

# The Effect of Foot Spa Therapy on Anxiety Reduction Among Hypertensive Patients in the Basic Geriatric Ward of Dr X

Renny Fransiska Aryanti<sup>1</sup>, Son Haji<sup>2</sup>

<sup>1,2</sup>Nursing Professional Study Program, Faculty of Nursing and Health Sciences, Keryahusada University, Semarang, Semarang, Indonesia  
Email: rennyfransiska36@gmail.com

Hypertension is one of the most common chronic diseases among older adults and is often accompanied by anxiety, which can negatively affect blood pressure control and overall quality of life. Anxiety may activate the sympathetic nervous system, leading to increased blood pressure and worsening the patient's condition. Foot spa therapy, which combines warm water foot soaking and gentle foot massage, is a complementary non-pharmacological intervention that promotes relaxation, improves peripheral blood circulation, and reduces anxiety. Therefore, comprehensive nursing care incorporating foot spa therapy is needed to support anxiety management in patients with hypertension. This case study aimed to describe the application of foot spa therapy in reducing anxiety among hypertensive patients in the Basic Geriatric Ward of Dr. X, using the nursing process, including assessment, nursing diagnosis, intervention planning, implementation, and evaluation. The study employed a case study design involving two older adult patients with hypertension who experienced anxiety. The assessment identified anxiety related to changes in health status, characterized by excessive worry, restlessness, and sleep disturbances. Nursing interventions included anxiety reduction, therapeutic communication, health education, relaxation techniques, and foot spa therapy administered for two consecutive days. The evaluation showed a significant reduction in anxiety levels. The Geriatric Anxiety Inventory (GAI) score decreased from 13 to 0 in the first patient and from 12 to 0 in the second patient. Blood pressure also improved, decreasing from 155/100 mmHg to 130/90 mmHg in the first patient and from 175/105 mmHg to 130/98 mmHg in the second patient. Subjectively, both patients reported feeling calmer, more comfortable, and less worried about their health condition. Objectively, they appeared more relaxed and cooperative during nursing care. In conclusion, the application of foot spa therapy as part of comprehensive nursing care effectively reduced anxiety and contributed to improved blood pressure among hypertensive patients. Foot spa therapy may be considered a safe, simple, and effective complementary nursing intervention for managing anxiety in patients with hypertension.

**Keywords:** Hypertension, Anxiety, Foot Spa Therapy, Nursing Care, Older Adults.

This is an open access article under the [CC BY-NC](#) license



## Corresponding Author:

Renny Fransiska Aryanti  
Nursing Professional Study Program, Faculty of Nursing and Health Sciences,  
Keryahusada University, Semarang, Semarang, Indonesia  
rennyfransiska36@gmail.com

## 1. Introduction

Older adults are individuals who have entered the final stage of the human lifespan and undergo the natural aging process [1]. Aging is characterized by gradual declines in physical, psychological, and social functioning. The Aging is characterized by gradual declines in physical, psychological, and social functioning, making older adults more susceptible to chronic degenerative diseases. Hypertension is one of the most prevalent chronic conditions among this population because age-related vascular stiffness increases the risk of elevated blood pressure [2].

Hypertension is a major non-communicable disease and an important contributor to cardiovascular morbidity and mortality, including stroke, heart failure, and chronic kidney disease [3]. The World Health Organization (WHO) estimates that the number of people living with hypertension According to the World Health Organization, the global prevalence of hypertension continues to increase, and Indonesia remains

The Effect of Foot Spa Therapy on Anxiety Reduction Among Hypertensive Patients in the Basic Geriatric Ward of Dr X. Renny Fransiska Aryanti et.al

one of the countries with a high disease burden. The 2018 National Basic Health Research (Riskesmas) reported that hypertension affected 34.11% of the Indonesian population, with the highest prevalence occurring among older adults [4].

