



# CASE STUDY OF COMBINATION WARM WATER FOOT SOAK THERAPY WITH RED GINGER AND BENSON THERAPY IN HYPERTENSIVE ELDERLY WITH ANXIETY NURSING PROBLEM



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## ABSTRACT

**Introduction:** Hypertension is a disease that most often occurs in the elderly. The problem of hypertension in the elderly causes psychological problems, one of which is anxiety. The anxiety experienced by the elderly can worsen their health condition and can also reduce their quality of life. For this reason, intervention is needed to reduce anxiety, namely by providing a combination of warm water foot soak therapy with red ginger and benson therapy. **Objective:** This case study aims to determine the effect of giving a combination of warm water foot soak therapy with red ginger and Benson therapy on anxiety in elderly people with hypertension. **Method:** This research is a case study by implementing interventions according to EBN. The intervention carried out was a combination of warm water foot soak therapy with red ginger and benson therapy which was carried out for 10 minutes for 7 days. The research subject was 1 person. The subject is hypertensive elderly with anxiety nursing problems. **Results:** After intervention for 7 days, the post-test results for anxiety levels using the HARS (Hamilton Rating Scale for Anxiety) instrument showed a score of 8 (no anxiety). This score decreased when compared with the results of the pre-test anxiety level which received a score of 19 (mild anxiety), which means the client's anxiety decreased from mild anxiety to no anxiety. **Conclusion:** Providing a combination intervention of warm water foot soak therapy with red ginger and benson therapy for 7 days can reduce anxiety levels in hypertensive elderly.

**Keywords:** Anxiety, benson therapy, hypertension, red ginger warm water foot soak therapy

**Citation:** Pangesti, P. J., Mulyaningrat, W. & Sumeru, A. 2025. 'Case Study of Combination Warm Water Foot Soak Therapy with Red Ginger and Benson Therapy in Hypertensive Elderly with Anxiety Nursing Problem'. *International Journal of Biomedical Nursing Review*. 4(2). p10-17. <https://doi.org/10.20884/1.ijbnr.2025.4.2.10875>

## INTRODUCTION

Health development in Indonesia is a government effort to increase the optimal level of residents health. The success of health development can be seen from the increase in life expectancy and the increase in the number of elderly people (Imelda, Sjaaf and Prihatiningrum, 2020). Elderly are people who have reached the age of 60 years and over (Ministry of Health of the Republic of Indonesia, 2016). In the period from 1971 to 2018, the percentage of Indonesia's elderly population approximately doubled, and in 2018, the percentage of elderly reached 9.27% or around 24.49 million people (BPS, 2018 in Styawan, 2019).

The problems of physical, mental, spiritual, economic and social in the elderly are likely to become greater. The increase in life expectancy and the elderly population has an impact on shifting disease patterns from infectious diseases to degenerative diseases. Degenerative diseases are non-communicable diseases caused by a chronic decline in the function of the body's organs due to the aging process or other processes (Berawi, Wahyudo and Pratama, 2019). One of the degenerative diseases that often arises is hypertension (Ariyanti, Preharsini and Sipolio, 2020).

Hypertension is one of the diseases that most often occurs in the elderly (Hernawan and

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Received: 13-12-2023  
Approved: 23-10-2024  
Published: 20-04-2025

Rosyid, 2017). The problem of hypertension in the elderly causes physical problems and psychological problems. One of the psychological problems that arises is anxiety (Jubaedah and Pratiwi (2022). This can happen because hypertension is a silent killer. Hypertension can come without symptoms and result in disease complications such as heart failure, stroke, kidney failure occur, which often makes hypertension sufferers feel worried and worried about their health condition. A person's worry about the emergence of a new problem due to hypertension will cause emotional mental disorders, namely anxiety (Suciana, Agustina and Zakiatul, 2020). Anxiety has two symptoms, namely physiological symptoms include headaches, fast heartbeat, excessive sweating, irregular digestion, insomnia, and psychological symptoms include feelings of worry, difficulty concentrating, restlessness, fear, lack of self-confidence, and confusion (Lesmana, 2014 in Jubaedah and Pratiwi , 2022). The anxiety experienced by elderly people with hypertension can worsen their condition and reduce their quality of life. For this reason, it is necessary to carry out interventions that can reduce anxiety in elderly people with hypertension.

