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The Effect Of Clove Compress Towards Rheumatoid Arthritis Pain On The Elderly In Banjar Uma Anyar, Pejeng Kaja Village, Tampaksiring

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ABSTRACT
Rheumatoid arthritis pain is pain that indicates the presence of swollen joints, inflammation, or damage that often causes pain resulted in damaged joints and tense muscles. Elderly who experience rheumatoid arthritis will experience disruption of activity therefore administering clove compresses can be done to reduce rheumatoid arthritis pain. This study aimed at determine the effect of clove compress on rheumatoid arthritis pain in Banjar Uma Anyar, Desa Pejeng Kaja Tampaksiring. This study was quantitative research that used Quasi-Experimental Designs with the Non-Equivalent Control Group type. Samples in this study were taken using nonprobability sampling technique namely purposive sampling, with a sample size of 30 respondents. This research instrument used an observation sheet. The results of the Mann Whitney U test analysis on the post-test of rheumatoid arthritis pain showed a probability value (sig) <0.05 (0,000 <0.05) therefore it could be concluded that in outline there was a difference in rheumatoid arthritis pain after providing clove compression to the intervention group. Based on the results of this study, it is expected that patients with rheumatoid arthritis pain can apply clove compress if rheumatoid arthritis appears in the morning and interfere with the elderly's activities.

Keywords: Rheumatoid Arthritis Pain, Clove Compress, Elderly

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BACKGROUND

The Elderly is someone who has entered the age of 60 years and over. The World Health Organization (2017) said that the number of the elderly population in Indonesia in 2017 was 9.03% or 23.66 million elderly people in Indonesia. In the next few years, the elderly population will continue to grow until in 2035 it will be 48.19 million people. The province of Bali is ranked fourth with the largest elderly population in Indonesia with a total of 9.78% people (Indonesian Central Statistics Agency, 2017). The elderly population in Gianyar Regency is 61,876 people (Bali Provincial Health Office)

The elderly will experience the aging process due to a decrease in physical, psychological, and social conditions. So that the elderly experience in decrease hearing function, decreased muscle ability, memory, and the elderly will experience changes in social roles in society. The elderly will also experience a decrease in musculoskeletal function which causes joint diseases, such as rheumatoid arthritis which is characterized by chronic inflammation in the joints of the hands and feet (Nurhayati, 2018).

According to the World Health Organization in 2016, as many as 335 million people in the world have rheumatoid arthritis (Nurhayati, 2018). Meanwhile, according to the Arthritis Foundation in 2015, as many as 22% or more than 50 million adults in the United States were diagnosed with arthritis. The highest prevalence based on arthritis diagnosis were Bali 19.3%, Aceh 18.3%, West Java 17.5% and Papua 15.4% (Gitaswari, 2019). According to Bali Province health data (2016), the incidence of RA was 427,605 cases. According to data from the Gianyar District Health Office, the number of RA diseases in 2019 was 4,256 cases (Gianyar Health Office, 2019). Based on data from Pustu Pejeng Kaja, the number of elderly people suffering from RA is 246 cases.

RA disease if not treated immediately will cause disability such as joint damage and paralysis (Ferawati et al., 2017). According to (Nurhayati, 2018) rheumatoid arthritis therapy consists of pharmacological therapy and non-pharmacological therapy. Clove compress therapy is one of the non-pharmacological actions by giving warm compresses to reduce pain. Where in cloves there are active compounds that can reduce pain intensity (Anggitasari & Sc, 2016).

In a previous study conducted by Sri Margowati (2017) with the title The Effect of Using Cinnamon Compress (Cinnamomum Burmani) on Reducing Pain in Gout Arthritis Patients, the results showed that there was a difference between before and after the cinnamon compress was 1.36 with $p = 0.000$. This means that the p-value <0.05 indicates that there is a significant difference between before and after being implementing a cinnamon compress.