Hypertension in older adults is influenced by both non-modifiable and modifiable risk factors. While age, sex, and family history cannot be altered, modifiable factors such as unhealthy dietary habits, physical inactivity, obesity, smoking, alcohol consumption, and psychological distress contribute substantially to disease progression [5]. Among these factors, anxiety has received increasing attention because persistent psychological stress activates the sympathetic nervous system, resulting in vasoconstriction, increased heart rate, and elevated blood pressure [6].

Anxiety is common among older adults due to declining physical health, reduced social roles, dependency, and concerns about illness and mortality [7]. Consequently, unmanaged anxiety not only reduces quality of life but may also worsen hypertension and increase the risk of cardiovascular complications [8].

Current hypertension management combines pharmacological and non-pharmacological approaches. Although antihypertensive medications remain the cornerstone of treatment, long-term drug therapy may be associated with adverse effects and does not adequately address psychological problems such as anxiety [9]. Therefore, complementary nursing interventions that promote relaxation have attracted considerable interest. Previous studies have demonstrated that relaxation therapy, massage, aromatherapy, meditation, hydrotherapy, and acupressure can improve psychological well-being while contributing to blood pressure control [10].

Among these complementary interventions, foot spa therapy, which combines warm water foot soaking with gentle foot massage, has shown promising therapeutic effects. Previous studies have reported that foot spa therapy improves peripheral circulation, promotes vasodilation, reduces muscle tension, and enhances relaxation through increased parasympathetic activity and decreased sympathetic nervous system activation [11]. Several studies have also demonstrated its effectiveness in lowering blood pressure and improving comfort among patients with hypertension. However, most previous research has primarily focused on physiological outcomes, particularly blood pressure reduction, whereas evidence regarding its effectiveness in reducing anxiety among older adults with hypertension remains limited. Furthermore, few studies have examined the implementation of foot spa therapy within the nursing process in hospital-based geriatric settings [12].

A preliminary survey conducted at Dr X, found that older adults with hypertension commonly experienced anxiety related to their health condition but had never received foot spa therapy as part of their nursing care. This finding indicates that the integration of foot spa therapy into routine nursing practice remains limited despite its potential psychological and physiological benefits. Therefore, this case study addresses an important gap by describing the implementation of foot spa therapy as a complementary nursing intervention to reduce anxiety among older adults with hypertension in a geriatric inpatient setting. The findings are expected to provide practical evidence supporting the integration of complementary nursing interventions into holistic hypertension management and contribute to the advancement of geriatric nursing practice.

## 2. Literature Review and Problem Statement

Older adults are individuals who have entered the final stage of life and experience the natural aging process, which is characterized by gradual declines in physical, psychological, and social functions. These age-related changes increase susceptibility to various degenerative diseases, particularly hypertension.

Reduced vascular elasticity associated with aging contributes to elevated blood pressure, making hypertension one of the most prevalent health problems among older adults [13]

Hypertension is a major non-communicable disease and a leading cause of cardiovascular complications, including stroke, heart failure, and chronic kidney disease. The World Health Organization (WHO) estimates that the global number of individuals with hypertension will continue to rise, reaching approximately 1.5 billion people. In Indonesia, the 2018 Basic Health Research (Riskesdas) reported a national hypertension prevalence of 34.11%, with the highest prevalence observed among older adults, indicating that hypertension remains an important public health concern in this population [4].

The development of hypertension is influenced by both non-modifiable and modifiable risk factors. Non-modifiable factors include age, sex, and family history, whereas modifiable factors include unhealthy dietary habits, physical inactivity, obesity, smoking, alcohol consumption, and psychological conditions such as stress and anxiety. Anxiety activates the sympathetic nervous system, increasing heart rate and peripheral vasoconstriction, which consequently elevates blood pressure. Persistent anxiety may also impair sleep quality, decrease comfort, and worsen the overall health status of older adults with hypertension (Dachi et al., 2021; Ayu et al., 2023; Aspiani, 2014; Anwar, 2016).