Various therapies can be used to overcome anxiety problems, one of which is foot soak therapy using warm water. In research conducted by Yanti et al., (2021) it was stated that there was an effect of providing foot soak therapy using warm water on anxiety in hypertensive patients. Herbal ingredients such as ginger can also be used in providing foot soak therapy. The types of ginger known to the public are emprit ginger (yellow ginger), elephant ginger (badak ginger), and red ginger. The ginger that is widely used for medicine is red ginger, because red ginger contains more essential oil compared to other ginger (Setyaningrum & Sapiranto, 2013 in Sani and Fitriyani, 2021). Red ginger is a type of ginger that contains quite a lot of essential oils compared to other types of ginger so it can be used for relaxation. Red ginger can also add a warm sensation to the skin because it contains gingerol. The effect of gingerol which is to increase blood circulation and increase relaxation of the body's muscles so that it can calm (Qiftiyah and Qonitun,

2021).

Apart from warm water foot soak therapy with red ginger, a therapy that can be used to reduce anxiety is benson relaxation therapy. The benson relaxation technique is a religious therapy that involves the religious beliefs one adheres to. In the elderly, there is a tendency to further improve the spiritual aspect and get closer to God so that the benson relaxation technique is appropriate for dealing with discomfort problems such as anxiety in the elderly. Benson relaxation therapy has been widely used to reduce tension or achieve a calm state such as eliminating pain, stress, insomnia, lowering blood pressure and depression (Sahar and Azwar, 2018).

Based on this background, the author is interested in implementing warm water foot soak therapy with red ginger combined with benson therapy in the case managed by Mrs. R to overcome anxiety nursing problem.

## METHOD

This case study follows the stages based on Polit and Beck (2012) regarding the process of implementing EBN (Evidence Based Nursing) in nursing practice. The stages carried out in the EBN implementation process consist of: (1) raising questions (PICO), (2) looking for evidence related to the case to be discussed, (3) assessing the selected evidence, and (5) evaluating the implementation of EBN.

In the first stage, the questions raised were based on PICO (Problem/population, intervention, comparison, and outcome), namely "What interventions can reduce anxiety in elderly patients with hypertension?". In the second stage, the EBN search used an electronic data base, namely Google Scholar, which then found foot soak therapy and benson therapy interventions which could be applied to hypertensive patients to reduce anxiety levels. The next stage is the application of EBN to respondent. The respondents selected were respondent who hypertensive patient, had anxiety, and had confidence/belief. Before EBN was implemented, a comprehensive assessment was carried out on the patient and a pre-test was carried out to measure anxiety levels using the HARS (Hamilton Rating

Scale for Anxiety) instrument. The implementation of a combination of warm water foot soak therapy with red ginger and benson therapy was carried out 10 minutes a day for 7 days on 8-14 November 2023. Next, the final stage was an evaluation of the implementation of EBN, namely by assessing the anxiety level of respondents using the HARS (Hamilton Rating Scale for Anxiety) instrument.

## RESULT

The client is Mrs. R is 70 years old and is an elderly person with hypertension. During the assessment, the client said she was experiencing pain in her left leg that had been going on for years. When asked about the history of the disease, the client said that her blood pressure had been high but currently did not feel anything (headaches, or other conditions that indicated increased blood pressure). The client does not take hypertension medication and rarely checks her blood pressure. The client said that he only sought treatment and had her blood pressure checked when she felt unwell, such as dizziness, increased leg pain, and usually received hypertension medication from the health center if her blood pressure was high, but after the hypertension medication ran out, she did not take hypertension medication again. The results of the client's blood pressure measurement were 200/110 mmHg and the pulse frequency was 102 times/minute. The client looks surprised by the high blood pressure measurement results and feels confused about why she feels fine and only complains of leg pain. The client said she was worried about the pain that did not go away and her blood pressure which turned out to be very high. The client said that her sister had fainted and was hospitalized because her blood pressure reached more than 200 mmHg. Mrs. R looked quite anxious and frowned. Elimination pattern Mrs. R is BAK 7-9 times a day (5-6 times during the day and 2-3 times at night). Mrs. R said she hadn't defecated since yesterday, and sometimes it was difficult to defecate. She urinates 2-3 times a day.

