

Implementation of Tai Chi Exercise for Reducing Blood Pressure Among Patients with Hypertension at Kedungmundu Community Health Center

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Background: Hypertension is one of the biggest diseases in the world, including Indonesia which is the biggest disease for people throughout the world, because most sufferers do not know that they have hypertension, and because they are tireless. hypertension can damage blood vessels and cause outcomes including heart disease and stroke. **Objective:** to determine the benefits of applying Tai Chi gymnastics to reduce blood pressure in hypertension sufferers at the Community Health Center. **Method:** This research method is descriptive in the form of a case study. This case study aims to analyze the application of ta ici gymnastics to reduce blood pressure in hypertension sufferers at the Community Health Center. **Results:** Overall, all respondents experienced a decrease in blood pressure after being given Tai Chi gymnastics intervention. The average decrease in systolic blood pressure was 15 mmHg, while the average decrease in diastolic blood pressure was 10 mmHg. This decrease indicates that Tai Chi gymnastics has a positive impact on controlling blood pressure in elderly hypertensives. **Conclusion:** The evaluation results showed a decrease in blood pressure in all respondents after being given Tai Chi gymnastics intervention. Mrs. A experienced a decrease in blood pressure from 160/100 mmHg to 145/90 mmHg, Mr. B from 158/98 mmHg to 142/88 mmHg, Mrs. C from 155/95 mmHg to 140/85 mmHg, and Mr. D from 162/102 mmHg to 148/92 mmHg.

Keywords: Hypertension Sufferers, Tai Chi Gymnastics.

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1. Introduction

Hipertensi Hypertension is one of the most prevalent chronic diseases worldwide, including in Indonesia, and remains a major public health concern because many affected individuals are unaware of their condition [1]. If left untreated or poorly controlled, hypertension can damage blood vessels and lead to serious complications, including cardiovascular disease, stroke, and kidney failure. Hypertension is defined as a cardiovascular disorder characterized by persistently elevated blood pressure above the normal range. Globally, its prevalence continues to increase, affecting both developed and developing countries. In Indonesia, hypertension remains one of the most common non-communicable diseases (NCDs) and poses a significant burden on the healthcare system [2].

According to the World Health Organization (WHO), approximately one billion people worldwide are living with hypertension. It is estimated that by 2025, around 29% of the adult population will have hypertension, reflecting a continuing upward trend. Hypertension is responsible for approximately eight million deaths annually, including about 1.5 million deaths in Southeast Asia, where nearly one-third of the population is affected by the disease [3].

Data from the Central Java Provincial Health Profile (2019) indicate that hypertension is the most prevalent disease among the population, with a prevalence of 37.57%. The prevalence is higher among women (40.17%) than men (34.83%) and increases with advancing age. Hypertension is closely associated with

behavioral and lifestyle factors. Several districts, including Karanganyar, Jepara, and Magelang City, reported hypertension service coverage reaching 100%, while Semarang achieved 97.5% coverage. In contrast, Purworejo recorded the lowest coverage at 12.9% [4].

Hypertension remains the leading contributor to non-communicable diseases in Central Java, accounting for 57.10% of all NCD cases, followed by diabetes mellitus at 20.57%. This highlights the importance of strengthening NCD prevention and control programs. Without appropriate management, hypertension can lead to severe complications such as coronary heart disease, stroke, chronic kidney disease, and other cardiovascular disorders. Therefore, comprehensive and individualized management strategies are essential to prevent disease progression and reduce the incidence of new NCD cases [5].

Hypertension is strongly associated with the aging process. Age-related physiological changes, including decreased vascular elasticity, thickening and stiffening of heart valves, reduced myocardial contractility, and diminished arterial compliance, contribute to increased peripheral vascular resistance and elevated blood pressure. Consequently, older adults are at a substantially higher risk of developing hypertension. In addition to aging, cardiovascular function, peripheral vascular resistance, hormonal regulation, and blood volume all play important roles in the pathogenesis of hypertension [6].

