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APPLICATION OF WARM GINGER COMPRESS THERAPY ON JOINT PAIN LEVELS AMONG OLDER ADULTS IN GUWOSARI VILLAGE, RT 02/RW 27, JEBRES, SURAKARTA CITY

PENERAPAN TERAPI KOMPRES JAHE HANGAT TERHADAP TINGKAT NYERI SENDI PADA LANSIA DI DESA GUWOSARI, RT 02/RW 27, JEBRES, KOTA SURAKARTA

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Abstract

Background: Joint pain is a common health problem experienced by older adults due to degenerative processes in the musculoskeletal system. This condition can cause limitations in daily activities and decrease quality of life. One non-pharmacological therapy that can be used to reduce joint pain is a warm ginger compress because it has anti-inflammatory effects and provides warmth to the painful area. Objective: To determine the effect of warm ginger compress therapy on reducing joint pain levels in older adults. Methods: This study used a descriptive case study design involving two older adults with joint pain in Kampung Guwosari, RT 02/RW 27, Jebres, Surakarta. The intervention was conducted for 3 consecutive days, once daily for 15–20 minutes. Pain levels were measured using the Numeric Rating Scale (NRS). Results: Respondent 1 experienced a decrease in pain scale from 7 to 4, while Respondent 2 experienced a decrease from 4 to 2 after receiving warm ginger compress therapy for 3 days. Conclusion: Warm ginger compress therapy can help reduce joint pain levels in older adults and can be used as a simple, safe, and affordable non-pharmacological therapy.

Keywords : Warm Ginger Compress, Older Adults, Joint Pain, Non-Pharmacological Therapy.

Abstrak

Latar Belakang: Nyeri sendi merupakan masalah kesehatan umum yang dialami oleh lansia akibat proses degeneratif pada sistem muskuloskeletal. Kondisi ini dapat menyebabkan keterbatasan dalam aktivitas sehari-hari dan menurunkan kualitas hidup. Salah satu terapi non-farmakologis yang dapat digunakan untuk mengurangi nyeri sendi adalah kompres hangat jahe, karena terapi ini memiliki efek anti-inflamasi dan memberikan rasa hangat pada area yang nyeri. Tujuan: Untuk mengetahui pengaruh terapi kompres hangat jahe terhadap penurunan tingkat nyeri sendi pada lansia. Metode: Penelitian ini

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menggunakan desain studi kasus deskriptif yang melibatkan dua orang lansia penderita nyeri sendi di Kampung Guwosari, RT 02/RW 27, Jebres, Surakarta. Intervensi dilakukan selama 3 hari berturut-turut, satu kali sehari selama 15–20 menit. Tingkat nyeri diukur menggunakan Numeric Rating Scale (NRS). Hasil: Responden 1 mengalami penurunan skala nyeri dari 7 menjadi 4, sedangkan Responden 2 mengalami penurunan dari 4 menjadi 2 setelah menerima terapi kompres hangat jahe selama 3 hari. Kesimpulan: Terapi kompres hangat jahe dapat membantu mengurangi tingkat nyeri sendi pada lansia dan dapat digunakan sebagai terapi non-farmakologis yang sederhana, aman, dan terjangkau.

Kata Kunci : Kompres Jahe Hangat, Lansia, Nyeri Sendi, Terapi Non-Farmakologis.

1. INTRODUCTION

Older adults are individuals aged 60 years and above who experience various physiological changes associated with the aging process. One of the most common age-related changes occurs in the musculoskeletal system, resulting in decreased joint function, reduced synovial fluid production, cartilage degeneration, and increased susceptibility to joint pain (Barus, 2024). Joint pain is one of the most prevalent health problems among older adults and may lead to limited physical activity, impaired mobility, sleep disturbances, reduced independence, and a decline in overall quality of life. If left untreated, persistent joint pain can increase dependency on caregivers and elevate the risk of falls (Wahyuni & Nurrohmah, 2024).

Joint disorders remain a significant public health problem worldwide. According to the World Health Organization (WHO), the global prevalence of gout arthritis reaches 34.2%, while the prevalence in the United States is 26.3%. In Indonesia, the prevalence of joint disease is reported to be 30.3%, with Central Java Province recording a prevalence of 6.78%. In Surakarta City, the prevalence of joint disease is 4.96%, and data from Ngoresan Public Health Center in 2025 indicated that 193 older adults experienced joint pain. Furthermore, a community assessment conducted with elderly health volunteers in Kampung Guwosari RT 02/RW 27, Jebres District, Surakarta, on March 31, 2026, identified that 20 out of 34 older adults suffered from joint disorders. These findings indicate that joint pain remains a common health problem requiring comprehensive management at the community level.