Based on the results of this assessment, the nursing diagnosis for the client Mrs. R that

can be enforced is anxiety related to the threat of death (PPNI, 2016). Nursing intervention that will be given to the client Mrs. R is to provide a combination intervention of warm water foot soak therapy with red ginger and benson therapy for 7 days (8-14 November 2023) which is carried out simultaneously once a day to reduce anxiety levels.

The procedure for implementing therapy is that in the first stage the researcher prepares tools and materials, including a basin with a width of  $\pm 30$  cm and a height of  $\pm 15$ -20 cm, a water thermometer, a sphygmomanometer,  $\pm 10$  red ginger rhizomes (100 grams), and  $\pm 2$  liters of water. Then the researchers made red ginger boiled water by boiling red ginger in 2 liters of water until it boiled and then letting it for a while. In the preparation stage before therapy is carried out, researchers need to check the condition of the client's feet to see if there are open wounds on the skin in the area of the feet which will be soaked in boiled red ginger water to avoid injury. Researchers also measured vital signs such as blood pressure and pulse frequency and measured anxiety levels in clients using the HARS (Hamilton Rating Scale for Anxiety) instrument. The client is asked to sit relaxed on a chair. Researchers poured warm boiled red ginger water in the basin. Set the water level to approximately ankle level and set the water temperature to  $\pm 40^{\circ}\text{C}$ . The researcher asked the client to put her feet into the basin while moving her toes for  $\pm 10$  minutes. At the same time, the researcher recommends that the client do benson relaxation by asking the client to close her eyes while sitting back (putting her back and head on a chair) to become more relaxed and do deep breathing by inhaling air slowly from the nose and exhaling slowly through the mouth while saying dhikr sentences (subhanallah, alhamdulillah, allahuakbar, laaillahaillallah) for  $\pm 10$  minutes. When finished, the client is asked to sit down first and rest. The next step is for the researcher to check vital signs such as blood pressure and pulse rate and observe the client's feelings. After the intervention was completed, the researcher tidied up the tools and washed her hands.

**Table 1. Anxiety level evaluation results**

Evaluation	Anxiety score	Anxiety level
Pre-test	19	Mild anxiety
Post-test	8	No anxiety

Apart from looking at the post-test results using the HARS (Hamilton Rating Scale for Anxiety) instrument, the author also measured vital signs, where after carrying out a combination of warm water foot soak therapy with red ginger and benson therapy, the results showed that blood pressure decreased and pulse frequency within normal limits.

**Table 2. blood pressure and pulse rate monitoring**

Day 1 intervention	
Before intervention	After intervention
Blood pressure: 182/106 mmHg Pulse frequency : 99x/minute	Blood pressure: 178/105 mmHg Pulse frequency : 96x/minute
2nd day of intervention	
Before intervention	After intervention
Blood pressure: 175/107 mmHg Pulse frequency : 95x/minute	Blood pressure: 159/95 mmHg Pulse frequency : 91x/minute
3rd day of intervention	
Before intervention	After intervention
Blood pressure: 179/106 mmHg Pulse frequency : 82x/minute	Blood pressure: 169/104 mmHg Pulse frequency : 75x/minute
4th day of intervention	
Before intervention	After intervention
Blood pressure: 194/115 mmHg Pulse frequency : 79x/minute	Blood pressure: 187/108 mmHg Pulse frequency : 77x/minute
5th day of intervention	
Before intervention	After intervention
Blood pressure: 171/94 mmHg Pulse frequency : 84x/minute	Blood pressure: 172/108 mmHg Pulse frequency : 88x/minute

6th day of intervention	
Before intervention	After intervention
Blood pressure: 168/102 mmHg Pulse frequency : 82x/minute	Blood pressure: 164/99 mmHg Pulse frequency : 83x/minute
7th day of intervention	
Before intervention	After intervention
Blood pressure: 173/114 mmHg Pulse frequency : 76x/minute	Blood pressure: 166/104 mmHg Pulse frequency : 76x/minute

## DISCUSSION

After the combined intervention of warm water foot soak therapy with red ginger and benson therapy on Mrs. R to reduce anxiety for 7 days, the results showed that there was a decrease in the level of anxiety from mild anxiety with a score of (19) to no anxiety (score 8).