Individuals with hypertension must maintain stable blood pressure through both pharmacological and non-pharmacological management. Pharmacological treatment commonly involves antihypertensive medications such as amlodipine and captopril. However, medication adherence is often suboptimal, and pharmacological therapy alone may not always achieve optimal blood pressure control. Consequently, non-pharmacological interventions are recommended as complementary approaches to hypertension management. Mind–body exercises have been recognized as one of the effective complementary therapies for blood pressure control [7].

Previous studies have demonstrated the effectiveness of mind–body exercise in reducing blood pressure among older adults with hypertension. A study by [8], entitled *The Effect of Yoga Exercise on Reducing Blood Pressure among Elderly with Hypertension*, reported that yoga significantly reduced both systolic and diastolic blood pressure by promoting relaxation, suppressing sympathetic nervous system activity, improving blood circulation, and reducing psychological stress. These findings suggest that yoga is an effective non-pharmacological intervention for hypertension management.

Similarly, [9] found that yoga exercise significantly reduced blood pressure among older adults with hypertension. The mean blood pressure decreased from 152.80/93.55 mmHg before the intervention to 134.50/81.95 mmHg afterward, with a statistically significant difference ($p = 0.000$). These findings further support the role of mind–body exercise as an effective complementary therapy for blood pressure reduction.

Preliminary data obtained from Kedungmundu Community Health Center showed that 262 patients were diagnosed with hypertension in 2025, while 196 cases were recorded between January and July 2026. The current management program primarily consists of antihypertensive medication; however, medication adherence remains a significant challenge. Many patients take their medication irregularly or discontinue treatment once they feel better without consulting healthcare professionals. In addition, inadequate family support contributes to poor treatment adherence, including failure to accompany patients during treatment, failure to refill medications, and failure to attend regular follow-up visits at the health center. Although various interventions, including health education on medication adherence and healthy dietary practices, have been implemented, these efforts have not fully addressed the problem. Therefore, further investigation into complementary non-pharmacological interventions is warranted. Based on this background, this study was conducted under the title "Implementation of Tai Chi Exercise for Reducing Blood Pressure among Patients with Hypertension at Kedungmundu Community Health Center".

2. Literature Review And Problem Statement

Hipertensi Hypertension is a condition characterized by blood pressure levels above the normal range, defined as a systolic blood pressure of ≥ 140 mmHg and/or a diastolic blood pressure of ≥ 90 mmHg. It is one of the leading risk factors for cardiovascular disease, stroke, kidney failure, and other serious complications. Based on its etiology, hypertension is classified into primary (essential) hypertension, which is largely influenced by lifestyle and environmental factors, and secondary hypertension, which results from underlying medical conditions. Advancing age is associated with reduced arterial elasticity, thereby increasing the risk of developing hypertension [10].

The pathophysiology of hypertension involves increased peripheral vascular resistance, expanded blood volume, activation of the renin–angiotensin–aldosterone system, and impaired renal and autonomic nervous system function. These changes increase the workload of the heart, resulting in persistently elevated blood pressure. Hypertension is often asymptomatic in its early stages; however, when left uncontrolled, it may cause symptoms such as headaches, dizziness, blurred vision, and shortness of breath, and may eventually lead to serious complications affecting the heart, brain, kidneys, and eyes [11].

Risk factors for hypertension are categorized into modifiable and non-modifiable factors. Modifiable risk factors include obesity, physical inactivity, excessive salt intake, and psychological stress, whereas non-modifiable factors include genetic predisposition, sex, and aging. Controlling modifiable risk factors through lifestyle modification plays a crucial role in preventing hypertension and reducing its severity [12]. Hypertension management includes both pharmacological treatment, such as diuretics, beta-blockers, angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers, and vasodilators, and non-pharmacological approaches, including weight reduction, the Dietary Approaches to Stop Hypertension (DASH) diet, sodium restriction, and regular physical activity [13].