Based on the results of a preliminary study conducted by researchers in the work area of Pustu Pejeng Kaja on June 26, 2020, data on rheumatism in Pejeng Kaja village was obtained as many as 246 cases, this research was conducted in the Uma Anyar Banjar where the Uma Anyar Banjar is one of the banjar is located in Pejeng Kaja Village, ,patients with rheumatism in Banjar Uma Anyar as many as 32 people. The results of interviews with 15 elderly people who experienced in RA in Banjar Uma Anyar, Pejeng kaja Village, said the intensity of pain ranged (3-9) with complaints of pain such as stabbing so that the elderly experienced activity disorders and the elderly also experienced sleep disorder as a result of the pain felt. To reduce pain, massage is carried out on the pain body part. The results of interviews related to the benefits of clove compresses for rheumatoid arthritis pain said that they did not know about the therapy. Based on the above problems, researchers are interested in conducting research about the effect of clove

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compresses on rheumatoid arthritis pain in the elderly in Banjar Uma Anyar, Pejeng Kaja Village.

METHODS

This study used quantitative research methods with Quasi-Experimental Designs with the type of Non-Equivalent Control Group. The design of this study was an experimental study that allow for comparing the results of health program interventions in a control group that was similar but did not need to be exactly the same group (Imas Masturoh, 2018). In this study, there were 2 groups, namely the control group with 15 respondents and the treatment group with 15 respondents. In this study, the data normality test used was the Shapiro Wilk test because the sample from this study was <50. After conducting the data normality test, the data obtained were not normally distributed. After obtaining the results of the data normality test, the Mean Whitney U Test was carried out, namely a statistical test of the comparison of two independent samples using a significant degree of $p < 0.05$ which was used to determine the value of the comparison between the two groups. The results of the analysis of this study obtained a value of <0.05, which means Ha was acceptable and there was a difference between the groups receiving treatment and those not receiving treatment.

RESULT

a. Univariate Analysis

Frequency Distribution of Respondents Characteristics

Characteristics of Respondents by Gender

Table 1. Frequency Distribution of Respondents' Characteristics by Gender in the Control and Intervention Group in Banjar Uma Anyar

Gender	Frequency (n)	Percentage (%)
Male	9	30.0
Female	21	70.0
Total	30	100.0

Table 1 shows that most of the respondents' gender, namely women, amounted to 21 respondents (70.0%).

Characteristics of Respondents by Age

Table 2. Frequency Distribution of Respondents Characteristics by Age in the Intervention Group and Control Group

Age	Intervention Group and Control Group			
	Intervention Group		Control Group	
	Frequency (n)	Percentage	Frequency (n)	Percentage
80	6	40.0	8	53.3
85	9	60.0	7	46.7
Total	15	100.0	15	100.0

Table 2 shows that the majority of respondents in the intervention group, namely the age of 85 years, amounted to 9 respondents (60.0%), while the majority of respondents in the control group, namely the age of 80 years, amounted to 8 respondents (53.3%).

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Identifying Rheumatoid Arthritis Pain Before being Implemented Clove Compress On The Intervention Group and Control Group In Banjar Uma Anyar, Pejeng Kaja Village, Tampaksiring

Table 3. Rheumatoid Arthritis Pain Before Implementing Clove Compress on the Intervention Group and Control Group In Banjar Uma Anyar, Pejeng Kaja Village, Tampaksiring

Rheumatoid Arthritis Pain	Mean	Std. Deviation	Min	Max	Confidence Interval (95%)	
					Lower	Upper
Pretest Intervention	6.27	0.799	5	8	0.258	1.056
Pretest Control	6.13	0.516	5	7	0.258	0.704

Table 3 shows that the average value of rheumatoid arthritis pain in the intervention group is 6.27 with a standard deviation of 0.799, a minimum value of 5, and a maximum value of 8. Based on the interval estimation above, it can be concluded that 95% are convinced that the average value of rheumatoid arthritis pain in the pretest group is the treatment between 0.258 and 1.056. Pretest measurement in the control group obtained the average value of rheumatoid arthritis pain in the control group at the pretest 6.13 with a standard deviation of 0.516, a minimum value of 5, and a maximum value of 7. Based on the interval estimation above, it can be concluded that 95% are convinced that the average value of the rheumatoid arthritis pain pretest control group between 0.258 to 0.704