These results are the same as the research conducted by Yanti, Karo-karo, Purba, Ginting, Octavariny, & Williani, NF (2021) that the act of soaking feet in warm water has an effect on reducing anxiety in hypertension sufferers with a p value =  $0.000 < 0,05$ . Apart from that, there is also in line with the results of research by Dekawaty and Yelisni (2023) which states that there is an effect of giving Benson relaxation therapy on the anxiety of elderly people with hypertension.

Based on the intervention of Mrs. R, after the combined intervention of warm water foot soak therapy with red ginger and benson therapy, there was a reduction in signs and symptoms of anxiety in Mrs. R. This can be seen from the post-test results of signs and symptoms of anxiety based on the HARS (Hamilton Rating Scale for Anxiety) instrument, for example in the aspect of feeling anxious the client said she didn't feel anxious. After each intervention, Mrs. R said she felt relaxed and felt calmer. In the aspect of tension, the client said she was not anxious and did not experience any symptoms (tension, lethargy, trembling, restlessness). In the somatic/physical aspect, Mrs. R said there were no muscle twitches and no ringing in the ears as experienced

during the anxiety pre-test. Apart from that, in the cardiovascular aspect, the client said she no longer had palpitations and her heart rate was normal.

Mrs. R's anxiety symptoms have reduced, but some anxiety symptoms in several aspects are still there. In terms of fear, the client said she was still afraid of the dark, afraid of large, scary animals, and afraid of busy traffic because he was old. In the aspect of sleep disorders, the client still experiences problems waking up at night because she feels like she wants to urinate 2-4 times a night. In terms of intelligence, the client said her memory had decreased because he was old and sometimes she forgot easily. In the aspect of feelings of depression, clients say they have reduced enjoyment of hobbies and lost interest in doing them because they are old. Apart from that, in terms of somatic/physical symptoms, the client said she still felt pain in her left leg and stiffness but it reduced after the intervention. Meanwhile, regarding the urogenital aspect, the client said that she still urinates quite frequently, 7-9 times a day.

Some symptoms of anxiety in Mrs. R is still there even though the combined intervention of warm water foot soak therapy with red ginger and benson therapy has been carried out. This can happen because the function of organs in the body decreases due to the aging process. The decrease in the ability of various organs, functions and body systems is natural or physiological, caused by a reduction in the number and ability of body cells (Handayani, Sari and Wibisono, 2020). Elderly people tend to experience decline in physical, psychological and psychosocial systems experienced by elderly people related to limitations in work activities, and cognitive changes (Handayani, Sari and Wibisono, 2020). Decreases in the psychological system can affect decreased memory, increased alertness, reduced sexual desire, and changes in sleep patterns (sleep disorders). Mrs. R, as an elderly person, experiences memory loss, sleep disturbances due to waking up at night, decreases her enjoyment of hobbies and loses interest in doing them because she is getting old, which is a natural and common process she experiences as an elderly person.

Based on the results of blood pressure measurements after the combined intervention of warm water foot soak therapy with red ginger and benson therapy, Mrs. R has decreased compared to blood pressure when the assessment was first carried out. This is in line with research (Santi Damayanti, Meisatama and Luturmas, 2022) that hydrotherapy, benson therapy and dhikr relaxation are effective in lowering blood pressure in the elderly. The effect of foot soak therapy using warm water produces heat energy which can dilate and improve blood circulation as well as stimulate the nerves in the feet to activate the parasympathetic nerves, thereby causing a decrease in blood pressure (Nurmaulina and Hadiyanto, 2021). Benson therapy can lower blood pressure because in principle this therapy will position the body in a relaxed condition. Dusek and Benson (2009) in Febriyanti, Yusri and Fridalni (2021) stated that the relaxation response is closely related to the Hypothalamus Pituitary Adrenal (HPA) axis where a person who is in a state of relaxation, this HPA axis will reduce levels of cortisol, epinephrine and norepinephrine which can causes a decrease in blood pressure and pulse rate.