One form of physical activity recommended for individuals with hypertension is Tai Chi. Tai Chi is a mind–body exercise that combines slow, gentle body movements with controlled breathing, concentration, and relaxation, providing both physical and psychological benefits. It is considered a low- to moderate-intensity exercise that is safe for older adults and individuals with hypertension due to its minimal risk of injury. In addition to improving balance and flexibility, Tai Chi enhances physical fitness, reduces stress, and promotes overall quality of life [13].

The successful implementation of Tai Chi exercise is influenced by several factors, including accessibility to training facilities, family support, and the motivation and attitudes of older adults toward participating in the exercise program. Tai Chi is generally performed for 30–60 minutes per session, 3–5 times per week, beginning with a warm-up, followed by the main exercise movements, and ending with a cool-down period. The movements are performed slowly and rhythmically while coordinating controlled breathing, which helps improve blood circulation and induces a state of relaxation [14].

Evidence from previous studies indicates that hypertension is a chronic condition requiring long-term management through a combination of pharmacological therapy and lifestyle modification. Tai Chi has emerged as an effective non-pharmacological intervention for blood pressure reduction by improving cardiovascular function, enhancing physical fitness, reducing psychological stress, and promoting autonomic nervous system balance. Therefore, regular Tai Chi practice has considerable potential as a complementary strategy for hypertension management, particularly among older adults [15].

3. Method

This study employed a descriptive research design using a case study approach to analyze the implementation of Tai Chi exercise in reducing blood pressure among patients with hypertension in the

working area of Kedungmundu Community Health Center. The case study was conducted over a one-week period, during which participants received Tai Chi exercise as the intervention three times per week, with each session lasting 60 minutes. The study participants consisted of four individuals with hypertension who were selected based on the inclusion criteria: older adults residing within the health center's service area, having no joint or mobility impairments, and willing to participate in the study. Individuals with physical disabilities, uncontrolled hypertension, unwillingness to participate, or other conditions that did not meet the study criteria were excluded.

The focus of this study was the implementation of Evidence-Based Nursing Practice (EBNP) through Tai Chi exercise as a non-pharmacological intervention for reducing blood pressure in patients with hypertension. The independent variable was Tai Chi exercise, while the dependent variable was blood pressure, which was measured before and after the intervention using a digital sphygmomanometer. The research instruments included a digital blood pressure monitor, a speaker and music to accompany the Tai Chi exercise sessions, and an observation sheet used to record blood pressure measurements throughout the intervention.

Data were collected through interviews, direct observation, and document review to obtain both subjective and objective information regarding the participants' conditions. The study was conducted at Kedungmundu Community Health Center in June 2026. Data were analyzed using descriptive narrative analysis based on the participants' blood pressure measurements before and after the intervention and were subsequently presented in narrative form. Throughout the study, ethical research principles were strictly observed, including obtaining informed consent, ensuring participant anonymity, and maintaining data confidentiality to protect the rights and privacy of all participants.

4. Results and Discussion

Results

Description of the Case Study Setting

This case study was conducted in the working area of Kedungmundu Community Health Center (Puskesmas Kedungmundu) in June 2026. Puskesmas Kedungmundu is a primary healthcare facility that provides promotive, preventive, curative, and rehabilitative health services to the community. One of its health programs focuses on the prevention and control of Non-Communicable Diseases (NCDs), particularly hypertension among older adults.

The case study involved elderly patients with hypertension who were registered within the health center's service area and met the inclusion criteria. The participants were hypertensive patients who demonstrated poor adherence to antihypertensive medication, as indicated by irregular medication use or failure to follow the prescribed treatment regimen. Consequently, their blood pressure remained uncontrolled. Therefore, participants received a non-pharmacological intervention in the form of Tai Chi exercise, which aimed to reduce blood pressure, improve physical fitness, and serve as a complementary therapy in hypertension management. The intervention consisted of three Tai Chi exercise sessions over one week, with each session lasting 30–60 minutes.