Identifying Rheumatoid Arthritis Pain After being implemented Clove Compress on the Control Group and the Intervention Group in Banjar Uma Anyar, Pejeng Kaja Village, Tampaksiring

Table 4. Rheumatoid Arthritis Pain After Clove Compression in the Control Group and the Intervention Group in Banjar Uma Anyar, Pejeng Kaja Village, Tampaksiring

Rheumatoid Arthritis Pain	Mean	Std.Deviation	Min	Max	Confidence Interval (95%)	
					Lower	Upper
Control Group Posttest	6.13	0.516	5	7	0.258	0.704
Posttest Group Intervention	3.47	0.834	3	5	0.352	1.014

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Table 4 shows that the results of the average value of rheumatoid arthritis pain in the control group at the posttest are 6.13 with a standard deviation of 0.516, a minimum value of 5, and a maximum value of 7. Based on the interval estimation above, it can be concluded that 95% are convinced that the average value of rheumatoid arthritis pain in the posttest group is the control between 0.258 to 0.704. While the average value of rheumatoid arthritis pain in the intervention group in the posttest was 3.47 with a standard deviation of 0.834, a minimum value of 3, and a maximum value

b. Bivariate Analysis

Analyzing the Differences between the Effect of Clove Compresses and Rheumatoid Arthritis Pain after being implemented a clove compress in the intervention group and the control group

Tables 5. The Effect of Clove Compress on Rheumatoid Arthritis Pain After Clove Compress was implemented in the Intervention Group and the Control Group

		N = 30			
Kategori		**Mean**	**Min-Max**	**SD**	***P-value***
Pain	Pre Intervention	6.27	5 – 8	0.799	
Rheumatoid Arthritis	Post Intervention	3.47	3 – 5	0.834	0.000
Pain	Pre Control	6.13	5 – 7	0.516	
Rheumatoid Arthritis	Pre Control	6.13	5 – 7	0.516	

Table 5 shows that the average value of pre-intervention rheumatoid arthritis pain is 6.27 and post-intervention rheumatoid arthritis pain is 3.47, while pre-control and post-control rheumatoid arthritis pain is 6.13. Based on the results in the table above, it is known that there is a decrease in the average value of rheumatoid arthritis pain in the intervention group, while in the control group there is no decrease in the average value of rheumatoid arthritis pain.

The results of the Mann Whitney U Test on posttest rheumatoid arthritis pain showed a probability value (sig) < 0.05 (0.000 < 0.05) so that in general there were differences in rheumatoid arthritis pain after being given clove compresses in the treatment group.

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DISCUSSION

Characteristics of Respondents by Gender

The results of this study indicate that most of the 30 respondents are female, namely 21 respondents (70.0%). The results of this study are similar to research (Elsi, 2018), which says that there are more female respondents, namely 20 respondents while there are 11 male respondents. Another study also revealed that of the 26 respondents, the number of female respondents is 14 respondents (53.8%) compared to 12 respondents (46.2%).

Characteristics of Respondents Based on Age

The results of this study indicate that the age of the respondents in this study is 60 years and over, with the lowest age of respondents being 80 years and the highest being 85 years. Most respondents in the intervention group are aged 85 years with a total of 9 respondents (60.0%), while most respondents in the control group are aged 80 years with a total of 8 respondents (53.3%). The results of this study are similar to research (Siregar, 2016), which showed that rheumatoid arthritis mostly occurred in respondents aged over 60 years.

Identifying Rheumatoid Arthritis Pain Before being Implemented Clove Compress In the Intervention Group and Control Group In Banjar Uma Anyar, Pejeng Kaja Village, Tampaksiring

Based on research conducted before being implemented clove compresses, it is known that most respondents experience rheumatoid arthritis pain which shows that the average value of rheumatoid arthritis pain in the intervention group at the pretest is 6.27 with a standard deviation of 0.799, a minimum value of 5, and a maximum value of 8. interval estimation can be concluded 95% convinced that the mean value of rheumatoid arthritis pain pretest treatment group between 0.258 to 1.056. Measurement of the pretest in the control group obtained the average value of rheumatoid arthritis pain in the control group at the pretest 6.13 with a standard deviation of 0.516, a minimum value of 5, and a maximum value of 7. The control group pretest is between 0.258 and 0.704.

