

The Effect Of Warm Compresses Of Ginger Decoction And Exercises Range Of Motion (ROM) To Decreased Joint Pain For The Elderly At Posyandu Tengger Lor Kediri Village

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ABSTRACT

At the elderly level, many experience a decrease in biological function, one of which is joint pain in the elderly so that it will interfere with limited movement in the joints. To maintain health, it is necessary to have good efforts in the nature of treatment, pharmacological and non-pharmacological treatment. Nonpharmacological treatment such as warm compresses of ginger decoction and range of motion exercises (ROM). This research design uses Quasi Experiment With Random Two Groups Design Approach, Posttest Only. Samples were taken using Simple Random Sampling from January 16 to January 20, 2023. The sample was 41 respondents and grouped into two groups, namely 20 respondents of the warm compress group of ginger decoction and 21 respondents of the range of motion (ROM) exercise group. This research instrument uses observation sheets. The results of the Mann-Whitney test are known that the average value of pain in respondents given warm compress therapy of ginger decoction is 10.50 and the average value of pain in respondents given range of motion (ROM) exercise therapy is 10.00. As for the P value = $0.006 < 0.05$ which means there is a significant difference between warm compress therapy of ginger decoction and range of motion (ROM) exercises, where the warm compress technique of ginger decoction is more effective in reducing joint pain in the. Doing warm compresses of ginger decoction regularly can reduce pain in the joints and provide a feeling of comfort in the body.

Keywords: Compress Hagat Ginger Decoction, Elderly, Joint Pain, Exercise Range Of Motion (ROM)

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INTRODUCTION

Joint pain is a common disease in the elderly and has many causes, namely a reflection of various joint diseases, arising from inflammation, cartilage degeneration, crystal deposition, infection and trauma (Baer, 2014). The incidence of joint pain in the world at the age of 45-64 years is 30.3% and at the age of ≥ 65 years is reported as much as 49.7% (Barbour, 2013). In Indonesia, joint pain is one of 12 non-communicable diseases with an incidence rate of 24.7% (Research and 2 Health Development Agency of the Republic of Indonesia, 2013). Based on Basic Health Research Data (Riskesdas) in Indonesia year 2013 the results of the highest

average prevalence of joint disease were in East Nusa Tenggara Province (NTT) which was around 33.1% and the province with the lowest prevalence was Riau which was around 10.8% while in East Java the prevalence rate was quite high at around 26.9% (Riskesdas, 2013). While joint pain at the Posyandu of Tengger Lor Village reached 46 people. Joint pain is complained by many elderly because it causes joint stiffness, swelling, limited movement in the joints, physical fatigue and can cause disability in sufferers. Joint pain can affect the joints in the knees, legs and pelvis, which tend to be most commonly affected by the leg joints. Joint stiffness occurs in the morning, this can last for one to two hours (Ayu and Warsito, 2013).

In overcoming pain, people generally prefer to use painkillers. Though analgesic drugs are not safe if used in the long term (Kurniah, et al 2012). Efforts to overcome pain can be done with therapeutic modalities to reduce pain are pharmacological and nonpharmacological therapies. Nonpharmacological therapies to reduce pain include warm compresses using ginger and Range Of Motion (ROM) exercises.

Range Of Motion (ROM) exercises are exercises given to maintain and improve reduced joint function. This exercise can help reduce pain, reduce muscle tension, and can improve sleep disorders in giving active ROM exercises is done for 30 minutes for one week twice to increase muscle strength and provide physical health to the elderly (Imron & Asih, 2015).

METHOD

This research design uses Quasi Experiment with Random Two Groups Design Approach, Posttest Only.

RESULTS AND DISCUSSION

Table 1. Frequency Distribution Characteristics of Respondents Characteristics of Respondents.

	F	%
1. Usia		
45-59 tahun	9	22
60-74 tahun	13	32
75-90 tahun	19	46
2. Jenis Kelamin		37
Laki-laki	15	63
Perempuan	26	
3. Pendidikan	30	76
SD	8	20
SLTP	3	4
SLTA		
4. Riwayat Pengobatan	41	100
Ya		

Based on table 1, it is known that the majority of respondents' ages, namely 75-90 years old, were 19 respondents (46%). The gender majority of respondents were women as many as 26 respondents (63%). The majority of respondents' education was elementary school as many as 30 respondents (76%). And the majority of treatment history, namely 41 respondents had a history of anti-pain medication (100%).