Summary of the Nursing Care Process

Assessment Results

Table 4.1. Baseline Characteristics and Initial Assessment of Participants

Client	Characteristics	Clinical Complaints	Vital Signs (Baseline)	Additional Information
Client 1 (Mrs. A)	Female, 62 years old, 5-year history of hypertension	Frequently experienced dizziness, especially during strenuous physical activity; irregular use of antihypertensive medication	Blood Pressure: 160/100 mmHg Pulse: 84 beats/min Respiratory Rate: 20 breaths/min Temperature: 36.5°C	Cooperative and willing to participate in all Tai Chi exercise sessions
Client 2 (Mr. B)	Male, 65 years old, 7-year history of hypertension	Frequent neck pain and fatigue	Blood Pressure: 158/98 mmHg Pulse: 82 beats/min Respiratory Rate: 20 breaths/min Temperature: 36.4°C	Completed the initial assessment before intervention
Client 3 (Mrs. C)	Female, 68 years old, 4-year history of hypertension	Occasional headaches	Blood Pressure: 155/95 mmHg Pulse: 80 beats/min Respiratory Rate: 20 breaths/min Temperature: 36.6°C	Completed the baseline assessment before intervention
Client 4 (Mr. D)	Male, 70 years old, 8-year history of hypertension	Frequent neck stiffness	Blood Pressure: 162/102 mmHg Pulse: 86 beats/min Respiratory Rate: 22 breaths/min Temperature: 36.5°C	Completed the initial assessment before intervention

Nursing Diagnosis

Based on the assessment findings, all four participants (Mrs. A, Mr. B, Mrs. C, and Mr. D) presented with blood pressure values above the normal range before the Tai Chi intervention. Mrs. A had a blood pressure of 160/100 mmHg, Mr. B 158/98 mmHg, Mrs. C 155/95 mmHg, and Mr. D 162/102 mmHg. They also reported symptoms such as dizziness, neck pain, headaches, and discomfort associated with elevated blood pressure.

Based on the subjective and objective assessment data, the nursing diagnosis established for all participants was Risk for Ineffective Peripheral Tissue Perfusion related to increased blood pressure, as evidenced by elevated blood pressure, dizziness, neck pain, and headaches.

Nursing Intervention

The nursing intervention implemented for all participants focused on a non-pharmacological therapy consisting of Tai Chi exercise. Blood pressure was measured before and after each intervention using a digital sphygmomanometer. The intervention was based on Evidence-Based Nursing Practice (EBNP), which has demonstrated that Tai Chi can reduce blood pressure through gentle body movements, controlled breathing techniques, and relaxation.

Previous studies have reported that Tai Chi effectively lowers both systolic and diastolic blood pressure among individuals with hypertension by improving blood circulation, reducing stress, increasing relaxation, and enhancing vascular elasticity. Accordingly, all four participants attended three Tai Chi sessions lasting 30–60 minutes each.

Nursing Implementation

The intervention was carried out in June 2026. Initially, the researcher introduced the study, explained its objectives, benefits, procedures, and Standard Operating Procedures (SOP), and obtained informed consent from eligible participants. A schedule was then arranged for blood pressure measurement and Tai Chi sessions.

Before each session, participants' blood pressure was measured. They then completed a 30–60-minute Tai Chi exercise session, after which blood pressure was measured again to evaluate changes. Several family members accompanied participants during the intervention.

Table 4.2. Progress of Tai Chi Intervention and Blood Pressure Changes

Client	Session 1	Session 2	Session 3
Client 1 (Mrs. A)	Reported feeling physically lighter, although no significant improvement in blood pressure was observed.	Dizziness decreased, and the client felt more relaxed. Blood pressure decreased to 150/95 mmHg.	Reported improved comfort, reduced dizziness, and better sleep quality. Blood pressure further decreased to 145/90 mmHg.
Client 2 (Mr. B)	Felt fresher and more relaxed after the first Tai Chi session.	Neck pain diminished, and blood pressure decreased to 148/92 mmHg.	Reported feeling healthier and less fatigued. Blood pressure further decreased to 142/88 mmHg.
Client 3 (Mrs. C)	Felt calmer and more comfortable after the first session.	Frequency of headaches decreased, and blood pressure improved to 148/90 mmHg.	Reported improved physical fitness and reduced fatigue. Blood pressure decreased to 140/85 mmHg.
Client 4 (Mr. D)	Felt physically lighter, although no significant improvement was observed.	Neck stiffness decreased, and the client felt more relaxed. Blood pressure decreased to 154/96 mmHg.	Dizziness occurred less frequently, daily activities became easier, and blood pressure further decreased to 148/92 mmHg.