Joint pain is commonly managed through pharmacological treatment using analgesics and anti-inflammatory medications. However, long-term use of these medications may cause adverse effects, making non-pharmacological interventions an important complementary approach. One such intervention is the application of warm ginger compress therapy, which is inexpensive, easy to administer, and safe for older adults (Mardiana et al., 2026). Ginger contains bioactive compounds, particularly gingerol and shogaol, which possess anti-inflammatory and analgesic properties. In addition, the heat generated by the warm compress promotes vasodilation, improves blood circulation, relieves muscle stiffness, and reduces pain perception in affected joints (Alpinda et al., 2026).

Several previous studies have demonstrated the effectiveness of warm ginger compress therapy in reducing joint pain among older adults. Mardiana *et al.*, (2026)reported that warm ginger compresses significantly reduced joint pain from moderate to mild levels in most participants. Similarly, Hidayat *et al.*, (2025)found a significant reduction in the mean pain score from 7.50 to 2.63 following warm ginger compress therapy ($p < 0.05$). Other studies conducted by Mujahidin, (2023) and Andini & Rahmadiyah, (2022) also concluded that warm ginger compresses effectively decreased joint pain intensity in older adults. These findings support the use of warm ginger compresses as an evidence-based complementary nursing intervention for pain management.

A preliminary assessment conducted on March 31, 2026, revealed that most older adults in Kampung Guwosari RT 02/RW 27 managed their joint pain by visiting community health centers, purchasing medications from pharmacies, or consuming traditional herbal remedies. Two older adults who had never received warm ginger compress therapy were identified with baseline pain scores of 7 (severe pain) and 4 (moderate pain), respectively, based on the Numeric Rating Scale (NRS). These

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findings provided the rationale for implementing warm ginger compress therapy as a complementary nursing intervention to reduce joint pain among older adults in the community.

Therefore, this study aimed to describe "The Implementation Of Warm Ginger Compress Therapy In Reducing Joint Pain Among Older Adults In Kampung Guwosari RT 02/RW 27, Jebres District, Surakarta City". The findings are expected to provide scientific evidence supporting the effectiveness of warm ginger compress therapy as a simple, safe, affordable, and practical complementary nursing intervention for managing joint pain in older adults and to serve as a reference for nurses and other healthcare professionals in community nursing practice.

2. RESEARCH METHOD

This research method includes research design, subject characteristics, measurement instruments, intervention implementation procedures, data collection techniques, data analysis, and application of research ethical principles.

1. This study employed a descriptive case study design to describe the implementation of warm ginger compress therapy in reducing joint pain among older adults. The study was conducted in Kampung Guwosari RT 02/RW 27, Jebres District, Surakarta City. The subjects consisted of two older adults aged ≥60 years who experienced joint pain with moderate to severe pain intensity, were able to communicate effectively, agreed to participate in the study, and signed informed consent. Participants with open wounds, skin disorders at the application site, or allergies to ginger were excluded from the study.
2. Pain intensity was measured using the Numeric Rating Scale (NRS), a validated instrument ranging from 0 (no pain) to 10 (worst imaginable pain). Baseline pain assessment was performed before the intervention, followed by repeated assessments after each treatment session to evaluate changes in pain intensity throughout the intervention period.
3. The intervention consisted of warm ginger compress therapy administered once daily for three consecutive days, with each session lasting approximately 15–20 minutes. The procedure began by assessing the participant's pain level and explaining the intervention. Fresh ginger was washed, grated, and boiled in approximately 500 mL of water until the temperature reached around 40°C. A clean towel was immersed in the warm ginger solution, wrung out to remove excess water, and applied directly to the painful joint for 15–20 minutes. The towel was reimmersed in the warm solution whenever it became cool to maintain a consistent therapeutic temperature throughout the procedure.
4. Data were collected through direct observation, interviews, pain assessment using the NRS instrument, and documentation during the intervention period. The collected data were analyzed descriptively by comparing pain scores before and after the intervention for each participant and describing the changes in pain intensity observed over the three-day treatment period.

This study was conducted in accordance with research ethics principles, including respect for participant autonomy, informed consent, confidentiality of participant information, beneficence, non-maleficence, and justice. Participants were informed about the study objectives, intervention procedures, potential benefits, and their right to withdraw from the study at any time without consequences before providing written consent.