Hypertension can be managed through pharmacological and non-pharmacological approaches [14]. Although antihypertensive medications are effective in controlling blood pressure, long-term use may be associated with adverse effects, highlighting the need for complementary non-pharmacological interventions. Various relaxation therapies, including massage, aromatherapy, meditation, acupressure, hydrotherapy, and foot spa therapy, have been recommended to promote relaxation, improve patient comfort, and assist in blood pressure control [13].

Foot spa therapy is a complementary intervention that combines warm water foot soaking with gentle foot massage. This therapy promotes peripheral vasodilation, improves blood circulation, relieves muscle tension, and stimulates the parasympathetic nervous system, resulting in relaxation and reduced sympathetic activity. Consequently, foot spa therapy has the potential to decrease anxiety while contributing to better blood pressure control. Furthermore, it is simple, safe, cost-effective, and can be performed independently or with family assistance [15].

A preliminary survey conducted at Dr. X, found that two older adults with hypertension experienced anxiety related to their illness and had never received foot spa therapy as a complementary nursing intervention. This finding suggests that foot spa therapy has not been widely implemented despite its potential benefits in reducing anxiety and promoting relaxation among hypertensive patients. Therefore, this case study aimed to describe the implementation of foot spa therapy as a complementary nursing intervention to reduce anxiety among hypertensive patients in the Basic Geriatric Ward of Dr. X.

### 3. Method

This study employed a descriptive case study design to describe the implementation of nursing care for older adults with hypertension experiencing anxiety, with a particular focus on the application of foot spa therapy as a complementary nursing intervention. The study was conducted in the Basic Geriatric Ward of Dr. X in May 2026. Two older adult patients with hypertension who met the inclusion criteria were recruited. Eligible participants were aged over 60 years, diagnosed with hypertension, experienced mild to moderate anxiety, were able to communicate effectively, and provided written informed consent. Patients with impaired consciousness, foot wounds or infections, severe complications requiring intensive care, or those unwilling to receive foot spa therapy were excluded.

Data were collected through interviews, direct observation, and documentation review. The instruments included a nursing assessment form, an observation sheet, a sphygmomanometer for blood pressure measurement, the Geriatric Anxiety Inventory (GAI) to assess anxiety levels, and a standard operating procedure (SOP) for foot spa therapy. Nursing care was implemented according to the nursing process, including assessment, nursing diagnosis, intervention planning, implementation, and evaluation. Foot spa therapy was administered by the researcher, who is a professional nursing student under the supervision of the ward clinical instructor. The intervention was provided once daily for two consecutive days. Each session lasted approximately 15–20 minutes and consisted of two stages: (1) soaking both feet in warm water maintained at 38–40°C for approximately 10 minutes, followed by (2) a 5–10-minute gentle foot massage. The massage was performed using light effleurage and circular stroking techniques on the plantar surface, dorsum of the foot, heel, toes, and ankle, progressing from the distal to the proximal direction to promote peripheral circulation and relaxation. Anxiety levels and blood pressure were measured immediately before and after each therapy session.

The collected data were analyzed descriptively by comparing participants' responses before and after the implementation of foot spa therapy. The findings were presented narratively according to each stage of the nursing process, including assessment, nursing diagnosis, intervention, implementation, and evaluation. Ethical principles were maintained throughout the study by obtaining informed consent from all participants, protecting participants' anonymity through the use of initials instead of names, and ensuring the confidentiality of all personal and clinical information collected during the study.

## 4. Results and Discussion

### Results

This case study involved two older adult female patients with hypertension who experienced anxiety and received nursing care in the Basic Geriatric Ward of Dr. X. Case 1 was a 77-year-old woman with a three-year history of hypertension and diabetes mellitus who was admitted with a neck mass, dysphagia, weight loss, and uncontrolled blood pressure. Case 2 was a 76-year-old woman with a five-year history of hypertension who was admitted due to melena and elevated blood pressure. At baseline, Case 1 had a blood pressure of 150/98 mmHg, a heart rate of 114 beats/minute, and a Geriatric Anxiety Inventory (GAI) score of 13, whereas Case 2 had a blood pressure of 170/90 mmHg, a heart rate of 100 beats/minute, and a GAI score of 12. Both patients reported excessive worry regarding their health conditions, appeared restless and tense, experienced sleep disturbances, and frequently asked about their illnesses and treatment.

