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Implementation of Guided Imagery Therapy in Reducing Blood Pressure Among Family Members of Elderly Individuals with Hypertension

Putri Awaliah Ananda[1*], Nurhayati[1], Sanghati[1] and Yanti Mala[1]

[1] Sekolah Tinggi Ilmu Kesehatan Makassar, South Sulawesi, Indonesia

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[*] **Correspondence:**
putriawaliah617@gmail.com
JL. Cendrawasih, No. C13, Baji Mappakasunggu, Kec. Makassar, Kota Makassar, Sulawesi Selatan 90121 Indonesia

Abstract: Hypertension, or high blood pressure, is a chronic condition characterized by a persistent elevation in arterial pressure, commonly defined as a systolic blood pressure ≥140 mmHg and/or diastolic pressure ≥90 mmHg. It remains one of the most prevalent health problems among the elderly and poses a significant risk factor for cardiovascular and renal complications. Psychological stress, anxiety, and emotional tension are known contributors to elevated blood pressure, especially in family members caring for elderly individuals with chronic illnesses. This case study aimed to explore the effect of guided imagery therapy in reducing blood pressure among family members of elderly individuals with hypertension. Guided imagery is a relaxation technique that uses visualization of calming mental images to reduce stress and promote physiological relaxation. The method used in this study involved qualitative assessments through subjective interviews and objective observations before and after the intervention. The results revealed a measurable reduction in blood pressure following the implementation of guided imagery therapy. Participants reported experiencing a greater sense of calm, reduced anxiety, and physical relaxation. These subjective outcomes were supported by corresponding reductions in systolic and diastolic measurements, suggesting a connection between mental relaxation and physiological response. In conclusion, guided imagery therapy may serve as an effective complementary approach to support blood pressure control in hypertensive individuals, especially when psychological factors are involved. It can also be integrated into health education programs for caregivers. This case study is expected to serve as a reference for further research and development of scientific proposals focused on non-pharmacological interventions in chronic disease management.

Keywords: elderly, guided imagery therapy, hypertension

1. Introduction

Hypertension, or high blood pressure, is a chronic condition characterized by a consistent increase in blood pressure within the arteries, which transport blood from the heart to all tissues and organs (Bustan & Usman, 2023). Hypertension is clinically defined as a systolic pressure of ≥140 mmHg and/or a diastolic pressure of ≥90 mmHg. According to Mulyani (2019), the elderly are individuals aged 60 years and above who experience physiological and psychological decline. One common physiological deterioration is the weakening of vascular function, increasing the risk of diseases such as stroke, heart disease, and hypertension. Hypertension is often asymptomatic, which makes it dangerous; without early detection and regular monitoring, it can result in serious complications.

Hypertension management includes pharmacological and non-pharmacological approaches. Pharmacological treatment involves the use of antihypertensive medications such as diuretics, adrenergic inhibitors, ACE inhibitors, and ARBs, typically administered under medical supervision. Non-pharmacological management includes lifestyle modifications such as low-salt and low-cholesterol diets, cessation of harmful substances, adequate rest, stress management, and regular physical activity (Baxter, 2018).

According to WHO (2020), approximately 26.4% of the global population suffers from hypertension, with prevalence expected to rise to 29% by 2025. In Southeast Asia, 1.5 million deaths annually are attributed to hypertension. In Indonesia, the 2018 Riskesdas reported a 34.1% national prevalence, with the highest rates in South Kalimantan (44.1%). In Kendari City, the prevalence increased from 34.04% in 2019 to 39.60% in 2021.

Research shows that stress significantly contributes to elevated blood pressure. Guided imagery therapy is a relaxation technique that harnesses the power of mental visualization to promote calm and activate the parasympathetic nervous system, helping to reduce heart rate and blood pressure (Lannasari et al., 2023). Studies have shown guided imagery to positively affect cardiovascular function (Society, 2023). This paper aims to evaluate the effectiveness of guided imagery therapy in reducing blood pressure among elderly individuals with hypertension.

2. Methods

Objective in this study is to determine the effect of guided imagery therapy in reducing blood pressure among elderly individuals with hypertension.

This descriptive case study examined the application of guided imagery therapy in two elderly hypertensive individuals, aged 65–75 years, residing in the Maccini Sawah area of Makassar City. The intervention was conducted over two weeks. Inclusion criteria included patients diagnosed with hypertension, female gender, and willingness to participate. Exclusion criteria comprised individuals without hypertension or those with hypertension-related complications such as coronary artery disease, vascular disorders, kidney failure, or visual impairment.

Data were collected using a sphygmomanometer, a standard operating procedure (SOP) for guided imagery, and a checklist designed to record blood pressure readings. Interviews and observations were conducted to gather both subjective and objective data before and after the intervention.

3. Results and Discussion

The subjects selected for this case study were two individuals who met the inclusion criteria. Both were women between the ages of 65 and 75 who had been diagnosed with hypertension and agreed to participate in guided imagery therapy.