Nursing Evaluation

The nursing evaluation demonstrated that the non-pharmacological intervention of Tai Chi exercise, conducted over three sessions lasting 30–60 minutes, resulted in decreased blood pressure in all participants. Mrs. A's blood pressure decreased from 160/100 mmHg to 145/90 mmHg, Mr. B's from 158/98 mmHg to 142/88 mmHg, Mrs. C's from 155/95 mmHg to 140/85 mmHg, and Mr. D's from 162/102 mmHg to 148/92 mmHg.

In addition to reductions in blood pressure, participants reported improvements in physical condition, including decreased dizziness, reduced neck pain and headaches, greater relaxation, and improved overall comfort. All participants successfully completed the Tai Chi program according to the Standard Operating Procedures and demonstrated enthusiasm throughout the intervention.

Overall, the findings indicate that Tai Chi exercise had a positive effect on reducing blood pressure among older adults with hypertension. The nursing problem related to elevated blood pressure showed

improvement, as evidenced by reductions in both systolic and diastolic blood pressure as well as the alleviation of hypertension-related symptoms..

Discussion

Nursing Assessment

Based on the assessment of four older adults with hypertension in the working area of Kedungmundu Community Health Center (Puskesmas Kedungmundu), all participants were found to have blood pressure values above the normal range. The baseline blood pressure measurements were 160/100 mmHg for Mrs. A, 158/98 mmHg for Mr. B, 155/95 mmHg for Mrs. C, and 162/102 mmHg for Mr. D. In addition to the objective finding of elevated blood pressure, subjective complaints included dizziness, neck pain, headaches, fatigue, and neck stiffness.

Hypertension in older adults is associated with the aging process, which results in decreased arterial elasticity, increased peripheral vascular resistance, and alterations in cardiovascular function. These physiological changes require the heart to work harder to pump blood, leading to elevated blood pressure. According to the theory proposed by Stanley and Beare (2018), age-related physiological changes contribute significantly to the high prevalence of hypertension among older adults.

The assessment findings in this case study are consistent with the study conducted by [28], which reported that most older adults with hypertension experienced dizziness, neck pain, and headaches due to uncontrolled blood pressure. These symptoms are associated with impaired tissue perfusion resulting from increased vascular pressure.

Nursing Diagnosis

Based on the subjective and objective data obtained, the nursing diagnosis established for all four participants was Risk for Ineffective Peripheral Tissue Perfusion related to increased blood pressure.

This diagnosis was established because all participants presented with hypertension, as evidenced by blood pressure readings above the normal range accompanied by symptoms such as dizziness, headaches, neck pain, and general discomfort. According to the Indonesian Nursing Diagnosis Standards (SDKI) [29], *Risk for Ineffective Peripheral Tissue Perfusion* refers to a condition in which an individual is at risk of decreased peripheral blood circulation that may compromise health.

This diagnosis was appropriate considering the participants' clinical conditions, as prolonged hypertension may impair tissue perfusion due to increased peripheral vascular resistance. If left uncontrolled, hypertension may increase the risk of serious complications, including stroke, coronary artery disease, and chronic kidney disease.

Nursing Intervention

The intervention provided to all participants consisted of a non-pharmacological therapy in the form of Tai Chi exercise conducted three times over one week, with each session lasting 30–60 minutes. Tai Chi was selected because it is a low-intensity physical exercise that combines slow body movements, controlled breathing, concentration, and relaxation. This exercise has been shown to enhance parasympathetic nervous system activity, reduce sympathetic nervous system activity, improve blood circulation, and decrease peripheral vascular resistance, thereby contributing to lower blood pressure.