Based on the nursing assessment, anxiety related to changes in health status was identified as the primary nursing diagnosis in both patients. Additional nursing diagnoses included nutritional deficit and risk for ineffective peripheral tissue perfusion in Case 1, whereas disturbed sleep pattern and risk of bleeding were identified in Case 2. Nursing interventions consisted of therapeutic communication, health education, family involvement, medication monitoring, relaxation techniques, and foot spa therapy administered once daily for two consecutive days. Anxiety levels, blood pressure, and heart rate were assessed before and after each intervention using the Geriatric Anxiety Inventory (GAI) and routine physiological measurements.

Following two consecutive days of intervention, both patients demonstrated clinically meaningful improvements in psychological and physiological outcomes. Anxiety levels decreased progressively after each therapy session, accompanied by reductions in blood pressure and heart rate. Patients also reported greater comfort, reduced tension, improved sleep quality, and increased confidence in managing their health

condition. No adverse events were observed during the intervention period. The comparison of pre- and post-intervention outcomes is presented in Table 1.

**Table 1.** Comparison of Clinical Outcomes Before and After Foot Spa Therapy

Variable	Case 1 (Pre)	Case 1 (Post)	Case 2 (Pre)	Case 2 (Post)
GAI Score	13	0	12	0
Blood Pressure (mmHg)	150/98	130/90	170/90	130/98
Heart Rate (beats/minute)	114	100	100	98
Anxiety Symptoms	Restless, worried, tense	Calm and relaxed	Restless, poor sleep	Calm, improved sleep
Additional Clinical Outcome	Poor appetite	Appetite improved	Melena and poor sleep	Normal bowel pattern and improved sleep

Overall, both patients demonstrated substantial reductions in anxiety and improvements in blood pressure following foot spa therapy, indicating positive psychological and physiological responses to this complementary nursing intervention.

## Discussion

### Nursing Assessment

Hypertension is a chronic disease that affects not only physical health but also the psychological well-being of patients. Individuals with hypertension often experience anxiety as a response to their health condition, particularly when their blood pressure remains uncontrolled or when their symptoms do not improve. Anxiety may manifest as excessive worry, fear of potential complications, difficulty relaxing, and disturbances in rest and sleep patterns.

The assessment findings showed that both patients experienced anxiety related to their hypertension. In Case 1, the patient reported feeling anxious, restless, and constantly worried about her illness and the possibility of elevated blood pressure. The initial Geriatric Anxiety Inventory (GAI) score was 13, with a blood pressure of 155/100 mmHg. In Case 2, the patient reported anxiety, sleep disturbances, frequent awakening during the night, and fear regarding her health condition. The initial GAI score was 12, with a blood pressure of 175/105 mmHg. These subjective and objective findings indicate that both patients experienced anxiety associated with changes in health status, as evidenced by excessive worry, sleep disturbances, and elevated blood pressure.

These findings are consistent with previous studies reporting that anxiety is highly prevalent among older adults with hypertension because chronic illness increases uncertainty regarding health outcomes and fear of disease progression. Persistent anxiety may further aggravate hypertension by increasing sympathetic nervous system activity, leading to elevated heart rate, vasoconstriction, and sustained increases in blood pressure. Therefore, early identification of anxiety is an essential component of comprehensive nursing assessment in hypertensive older adults.

### Nursing Diagnosis

Based on the assessment findings, the primary nursing diagnosis established for both patients was anxiety related to changes in health status. This diagnosis is consistent with the Indonesian Nursing Diagnosis Standards (SDKI), which state that chronic illnesses may lead to feelings of worry, fear, restlessness, and uncertainty regarding one's health condition. Hypertension, as a chronic disease, often causes patients to become concerned about potential complications, thereby triggering anxiety.