3. RESULT AND DISCCUSSION

The implementation of warm ginger compress therapy was conducted on two older adults experiencing joint pain in Kampung Guwosari RT 02/RW 27, Jebres, Surakarta. The intervention was administered once daily for three consecutive days, with each session lasting approximately 15–20 minutes. Pain intensity was assessed before and after the intervention using the Numeric Rating Scale (NRS).

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Figure 1.1 application of ginger compress

Before the intervention, Respondent 1 reported a pain score of 7, categorized as severe pain, while Respondent 2 reported a pain score of 4, categorized as moderate pain. Following three days of warm ginger compress therapy, Respondent 1's pain score decreased from 7 to 4, indicating a reduction from severe to moderate pain. Similarly, Respondent 2's pain score decreased from 4 to 2, demonstrating an improvement from moderate to mild pain. Overall, both respondents experienced a clinically meaningful reduction in pain intensity, although the magnitude of improvement differed between individuals.

Table 1 Pain Level Before and After Ginger Compress Garment

Day	Respondents 1		Respondents 2	
	Before	After	Before	After
1	7	7	4	4
2	7	5	4	3
3	5	4	3	2

Primary Data : 2026

Daily observations also demonstrated a gradual decline in pain intensity throughout the intervention period. Both participants reported increased comfort after receiving the warm ginger compress, accompanied by improved joint mobility and a reduction in stiffness during daily activities. These findings indicate that repeated application of warm ginger compresses may provide cumulative therapeutic benefits in managing joint pain among older adults. The reduction in pain observed in this study is consistent with the proposed mechanism of action of warm ginger compress therapy. The therapeutic effect results from the combination of heat stimulation and the pharmacological properties of ginger. Heat promotes vasodilation, increases local blood circulation, enhances oxygen and nutrient delivery to tissues, and promotes muscle relaxation. Improved circulation also facilitates the removal of inflammatory metabolites that contribute to pain perception. In addition, ginger contains bioactive compounds, particularly gingerol and shogaol, which possess anti-inflammatory and analgesic properties. These compounds inhibit the production of inflammatory mediators, thereby reducing inflammation and decreasing nociceptor sensitivity, ultimately leading to lower pain intensity.

Although both respondents experienced pain reduction, the extent of improvement differed. Respondent 1 showed a greater numerical reduction (7 to 4) than Respondent 2 (4 to 2). This difference may be attributed to variations in baseline pain severity, individual pain tolerance, physical condition, and response to non-pharmacological therapy. Nevertheless, both respondents demonstrated consistent improvement after receiving warm ginger compress therapy for three consecutive days, suggesting that the intervention was beneficial regardless of the initial pain level. This finding supports the use of individualized complementary nursing interventions for pain management in older adults. The findings of this case study are consistent with previous studies cited in the report, which demonstrated that warm ginger compress therapy effectively reduces joint pain in older adults. Previous research reported significant reductions in pain intensity following warm ginger compress application due to the anti-inflammatory effects of ginger and the physiological benefits of heat therapy. The present findings reinforce this evidence by showing similar improvements in two elderly participants treated using the same intervention protocol.

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Overall, the results suggest that warm ginger compress therapy is a practical, safe, inexpensive, and easily applicable complementary intervention for older adults with joint pain. In addition to reducing pain intensity, the therapy may improve comfort and support daily functional activities. Therefore, warm ginger compresses can be recommended as a non-pharmacological nursing intervention to complement pharmacological treatment in managing joint pain among older adults.

DISCUSSION

Before the intervention, Respondent 1 reported a pain score of 7 (severe pain), while Respondent 2 reported a pain score of 4 (moderate pain). The difference in pain intensity was associated with age-related degenerative joint changes, comorbidities, physical activity, and mobility levels. Both respondents had a history of gout, which likely contributed to joint pain, whereas Respondent 1 also had diabetes mellitus, potentially exacerbating pain perception. In addition, neither respondent had previously received education regarding the use of warm ginger compresses as a non-pharmacological pain management strategy.

Following the application of warm ginger compresses for 15–20 minutes daily over three consecutive days, both respondents experienced a reduction in pain intensity. Respondent 1's pain score decreased from 7 to 4, while Respondent 2's pain score decreased from 4 to 2. These findings indicate that warm ginger compress therapy effectively reduced joint pain in older adults. The therapeutic effect is likely attributable to the combined action of heat, which promotes vasodilation and muscle relaxation, and the bioactive compounds in ginger, such as gingerol and shogaol, which possess anti-inflammatory and analgesic properties.