Table 2 Frequency Distribution Variable Characteristics of Pain Tape Warm Compress Ginger Decoction Pain

1. Sebelum Kompres Hangat Rebusan Jahe		
Skala Nyeri 2	2	10%
Skala Nyeri 3	3	15%
Skala Nyeri 4	8	40%
Skala Nyeri 5	5	25%
Skala Nyeri 6	2	10%
Total	20	100%
2. Sesudah Kompres Hagat Rebusan Jahe		
Skala nyeri 0	3	15 %
Skala nyeri 1	4	20%
Skala nyeri 2	8	40%
Skala nyeri 3	3	15%
Skala nyeri 4	2	10%
Total	20	100%

Based on table 2, it is known that of the 20 respondents in the pre-test measurement, most experienced pain on a scale of 4, which is 8 respondents (40%). And it is known that post test most experience pain on a scale of 2, which is 8 respondents (40%).

Table 3 Frequency Distribution of Variable Characteristics of Exercise Rage Of Motion (ROM) Pain Scales

Sekala Nyeri	F	(%)
1. Sebelum ROM		
skala nyeri 2	3	14%
skala nyeri 3	5	24%
skala nyeri 4	6	29%
skala nyeri 5	5	24%
skala nyeri 6	2	9%
Total	21	100%
2. Sesudah ROM		
Skala nyeri 1	3	14%
Skala nyeri 2	4	19%
Skala nyeri 3	6	29%
Skala nyeri 4	6	29%
Skala nyeri 5	2	9%
Total	21	100%

Based on table 3, it is known that of the 21 respondents in the pre-test measurement, the majority experienced pain on a scale of 4, namely 6 respondents (29%). And it is known that post test most experienced pain on a scale of 3 and 4 each amounting to 6 respondents (29%).

Table 4 Posttest Normality Test Results of Warm Compresses of Ginger Decoction and Exercise Range Of Motion (ROM).

Variabel	Nilai Signifikan
Skala nyeri post kompres hangat rebusan jahe	0,034
Skala nyeri pots latihan range of motion (ROM)	0,097

The results of the statistical test output are known that the significance value of the pain scale post warm compress decoction jahe 0.037 and post exercise range of motion (ROM) 0.097, because $0.034 \leq 0.05$ and $0.097 \leq 0.05$, it can be concluded that post warm compress ginger decoction and post exercise range of motion (ROM) there is data variance or the spread is abnormal.

Table 5 Tests of Different Effectiveness of Warm Compresses of Ginger Decoction and Range Of Motion (ROM) Exercises.

Variabel	Mean Rank	Nilai P
Kompres hangat rebusan jahe	10.50	0.006
Latihan range of motion (ROM)	10.00	

The results of the statistical test output are known that the average value of pain in respondents given warm compress therapy of ginger decoction is 10.50 and the average value of pain in respondents given range of motion (ROM) exercise therapy is 10.00. while P value = $0.006 < 0.05$ which means that there is a significant difference between warm compress therapy of ginger decoction and range of motion (ROM) exercise on reducing joint pain in the elderly, where the warm compress technique of ginger decoction is more effective than giving range of motion (ROM) exercises to reduce joint pain in the elderly.

A. Identify joint pain in the elderly after a warm compress of ginger decoction.

The results showed that joint pain before being given a warm compress of ginger decoction of 20 respondents, most respondents experienced joint pain on a scale of 4, which amounted to 8 respondents (40%) and obtained an average scale of joint pain before a warm compress of ginger decoction, which was 4.10. While the results of observations that have been made the value of the joint pain scale after a warm compress of ginger decoction, most respondents said joint pain on a scale of 2, namely 8 respondents (40%). The average joint pain scale after a warm compress of ginger decoction decreased to 1.85. The results showed that there was a decrease in pain scale after a warm compress of ginger decoction.

According to Erika Untari Dewi, (2020) ginger compresses are useful for reducing joint pain because ginger contains 6-gingerdion, 6-gingerol, zingerol which functions to suppress prostaglandins through inhibition of COX-2 activity which inhibits the production of PGE2 and leukotrienes and TNF- in synovocytes and human joints. Ginger compresses also aim to facilitate blood circulation, provide a sense of relaxation in the body and help carry out daily activities. (Ersi Herliana, 2018).

Based on the results of the study and associated with the theory above, it was found that ginger compresses had an effect on reducing joint pain by doing ginger compresses, all respondents experienced a decrease in joint pain. This happened because the respondents had done compresses using ginger to reduce pain experienced for 5 days and also the nature of hot ginger and compressing actions using warm water which is known that heat helps increase blood flow and relax muscles so as to make the pain felt reduced.