The Effect of Foot Spa Therapy on Anxiety Reduction Among Hypertensive Patients in the Basic Geriatric Ward of Dr X. Renny Fransiska Aryanti et.al

The nursing diagnosis identified in this study is consistent with previous nursing research demonstrating that anxiety is one of the most common psychosocial problems among older adults with hypertension. Accurate identification of anxiety enables nurses to implement timely interventions aimed at reducing psychological distress while simultaneously improving physiological outcomes, including blood pressure control and treatment adherence.

### **Nursing Intervention**

The nursing intervention consisted of a non-pharmacological approach through foot spa therapy administered for two consecutive days, with each session lasting approximately 15–20 minutes. The intervention involved soaking the feet in warm water followed by gentle foot massage. Foot spa therapy was selected because it is a simple, safe, cost-effective complementary intervention that promotes relaxation in older adults with hypertension experiencing anxiety.

Foot spa therapy promotes vasodilation through the application of warm water, thereby improving peripheral blood circulation and enhancing physical comfort. In addition, gentle foot massage stimulates sensory nerves and promotes the release of endorphins, producing relaxation and a calming effect. These physiological responses suppress sympathetic nervous system activity while enhancing parasympathetic activity, resulting in reduced muscle tension, lower heart rate, decreased blood pressure, and reduced anxiety. Warm water immersion also improves peripheral circulation by relaxing vascular smooth muscle, while tactile stimulation during massage activates mechanoreceptors that influence the autonomic nervous system. Consequently, parasympathetic activity predominates, reducing the secretion of stress hormones such as adrenaline and cortisol, which are known to contribute to hypertension and anxiety.

Older adults with hypertension frequently experience anxiety due to concerns about their health status, possible disease complications, and age-related physiological changes. Persistent anxiety may increase blood pressure through the release of stress hormones such as adrenaline and cortisol. Therefore, foot spa therapy represents an effective complementary intervention that not only reduces anxiety but also contributes to improvements in physiological status.

The results of this case study demonstrated that foot spa therapy effectively reduced anxiety levels in both patients. Following the intervention, both patients appeared calmer, more relaxed, and less restless, and reported feeling more comfortable than before the therapy. These findings suggest that foot spa therapy provides a relaxation effect that helps alleviate anxiety in older adults with hypertension. Similar findings were reported by Pratiwi and Nurhayati (2023), who concluded that foot spa therapy reduces anxiety by promoting comfort and regulating stress responses in patients with chronic illnesses. Likewise, several previous studies have reported that warm water immersion and therapeutic foot massage significantly improve relaxation, decrease sympathetic nervous system activity, and contribute to reductions in blood pressure among patients with hypertension. Collectively, these findings support the use of foot spa therapy as an evidence-based complementary nursing intervention for managing both psychological and physiological symptoms.

### **Nursing Implementation**

Foot spa therapy was implemented for two consecutive days, with anxiety levels assessed before and after each intervention using the Geriatric Anxiety Inventory (GAI). In Case 1, the GAI score decreased from 13 to 8 after the first session and further decreased from 5 to 0 after the second session. The patient reported feeling calmer, more relaxed, and able to rest more comfortably. Objectively, the patient appeared less anxious, more cooperative, and interacted appropriately throughout the nursing care process.

In Case 2, the GAI score decreased from 12 to 5 following the first session and further decreased from 5 to 0 after the second session. The patient reported increased comfort, reduced tension, and the absence of anxiety regarding her health condition. Objective observations also showed that the patient appeared calmer, more relaxed, and demonstrated improved sleep quality.

The magnitude of anxiety reduction observed in both patients was comparable to findings reported in previous studies evaluating complementary relaxation therapies among older adults with hypertension. However, unlike many previous studies that primarily focused on blood pressure reduction, the present case study comprehensively evaluated anxiety using the Geriatric Anxiety Inventory within the nursing process framework. This approach allowed continuous monitoring of patients' psychological responses from assessment through evaluation. Although this study involved only two participants, the consistent improvements observed in both cases suggest that foot spa therapy may be beneficial as part of individualized nursing care for older adults experiencing hypertension-related anxiety.