Pain scores progressively declined throughout the three-day intervention. Respondent 1 demonstrated a reduction of three pain-scale points, whereas Respondent 2 showed a two-point reduction. The difference in outcomes may be influenced by age, daily physical activity, dietary habits, underlying medical conditions, and adherence to the intervention. Respondent 1, who had more rest during the intervention period, experienced greater pain reduction than Respondent 2, who continued performing repetitive manual activities.

The findings are in line with Mardiana et al., (2026) research reporting that warm ginger compress therapy is an effective non-pharmacological intervention for reducing joint pain by improving blood circulation, promoting muscle relaxation, and inhibiting pain impulse transmission. However, the effectiveness of the intervention may vary according to individual characteristics and external factors during treatment.

4. CONCLUSION

Based on the results of applying warm ginger compress to the level of joint pain in the elderly in Kampung Guwosari RT 02/RW 27 Jebres City of Surakarta for 3 consecutive days, it can be concluded that:

1. Joint pain level before given warm ginger compress on respondents 1 is on a scale of 7 (severe pain) and 2 respondents are on a scale of 4 (mild pain). Both respondents complained of joint pain that interferes with daily activities.
2. Joint pain levels after given warm ginger compress experienced a decrease in both respondents. At the end of application, respondents 1 experienced a decrease in pain scale from 7 to 4, while respondents 2 experienced a decrease in pain scale from 4 to 2.
3. The development of joint pain levels before and after being given a warm ginger compress indicates a decrease in pain in both respondents during 3 days of application. The results showed that gradually giving warm ginger compresses was able to help reduce the intensity of joint pain in the elderly.
4. Comparison of the final results between the two respondents showed that both experienced a decrease in joint pain rate after being given a warm ginger compress for 3 consecutive days. Respondent 1 experienced a decrease in pain scale from 7 to 4 with a decrease in 3 scale, while 2

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respondents experienced a decrease in pain scale from 4 to 2 with a decrease in 2 scale. Thus, warm ginger compress can help lower joint pain levels in the elderly.

5. REFERENCES

Alpinda, P., Anisa, S., Astuti, W., Octaviani, Y., Yanti, Y. E. D., & Rossita, T. (2026). Implementation of Ginger Compress Therapy Based on Local Wisdom to Prevent Rheomatoid Arthritis in RT 05 Senalang Village, Lubuk Linggau City. *Journal of Mitra Persada Service*, *2*(2), 57–60. https://jurnal.utami.id/index.php/JPMP/article/view/667

Andini, N., & Rahmadiyah, D. C. (2022). Application of ginger warm compresses to reduce pain in the joints. *Journal of Health and Cardiovascular Nursing*, *2*(2). https://doi.org/10.36082/jhcn.v2i1.855

Barus, R. D. (2024). *The Effect of Brisk Walking Exercise on Lowering Blood Pressure in Elderly Patients with Hypertension in the Working Area of the Tuntungan Health Center, Pancur Batu District*. Polytechnics of the Ministry of Health Medan. https://repository.poltekkes-medan.ac.id/id/eprint/3326/1/COVER.pdf

Hidayat, M. A., Danismaya, I., & Hamzah, A. (2025). The Effect of Ginger Compress Therapy on the Level of Joint Pain in the Elderly in the Jampang Tengah Health Center Area, Sukabumi Regency. *Ventilator Journal*, *3*(1), 42–50. https://jurnal.stikeskesdam4dip.ac.id/index.php/Ventilator/article/view/1717/1312

Mardiana, D., Cahyati, P., Bahtiar, Y., & Hartono, D. (2026). The Effect of Ginger Compress on the Level of Joint Pain in the Elderly in the Working Area of the Purbaratu Health Center. *Scientific Journal of Health Husada*, *15*(1), 71–80. https://doi.org/https://doi.org/10.33475/jikmh.v15i1.458

Mujahideen. (2023). The Effect of Ginger Compress on Joint Pain Complaints. *Journal of Applied Health*, *10*. https://doi.org/https://doi.org/10.54816/jk.v10i1.611

Wahyuni, M. E., & Nurrohmah, A. (2024). Application of Elderly Gymnastics in an Effort to Reduce Knee Joint Pain in the Elderly at the Gemolong Health Center. *Calory Journal Medical Laboratory Journal*, *2*(3), 40–51.