are 17 people (47.2%).

Characteristics of participants by gender

Table 2. Characteristics of activity participants based on gender

Gender	Frequency (f)	Percentage (%)
Woman	35	97.2%
Men	1	2.8%
Total	**36**	**100%**

Based on table 2. It shows that most of the participants are female as many as 35 people (97.2%).

1) Pretest-post-test level of knowledge of people with hypertension

Table 3. Pretest-post-test level of knowledge of people with hypertension

Knowledge level	Pretest	Postest
Good	9	34
Enough	24	2
Less	3	0
Total	**36**	**36**

Based on table 3. It is known that in the pretest, most of the knowledge levels are enough as many as 24 people. After being provided with education related to

hypertension and acupressure complementary therapy, there was an increase in the knowledge of 34 partners, good knowledge and 2 people in the sufficient category. There is a difference between the knowledge of partner group members about acupressure self-care as a complementary therapy to manage hypertension before and after health education is provided, further proving that the provision of information through education proves that information sourced from health promotion, print media, and electronic media affects the level of individual knowledge. If an individual obtains a lot of information, the knowledge he has will be wider and more (Zakiyah et al., 2020).

Participants seemed enthusiastic when delivering hypertension material because they already had prior knowledge. After the Hypertension material, the acupressure material continued. The material provided is the definition of acupressure, acupressure points, and how to massage acupressure correctly. Participants were more enthusiastic about this material because it was new knowledge that they had never gained before

2) Pretest-post-test systole and diastole blood pressure in people with hypertension

Table 4. Pretest-post-test systole and diastole blood pressure in hypertensive patients

Blood pressure	Pretest	Post-test	Difference
	Mean	Mean	
Systole	140.89 mmhg	137.03 mmHg	3.86
Diastole	83.86 mmHg	82.28 mmHg	1.58

Based on table 4. It showed that there was a significant difference in the reduction of systole and diastole blood pressure in participants before and after acupressure therapy. The average systolic blood pressure of the participants before being given acupressure therapy was 140.89 mmHg and after being given systolic acupressure therapy the average systole was 137.03 mmHg, the difference was 3.86 mmHg. and the average diastole before acupressure therapy was 83.86mmHg with a decrease of 82.28mmHg with a difference of 1.58mmHg.

After the implementation of community service activities, most of the partner members showed quite good consistency in applying acupressure independently at home.

Some of the factors that support this consistency include increased understanding of the benefits of acupressure, ease of practice without the need for special tools, and support from family. In addition, the training materials delivered with practical methods and the existence of a guide leaflet also make it easier for members to remember and practice acupressure techniques appropriately.

Finger pressure along the body's meridian pathways can help lower systolic and diastolic blood pressure and reduce symptoms of hypertension (Herliawati & Girsang, 2019). Pressing these meridians will stimulate certain organs by activating the body's energy flow. When the flow of energy is active, it helps balance the health of the body according to each energy classification.

Suppressing these meridians can also stimulate mast cells to increase histamine production, which acts as a blood vessel dilator. This physiological process improves blood circulation and relaxation, thus helping to lower blood pressure (Pujiastuti & Azaria, 2019).

Partner's Skills in acupressure therapy

Prior to the intervention, most partner members lacked an understanding of acupressure therapy and the correct technique for its implementation. Following education, training, and mentorship, a measurable enhancement in both knowledge and practical capabilities was observed among the partners. The improvement in acupressure skills was evaluated utilizing a structured skills observation checklist developed by the team, which incorporated indicators such as: (1) ability to accurately identify acupressure points, (2) precision of finger positioning and pressure application, (3) sequence and duration of massage, and (4) capacity to elucidate the procedure and its benefits. Each criterion was rated on a scale from 1 to 4 (from poor to very good). Skill assessment was performed through demonstrations conducted prior to and following the training. The findings indicated an increase in the average skill score post-training, thereby signifying a substantial enhancement in the partners' competencies.

Follow-up monitoring was conducted over a four-week period following the training through weekly mentoring sessions and home visits. During these sessions, partners were requested to demonstrate independent acupressure

practice, with facilitators observing the accuracy of techniques and providing corrective feedback. Additionally, participants completed a self-care logbook to record the frequency of practice and their perceived effects on blood pressure regulation. Success indicators were defined as the ability to perform all procedural steps correctly and independently, practice acupressure at least three times per week, and verbally articulate the benefits of the therapy. Possessing adequate skills enables partners to actively participate in enhancing the health and welfare of the community. (Prasasongko & Kuswinarno, 2024).

The consistent engagement of partner members in self-administered acupressure at home has yielded favorable outcomes. Follow-up evaluations demonstrated that the majority of participants are capable of independently utilizing acupressure to control blood pressure. This achievement is attributed to a comprehensive educational program, which encompasses lectures, informational leaflets, demonstrations, simulations, and iterative practical exercises. The application of diverse instructional methods has effectively facilitated participants' comprehension of the objectives and correct techniques of acupressure massage (Endah & Patriyani, 2022). Skills are developed through a learning process that starts with gaining more knowledge (Herman et al., 2025). Therefore, the additional knowledge acquired through community service activities directly enhances skills, fosters independence, and promotes the ongoing application of acupressure therapy in daily life.

Figure 3. Implementation activities

D. CONCLUSIONS AND SUGGESTIONS

The implementation of acupressure self-care training as a complementary therapy for hypertension management in the tera gymnastics group successfully achieved its objectives. The program improved partners' knowledge, practical skills, and independence in managing their health, particularly in performing acupressure techniques and monitoring blood pressure correctly. These improvements were accompanied by positive changes in attitudes, including increased self-awareness, motivation to maintain a healthy lifestyle, and confidence in conducting self-care practices.

The activity contributed directly to empowering the community to adopt safe and simple non-pharmacological strategies for hypertension control and strengthened local capacity through the formation of trained cadres who can continue education and assistance independently. This indicates that the program has strong potential for sustainability within the community.

Future activities are recommended to focus on continuous mentoring, periodic skill refreshment, and replication of the program in other community groups to expand its benefits and further support community-based hypertension prevention and management efforts.

CONFESSION

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