Prior to beginning the assessment, the researcher established a rapport with each subject to build trust and clarify the objectives of the study. A time contract was agreed upon, and each subject signed an informed consent form. The results of the case study are presented in the following section:

3.1. Subjek I (Participant "R")

Age : 75
Gender : Female
Last education : Senior High School
Occupation : Housewife

Table 1. Blood Pressure Observation Results for Subject 1 (*Participant "R")*

No	Date	Implementation	mmHg		
			Hours	Pretest	Posttest
1.	June 25, 2024	Relaxation guidance, positive affirmations, supportive suggestion	08.00-08.30	175/100	160/96
2.	June 26, 2024		09.30-09.50	155/95	150/93
3	June 27, 2024		10.00-10.15	145/91	140/90

Source: Primary Data, 2024

Table 1 shows that on the first day, Participant "R" had a pre-intervention blood pressure of 175/100 mmHg, which decreased to 160/96 mmHg after receiving guided imagery therapy for 30 minutes. On the second day, her blood pressure dropped from 155/95 mmHg before the session to 150/93 mmHg after 20 minutes of therapy. By the third day, a further reduction was observed, with the blood pressure decreasing from 145/91 mmHg to 140/90 mmHg following a 15-minute intervention. This consistent reduction across three days suggests a positive effect of guided imagery therapy on lowering blood pressure in hypertensive elderly patients..

3.2. Subjek II (Participant "H")

Age : 68
Gender : Female
Last education : Senior High School
Occupation : Housewife

Table 2. Observation Results of Foot Massage Therapy in Participant "S".

NO	Date	Implementation	Pain Level		
			Hours	Pretest	Posttest
1.	April 25 2024	Relaxation guidance, positive affirmations, supportive suggestion	09.40-10.10	165/100	160/97
2.	April 26 2024		10.30-10.50	155/94	150/92
3	April 27 2024		11.30-11.45	145/90	140/90

Source: Primary Data, 2024

Table 2 shows that on the first day, Participant "H" recorded a blood pressure of 165/100 mmHg before undergoing guided imagery therapy, which decreased to 160/97 mmHg after a 30-minute session. On the second day, her blood pressure reduced from 155/94 mmHg to 150/92 mmHg following a 20-minute session. On the third day, after 15 minutes of guided imagery therapy, her

blood pressure decreased from 145/90 mmHg to 140/90 mmHg. This progressive reduction indicates that guided imagery therapy may be effective in gradually lowering and stabilizing blood pressure in elderly individuals with hypertension.

3.2. Discussion

Based on the results of the case study over three days of guided imagery therapy, a reduction in blood pressure was observed in both subjects. However, differences in the level of reduction were noted between the two participants.

Subject I – Participant***. "R"***

On the first day, Participant. "R" had a pre-intervention blood pressure of 175/100 mmHg, which decreased to 160/96 mmHg after 30 minutes of guided imagery therapy. On the second day, blood pressure decreased from 155/95 mmHg to 150/93 mmHg after 20 minutes of therapy. On the third day, it further reduced from 145/91 mmHg to 140/90 mmHg after a 15-minute session. These findings align with Despitasari et al. (2024), who noted a significant reduction in both systolic and diastolic blood pressure following guided imagery therapy, likely due to relaxation-induced vasodilation.

Subject II – Participant***. "H"***

Similarly, Participant. "H" showed progressive reductions in blood pressure. On the first day, it decreased from 165/100 mmHg to 160/97 mmHg. On the second day, it dropped from 155/94 mmHg to 150/92 mmHg. On the third day, it decreased from 145/90 mmHg to 140/90 mmHg. These results are consistent with previous findings by Sumartini & Bachtiar (2016) and Yusiana & Rejeki (2015), which also demonstrated the effectiveness of guided imagery in reducing hypertension. The calming effect of guided imagery, achieved through visualizing peaceful experiences, may stimulate parasympathetic nervous system activity and promote blood vessel relaxation.

Overall, these findings support the results of Aswad (2019), who noted that guided imagery reduces stress and blood pressure by stimulating the brain to release endorphins and reduce catecholamines, leading to vasodilation. Similar conclusions were reached in studies by Fadliyah & Nur Aini (2020), Komang et al. (2022), and others, affirming that guided imagery therapy is a viable, non-pharmacological option for hypertension management.

4. Conclusions

Based on case studies conducted over three consecutive days with Participant "R" and Participant. "H" at the Maccini Sawah Health Center in Makassar City, it can be concluded that guided imagery therapy effectively reduces blood pressure in elderly individuals with hypertension. This technique is simple, low-risk, and can be considered a complementary therapy for blood pressure management.

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Implications for Practice: Guided imagery therapy can be introduced in primary healthcare settings and community health programs as a supportive intervention for managing hypertension, especially in elderly populations. Training caregivers and healthcare providers in implementing guided imagery can expand access to this cost-effective and non-invasive therapy

Limitations: This study was limited to two female subjects in one location, over a short duration. Broader research involving diverse populations and longer interventions is recommended to validate and generalize findings

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