As a result of this implementation, Mrs. R decreasing also has an effect on reducing anxiety. An increase in blood pressure is a response to anxiety (Widyastuti, 2022). In research by Marlina et al (2019) in Dekawaty and Yelisni (2023) it is stated that the physiological condition of the body when anxious is correlated with narrowing of blood vessels when blood pressure increases.

Warm water foot soak therapy can reduce anxiety levels because warm water has a physiological impact on the body which provides therapeutic effects including the body becoming more relaxed, getting rid of aches and stiffness in the muscles due to good tissue oxygenation, eliminating pain, and making sleep becomes more restful (Ulya and Purnaningrum, 2019). The basic principle of foot soak therapy in warm water is that it can produce heat energy which can result in vasodilation of blood vessels which results in smoother blood flow and can reduce tension and calm the soul (Astutik and Mariyam, 2021). Apart from that, warm water foot soak therapy can also stimulate



the nerves in the feet to activate the parasympathetic nerves so that there is an increase in the work of the parasympathetic nerves which has the effect of reducing anxiety levels (Astutik and Mariyam, 2021).

Soaking the feet can be combined with spices, one of which is ginger. Red ginger or *Zingiber officinale roscoe* has a higher content of essential oils and oleoresin than other ginger variants, therefore red ginger can usually be used for traditional medicine. Ginger rhizome contains 2-3% essential oil consisting of zingiberin, kemferia, limonene, broneol, cineol, zingiberal, linalool, geraniol, kavikol, zingiberol, gingerol and shogaol. The chemical content gingerol in red ginger is able to block prostaglandins so that it can reduce pain (Ozgoli et al., 2009 in Qiftiyah and Qonitun, 2021). As is known, Mrs. R also had complaints of joint pain in her left leg which after being given therapy, Mrs. E said the pain he felt began to decrease. Apart from that, the gingerol content comes from non-volatile oil in boiled red ginger which can provide a warm sensation on the skin. The effect is to increase blood circulation and increase body muscle relaxation (Qiftiyah and Qonitun, 2021).

Apart from that, in line with the results of the intervention for Mrs. R, who experienced a decrease in anxiety after undergoing Benson therapy, according to Akbriani et al., (2023), Benson relaxation therapy has also been proven to be able to overcome stress related to conditions such as anger, depression, anxiety, chronic pain and sleep disorders as well as creating a calmer feeling. Ther is because the Benson relaxation technique is a technique that uses repeated words that involve faith and belief, thereby creating a maximum relaxation response in the body. According to Benson and Proctor (2020) in Akbriani et al., (2023), the Benson relaxation technique will inhibit sympathetic nerve activity which can reduce oxygen consumption by the body so that the body's muscles relax and the feeling becomes calm and comfortable. Benson relaxation will produce alpha wave frequencies in the brain which can cause feelings of happiness, joy, excitement and self-confidence (Febriyanti, Yusri and Fridalni, 2021).

Based on the results of the warm water foot soak therapy intervention with red ginger and Benson therapy on Mrs. R, which can reduce mild anxiety to no anxiety, the author hopes that warm water foot soak therapy with red ginger and Benson therapy can be applied in hospital and community environments considering its benefits in reducing anxiety.

## CONCLUSION

After applying the combined intervention of warm water foot soak therapy with red ginger and Benson therapy for 7 days, the results showed that there was a reduction in anxiety levels in Mrs. R from mild anxiety to no anxiety. The signs and symptoms of anxiety experienced decrease and blood pressure levels also decrease.

The advice that the author can convey is that the nursing profession, especially nurses in the community, can apply a combination of warm water foot soak therapy with red ginger and Benson therapy as an effort to reduce anxiety levels in hypertension sufferers. It is hoped that future researchers can develop ther research by carrying out a combination therapy intervention of warm water foot soaking with red ginger and Benson therapy for a different or longer time to examine its effect on anxiety in elderly people with hypertension so that more effective times and maximum results can be identified. . Future researchers are also advised to examine whether patients have positive religious coping or negative religious coping before intervention is carried out. Providing Benson therapy is more suitable for patients who have positive religious coping because Benson therapy involves elements of the beliefs held by the patient.

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