B. Identify joint pain in the elderly after range of motion (ROM) exercises.

Based on the results of the study, it showed that all 21 respondents experienced joint pain with varying joint pain scales before the range of motion (ROM) exercise, most respondents experienced joint pain on a scale of 4, namely 6 respondents (29%). And obtained the average scale of joint pain before exercise range of motion (ROM) which is 3.90. Based on the results of observations that have been made, the value of the joint pain scale after the range of motion (ROM) exercise, most respondents said pain on a scale of 3 and 4, each amounting to 6 respondents (29%). The average joint pain scale after range of motion (ROM) exercise decreased to 3.00. This proves that the administration of range of motion (ROM) exercises is also effective in overcoming joint pain.

Range of motion (ROM) exercises can also lower joint pain scales in the elderly. The positive impact of exercise (ROM) occurs because it is based on the basic principle of implementation, namely (ROM) is repeated 5 times, (ROM) is done slowly and carefully so as not to tire the patient. Planning range of motion (ROM) exercises takes into account the patient's age, diagnosis, vital signs and length of bed rest. Range of motion (ROM) exercises can be performed on all joints and must be on time.

C. Analyze the difference in joint pain in the elderly after warm compresses of ginger decoction and Range of Motion (ROM) exercises.

Based on the results of research that has been done, warm compresses of ginger decoction are more effective in reducing joint pain in the elderly than range of motion (ROM) exercises. The results of this statistic show that there is a difference in effectiveness between warm compresses of ginger decoction and range of motion (ROM) exercises on reducing joint pain in the elderly with a value of $P = 0.006 < 0.05$ and in warm compresses of ginger decoction mean rank shows a value of 10.50 in range of motion (ROM) exercises mean rank shows a value of 10.00 then it can be concluded that there is a significant difference between warm compresses of ginger decoction and range of motion (ROM) exercises in reducing joint pain in the elderly, where warm compresses of ginger decoction are more effective than giving range of motion (ROM) exercises to reduce joint pain in the elderly.

Based on opinions (Nur Amalia et al., 2021) Natural ingredients that are suitable for use as warm compresses that can cause a warm sensation, one of which is red ginger. Where red ginger contains several components such as starch (52.0%), essential oil (3.9%), and essence mixed in alcohol (9.93%) more than elephant ginger and empirrit ginger. Red ginger is bitter, spicy and aromatic derived from oleoresin, namely gingerol, zingeron and shogaol. Where there are anti-inflammatories from oleoresin, strong antioxidants and anti-pain, olerasin or zingeron is useful for inhibiting prostaglandin synthesis to reduce joint pain or muscle tension.

Based on research conducted (Mujib Hannan, 2016) With the results there is an effect of ROM exercise on the flexibility of the elderly joints. ROM is able to (1) maintain muscle ability, (2) maintain joint movement, (3) improve blood circulation, (4) avoid disability. ROM exercises increase blood flow to the joint capsule and increase joint flexibility so that pain can be reduced or even resolved.

CONCLUSION

1. Pain scale after a warm compress of ginger decoction Most respondents experienced pain on a scale of 2, which was 8 respondents and the average scale of joint pain after a warm compress of ginger decoction was 1.85, which means there was a decrease after a warm compress of ginger decoction.
2. Pain scale after range of motion (ROM) training Most respondents experienced pain on a scale of 3 and 4 with 6 respondents each and the average joint pain scale after range of motion (ROM) exercise was 3.00 which means there was a decrease after range of motion (ROM) exercise.
3. It was found that there was a significant difference between warm compresses of ginger decoction and range of motion (ROM) exercises on reducing joint pain in the elderly, where warm compresses of ginger decoction were more effective than giving range of motion (ROM) exercises on reducing joint pain in the elderly.

SUGGESTION

1. Share the Place of Research

With this research, it is hoped that the Elderly Posyandu of Tengger Lor Village can apply in the environment so that warm compresses of ginger decoction can work optimally and add insight into science to reduce joint pain.

2. For the Next Researcher

In conducting further research, researchers can control the administration of anti-pain drugs consumed by the elderly because it can affect the effectiveness of complementary therapies given, for example, researchers can provide therapy before the elderly take anti-pain drugs.

3. For the Elderly

Giving warm compresses of ginger decoction to the elderly who experience joint pain will feel relaxed and pain can be reduced and increase knowledge for the elderly about how to reduce the pain they experience.

4. For Nurses

Provide education and explanation of how to apply warm compresses of ginger decoction as a complementary therapy in order to reduce joint pain in the elderly.

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