### **Nursing Evaluation**

The evaluation demonstrated successful outcomes in both patients following two days of foot spa therapy. Anxiety levels decreased substantially, with GAI scores declining from 13 to 0 in Case 1 and from 12 to 0 in Case 2. Blood pressure also improved, decreasing from 155/100 mmHg to 130/90 mmHg in Case 1 and from 175/105 mmHg to 130/98 mmHg in Case 2.

Subjectively, both patients reported feeling calmer, more comfortable, and no longer worried about their health condition. Objectively, they appeared more relaxed, less restless, and exhibited calmer facial expressions throughout the evaluation period. These findings indicate that foot spa therapy is an effective complementary nursing intervention for reducing anxiety and improving blood pressure control in older adults with hypertension.

The findings of this study have important implications for nursing practice. Foot spa therapy is a low-cost, non-invasive, and easy-to-implement intervention that can be incorporated into routine nursing care in geriatric wards. In addition to providing physiological benefits, the intervention addresses patients' psychological needs by promoting relaxation and reducing anxiety, thereby supporting holistic nursing care. Nurses may also educate patients and family caregivers to continue foot spa therapy at home as a self-management strategy, contributing to long-term anxiety control, improved treatment adherence, and better quality of life among older adults with hypertension.

## **5. Conclusion**

This case study demonstrated that the implementation of foot spa therapy as a complementary nursing intervention effectively reduced anxiety among older adults with hypertension. Following two consecutive days of intervention, both patients showed progressive reductions in Geriatric Anxiety Inventory (GAI) scores, accompanied by improvements in blood pressure, heart rate, emotional status, and overall comfort. These findings indicate that foot spa therapy may provide both psychological and physiological benefits when integrated into comprehensive nursing care. Therefore, foot spa therapy may be considered a safe, simple, and cost-effective complementary intervention to support holistic nursing management for older adults with hypertension experiencing anxiety.

### **Limitations**

This study has several limitations that should be considered when interpreting the findings. First, the study involved only two older adult patients with hypertension, which limits the generalizability of the results. Second, the intervention was implemented over a relatively short period of two consecutive days, The Effect of Foot Spa Therapy on Anxiety Reduction Among Hypertensive Patients in the Basic Geriatric Ward of Dr X. Renny Fransiska Aryanti et.al

preventing evaluation of the long-term effects of foot spa therapy on anxiety reduction and blood pressure control. Third, the descriptive case study design does not permit causal inferences regarding the effectiveness of the intervention. Therefore, the findings should be interpreted as preliminary clinical evidence rather than definitive proof of effectiveness.

## Recommendations

Based on the findings of this study, nurses are encouraged to consider incorporating foot spa therapy into routine nursing care for older adults with hypertension experiencing anxiety because it is simple, safe, inexpensive, and easy to implement. Healthcare institutions may also consider integrating this complementary intervention into geriatric nursing practice to support holistic patient care. Future research should include larger sample sizes, longer intervention periods, and more rigorous study designs, such as quasi-experimental studies or randomized controlled trials, to provide stronger evidence regarding the effectiveness of foot spa therapy on anxiety, blood pressure, quality of life, and other patient-centered outcomes.