A study by Liu et al. (2022) demonstrated that Tai Chi effectively reduces both systolic and diastolic blood pressure in individuals with hypertension by improving endothelial function and reducing psychological stress. Furthermore, another study [31] concluded that regular Tai Chi practice is a safe and effective complementary therapy for blood pressure control among older adults with hypertension. Therefore, the intervention implemented in this case study is consistent with the principles of Evidence-Based Nursing

Practice (EBNP), which support the use of Tai Chi as a non-pharmacological intervention for hypertension management.

Nursing Implementation

The intervention was implemented by measuring participants' blood pressure before and after each of the three Tai Chi sessions. In addition, the participants' physical condition was monitored, and health education regarding the importance of regular physical activity for hypertension management was provided.

Client 1 (Mrs. A)

Before the intervention, Mrs. A's blood pressure was 160/100 mmHg, and she reported experiencing dizziness during physical activity. After completing three Tai Chi sessions, her blood pressure decreased to 145/90 mmHg, representing reductions of 15 mmHg in systolic blood pressure and 10 mmHg in diastolic blood pressure.

In addition to the improvement in blood pressure, Mrs. A reported reduced dizziness, greater relaxation, and improved sleep quality. These findings suggest that Tai Chi contributed to relaxation and enhanced blood circulation.

Client 2 (Mr. B)

Prior to the intervention, Mr. B's blood pressure was 158/98 mmHg, accompanied by complaints of neck pain and fatigue. Following three Tai Chi sessions, his blood pressure decreased to 142/88 mmHg, representing reductions of 16 mmHg systolic and 10 mmHg diastolic.

He also reported reduced neck pain and increased physical freshness, indicating improved physical comfort and better blood pressure control.

Client 3 (Mrs. C)

Before the intervention, Mrs. C's blood pressure measured 155/95 mmHg, and she occasionally experienced headaches. Following three Tai Chi sessions, her blood pressure decreased to 140/85 mmHg, representing reductions of 15 mmHg systolic and 10 mmHg diastolic.

She also reported fewer headaches and improved physical fitness, indicating that Tai Chi promoted relaxation and reduced vascular tension.

Client 4 (Mr. D)

Before the intervention, Mr. D's blood pressure was 162/102 mmHg, accompanied by neck stiffness and dizziness. After the intervention, his blood pressure decreased to 148/92 mmHg, representing reductions of 14 mmHg systolic and 10 mmHg diastolic.

He further reported reduced neck stiffness and greater comfort during daily activities. These findings indicate that Tai Chi produced a relaxation effect that contributed to blood pressure reduction.

Analysis of Pre- and Post-Intervention Outcomes

Overall, all participants experienced reductions in blood pressure following the Tai Chi intervention.

Participant	Pre- Intervention (mmHg)	Post- Intervention (mmHg)	Systolic Reduction	Diastolic Reduction
Mrs. A	160/100	145/90	15 mmHg	10 mmHg
Mr. B	158/98	142/88	16 mmHg	10 mmHg
Mrs. C	155/95	140/85	15 mmHg	10 mmHg
Mr. D	162/102	148/92	14 mmHg	10 mmHg

The average reduction in systolic blood pressure was 15 mmHg, while the average reduction in diastolic blood pressure was 10 mmHg. These findings indicate that Tai Chi exercise had a positive effect on blood pressure control among older adults with hypertension.

These results are consistent with the findings of Zou et al. (2019), who reported that regular Tai Chi practice can reduce systolic blood pressure by 10–15 mmHg and diastolic blood pressure by 5–10 mmHg in patients with hypertension. The proposed mechanisms include enhanced vasodilation, reduced sympathetic nervous system activity, and improved physical and psychological relaxation.