Identifying Rheumatoid Arthritis Pain After Clove Compress in the Control and Intervention Groups in Banjar Uma Anyar, Pejeng Kaja Village, Tampaksiring

Based on research conducted after the clove compress in the control group, it is found that most respondents experienced Rheumatoid Arthritis Pain which is showed that the average value of rheumatoid arthritis pain in the control group is 6.13 with a standard deviation of 0.516, a minimum value of 5, and a maximum value of 7. Based on the estimated interval, it can be concluded that 95% are convinced that the average value of posttest rheumatoid arthritis pain in the control group is between 0.258 and 0.704. Meanwhile, after being implemented clove compresses to the intervention group, it is known that most of the respondents experienced rheumatoid arthritis pain which shows that the results of the average value of rheumatoid arthritis pain in the intervention group in the posttest are 3.47 with a standard deviation of 0.834, a minimum value of 3, and a maximum value of 5. Based on the estimated interval it can be concluded that 95% are convinced that the average value of posttest rheumatoid arthritis pain in the treatment group is between 0.352 to 1.014.

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The Effect of Clove Compress on Rheumatoid Arthritis Pain After Clove Compress was Given in the Intervention Group and the Control Group

Based on the results of the study, the average value of pre-intervention rheumatoid arthritis pain is 6.27 and post-intervention rheumatoid arthritis pain is 3.47, while pre-control and post-control rheumatoid arthritis pain is 6.13. Based on these results, there is a decrease in the average value of rheumatoid arthritis pain in the intervention group, while in the control group there is no decrease in the average value of rheumatoid arthritis pain.

Based on the results of the Mann Whitney U Test on posttest rheumatoid arthritis pain, it shows a probability value (sig) < 0.05 (0.000 < 0.05) so that in general there are differences in rheumatoid arthritis pain after being implemented clove compresses in the intervention group.

CONCLUSION

Based on the results of research on the effect of Clove Compresses on Rheumatoid Arthritis Pain in Banjar Uma Anyar, Pejeng Kaja Tampaksiring Village, the following conclusions can be formulated:

1. Characteristics of respondents based on gender showed that the majority of respondents are female, namely 21 respondents (70.0%), and based on age showed that most respondents in the intervention group are 85 years old 9 respondents (60.0%) and in the control group respondents most of them are 80 years old 8 respondents (53.3%).
2. Rheumatoid arthritis pain before being implemented clove compresses in the intervention group and control group, showed that the average value of rheumatoid arthritis pain in the intervention group at the pretest is 6.27, and in the control group the average value of rheumatoid arthritis pain in the control group was obtained at the pretest. 6.13. So, the average value of rheumatoid arthritis pain in the intervention group and the control group is on a moderate pain scale.
3. Rheumatoid arthritis pain after clove compression in the control group, it is known that most of the respondents experience Rheumatoid Arthritis Pain which shows that the average value of rheumatoid arthritis pain in the control group is 6.13 (moderate pain scale). So, the control group showed that there is no change in rheumatoid arthritis pain because the clove compress intervention is not given to the control group. While rheumatoid arthritis pain after being implemented clove compresses in the intervention group, it is known that most of the respondents experienced a decrease in rheumatoid arthritis pain which shows that the results of the average value of rheumatoid arthritis pain in the intervention group at the posttest is 3.47 (mild pain scale).
4. There is an effect of giving clove compresses to reducing rheumatoid arthritis pain seen from the results of the Mann Whitney U Test on posttest rheumatoid arthritis pain showing a probability value (sig) < 0.05 (0.000 < 0.05) so that it can be said that in general there is a difference rheumatoid arthritis pain after being given clove compresses in the intervention group.

CONFLICT OF INTEREST

The author has no conflict of interest to disclose

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