## 6. Referensi

- [1] T. Miranti, A. E. Wijayanti, M. Handari, S. Wira, And H. Yogyakarta, "Analisis Dukungan Keluarga Dengan Self-Care Management Pada Lansia Hipertensi Family Support Analysis And Self-Care Management Among Elderly With Hypertension."
- [2] World Health Organization, *Hypertension Fact Sheet*. Geneva: World Health Organization, 2023.
- [3] Encep Muhammad Fajri, "Problematica Anxiety Disorder Pada Remaja Di Era Modern," *Jurnal Ilmu Pendidikan Dan Psikologi (Jipp)*, Vol. 2, No. 3, Pp. 95–102, Jul. 2024, Doi: 10.61116/Jipp.V2i3.302.
- [4] Kementerian Kesehatan Republik Indonesia, *Profil Kesehatan Indonesia Tahun 2019*. Jakarta: Kementerian Kesehatan RI, 2019.
- [5] K. Ainun, K. Kristina, And S. Leini, "Terapi Foot Massage Untuk Menurunkan Dan Menstabilkan Tekanan Darah Pada Penderita Hipertensi," *Abdimas Galuh*, Vol. 3, No. 2, Pp. 328–336, Sep. 2021, Doi: 10.25157/Ag.V3i2.5902.
- [6] Kementerian Kesehatan Republik Indonesia, *Laporan Nasional Riset Kesehatan Dasar (Riskesdas) 2018*. Jakarta: Badan Penelitian Dan Pengembangan Kesehatan, 2018.
- [7] M. Putri, S. Ayubbana, And A. Keperawatan Dharma Wacana Metro, "The Application Of Progressive Muscle Relaxation On Blood Pressure In Hypertension Patients In The Work Area Of Yosomulyo Puskesmas Metro City In 2021," *Jurnal Cendikia Muda*, Vol. 2, No. 2, 2022.
- [8] H. Sya'diyah, *Keperawatan Lanjut Usia: Teori Dan Aplikasi*. Surabaya: Indomedia Pustaka, 2018.
- [9] N. S. Annisa, J. Haryanto, And K. Kristiawati, "Dukungan Keluarga Terhadap Manajemen Hipertensi Pada Lansia Di Indonesia," *Journal Of Telenursing (Joting)*, Vol. 6, No. 1, Pp. 657–665, Mar. 2024, Doi: 10.31539/Joting.V6i1.8212.
- [10] S. Serly, W. F. Rahman, And Y. Ardiansyah, "Efektivitas Terapi Foot Massage Terhadap Penurunan Tekanan Darah Pada Lansia Dengan Hipertensi Di Puskesmas Bungursari," *Selaparang: Jurnal Pengabdian Masyarakat Berkemajuan*, Vol. 7, No. 3, P. 2149, Sep. 2023, Doi: 10.31764/Jpmb.V7i3.17168.
- [11] N. Pristina *Et Al.*, "Hubungan Tingkat Kecemasan Dengan Kualitas Hidup Pada Lansia Riwayat Diabetes Meilitus," 2024.
- [12] Indah Puspita Sari, Andi Asrina, And Andi Nurlinda, "Hubungan Dukungan Keluarga Dengan Tingkat Kecemasan Pada Lanjut Usia (Lansia) Penderita Hipertensi Di Puskesmas Kassi Kassi Kota Makassar," *Window Of Public Health Journal*, Vol. 6, No. 3, Pp. 501–511, Jun. 2025, Doi: 10.33096/Tmvzmt55.

- [13] J. Purnama And W. Putri, "Hubungan Dukungan Keluarga Dengan Tingkat Kecemasan Pada Penderita Hipertensi Di Wilayah Kerja Puskesmas Manisa Kabupaten Sidrap The Relationship Of Family Support With The Level Of Anxiety In Hypertension Patients In The Work Area Manisa Puskesmas, Sidrap District," Vol. 12, 2023, [Online]. Available: <https://ltkesmu-sidrap.e-journal.id/jikp>
- [14] A. Robby, T. Agustin, And H. Hanifan Azka, "Pengaruh Pijat Kaki (Foot Massage) Terhadap Kualitas Tidur," *Healthcare Nursing Journal*, Vol. 4, No. 1, Pp. 206–213, Jan. 2022, Doi: 10.35568/Healthcare.V4i1.1845.
- [15] S. Nurfitasari, L. T. Handayani, And S. W. Asih, "Hubungan Dukungan Keluarga Dengan Self Care Management Pada Lansia Hipertensi," *Jurnal Kesmas Asclepius*, Vol. 5, No. 2, Pp. 115–122, Dec. 2023, Doi: 10.31539/Jka.V5i2.7915.