Nursing Evaluation

The evaluation demonstrated that most of the nursing goals were successfully achieved. Following three Tai Chi exercise sessions, all participants experienced reductions in blood pressure along with improvements in their clinical symptoms. Mrs. A's blood pressure decreased from 160/100 mmHg to 145/90 mmHg, Mr. B's from 158/98 mmHg to 142/88 mmHg, Mrs. C's from 155/95 mmHg to 140/85 mmHg, and Mr. D's from 162/102 mmHg to 148/92 mmHg. Furthermore, complaints of dizziness, neck pain, headaches, and neck stiffness were reduced after the intervention.

The findings of this case study support those reported by Wang et al. (2021) and [30], which concluded that Tai Chi is an effective non-pharmacological therapy for reducing blood pressure and improving the quality of life of older adults with hypertension. Therefore, Tai Chi exercise can be recommended as a complementary nursing intervention that is simple, safe, cost-effective, and beneficial for blood pressure management in older adults with hypertension.

5. Conclusion

Based on the findings of this case study on the implementation of Tai Chi exercise for reducing blood pressure among older adults with hypertension in the working area of Kedungmundu Community Health Center, the following conclusions can be drawn:

1. The nursing assessment revealed that all four participants had blood pressure levels above the normal range, accompanied by complaints of dizziness, neck pain, headaches, and fatigue. The baseline blood pressure measurements were 160/100 mmHg for Mrs. A, 158/98 mmHg for Mr. B, 155/95 mmHg for Mrs. C, and 162/102 mmHg for Mr. D.
2. The nursing diagnosis established for all participants was Risk for Ineffective Peripheral Tissue Perfusion related to increased blood pressure, as evidenced by elevated blood pressure and hypertension-related symptoms.
3. The nursing intervention consisted of a non-pharmacological therapy in the form of Tai Chi exercise, conducted for 30–60 minutes per session, three sessions over one week, following the established Standard Operating Procedures (SOPs).
4. The implementation results demonstrated that all participants were able to complete the Tai Chi exercise sessions successfully and showed positive responses throughout the intervention.
5. The evaluation findings showed reductions in blood pressure among all participants following the Tai Chi intervention. Mrs. A's blood pressure decreased from 160/100 mmHg to 145/90 mmHg, Mr. B's from 158/98 mmHg to 142/88 mmHg, Mrs. C's from 155/95 mmHg to 140/85 mmHg, and Mr. D's from 162/102 mmHg to 148/92 mmHg.
6. The findings indicate that Tai Chi exercise is effective in reducing blood pressure among older adults with hypertension. Therefore, Tai Chi may be recommended as a safe, simple, and beneficial non-pharmacological intervention for blood pressure management in primary healthcare settings.

Recommendations

1. For Kedungmundu Community Health Center
The findings of this case study are expected to serve as a reference for developing health promotion and disease prevention programs, particularly for individuals with hypertension. Tai Chi exercise may be incorporated as a routine activity within the Integrated Non-Communicable Disease (NCD) Post (Posbindu PTM) or elderly healthcare programs to support blood pressure control.
2. For Nurses
Nurses are encouraged to implement Evidence-Based Nursing Practice (EBNP) by incorporating Tai Chi exercise as a complementary non-pharmacological intervention alongside pharmacological therapy to assist in reducing blood pressure among patients with hypertension.
3. For Older Adults with Hypertension
Older adults are encouraged to perform Tai Chi exercise regularly and consistently as part of a healthy lifestyle to improve physical fitness, reduce stress, maintain overall health, and help keep blood pressure within the normal range.
4. For Family Members
Family members are encouraged to provide continuous support by motivating older adults to participate regularly in Tai Chi exercise, reminding them to adhere to antihypertensive medication, maintain a healthy diet, and attend routine health check-ups.
5. For Future Researchers
Future studies are recommended to include larger sample sizes, longer intervention periods, and more rigorous research designs to provide stronger evidence regarding the effectiveness of Tai Chi exercise in reducing blood pressure among individuals with hypertension.

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Implementation of Tai Chi Exercise for Reducing Blood Pressure Among Patients with Hypertension at Kedungmundu Community Health Center. Ditta Ainurrohmah et.al

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