

The Effect of Back Massage with the Combination of Jamblang Essential Oil and Coffee In Relaxing the Lower Back Muscle in the Elderly

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ABSTRACT

Low back pain is a musculoskeletal disorder due to poor activity, which causes pain that is often suffered by the elderly. One of the non-pharmacological pain management methods can be done by back massage with jamun essential oil. Back massage is a technique to massage the back with gentle strokes. The purpose of this study was to determine the effect of back massage with jamun essential oil on low back pain in the elderly at the Marelan While Elderly Social Center. This type of research is pre-experimental with a one-group pretest-posttest design. The number of samples was 17 people selected based on the purposive sampling technique. Data analysis used univariate and bivariate analyses. Based on the paired t-test analysis, it shows that doing back massage can reduce the scale of low back pain in the elderly with an r value

0.000 (<0.05). It can be concluded that there is a significant effect of back massage with jamun essential oil on the low back pain scale in the elderly at the Marelan While Elderly Social Center. Based on the results of this study, back massage with jamun essential oil is an alternative nursing intervention to reduce low back pain.

Keywords: massage, back, essential, jamun, elderly.

BACKGROUND

Aging process is a mechanism of anatomical and physiological and biochemical changes that occur in humans with age. In the elderly (elderly), all of these processes will result in decreased body functions and abilities, thus affecting a series of individual activities. The number of elderly people in Southeast Asia is reported as many as 8% of the total population or around 142 million people. In 2050, it is estimated that the elderly population will increase 3 times. In Indonesia, it is estimated that by 2020 the number of elderly people will reach around 80 million people (Ministry of Health, 2013).

Some of the health problems experienced by the elderly due to decreased body function can be in the problems in the musculoskeletal system. It is estimated that 10-15% of muscle strength can be lost each week if the muscles are fully rested, and about 5.5% of muscle can be lost day-to-day under conditions of complete rest and immobility (Stanley, Beare, & Patricia Gauntlett, 2006). One of the daily physical problems that are often found in the elderly is low back pain (Bandiyah, 2009).

The prevalence of musculoskeletal pain, including low back pain, has been described as an epidemic. About 80 percent of the population suffers from low back pain, at least once in their life. Based on the data obtained in the world, it is found that the severity percentage of low back pain in men and women is in the severe category (48.32% and 53.64%), paralysis category (3.35% and 8.68%), and minimal category. (2.68% and 2.64%) respectively. At the age of 40-45, it showed that women have a higher percentage than men with pain when walking, sitting, sleeping, in social life and in activities (Chawla, Schneck, & Wheeler, 2018).

Thus, the older you are, the greater you are at risk for low back pain. Elderly people experience a decrease in body functions, especially the bones so that they are no longer as elastic as when they were young. Data for the number of low back pain sufferers in Indonesia are not certainly known, but it is estimated that low back pain sufferers in Indonesia vary between 7.6% to 37% of the total population in Indonesia (Lailani, 2013). A preliminary study conducted at the Marelan Elderly Social Center, Medan City in 2018 reported that from 80 elderly people at the Marelan Elderly Social Center, there were 30 people who experienced low back pain.

Pain management can be assisted with non-pharmacological therapy. There are several non-pharmacological techniques such as providing a back massage with essential oil aromatherapy. Rubbing with essential oils provides a warm sensation by enabling local blood vessels to dilate. The elderly who were given back massage therapy experienced a decrease in pain from moderate to mild intensity (Kristanto & Maliya, 2012). Jamblang is an aromatherapy that can help improve body circulation. The substance contained in jamblang is linalool which is useful for stabilizing the nervous system so that it can cause a calming effect for anyone who inhales it (Purwandari & Sabrian, 2012). Based on the description above, researchers are interested in conducting further research on the effects of back massage combined with the use of jamblang aromatherapy in the elderly with low back pain problems.

RESEARCH PURPOSE

This study aims to analyze the effect of back massage with a combination of jamblang essential oil and coffee on low back pain in the elderly at the Marelan Elderly Social Center.

RESEARCH METHOD

Design

This study used a pre-experimental research design with a one group pretest – posttest approach.

Population and Sample

The population in this study were all the elderly who experienced low back pain at the Marelan Elderly Social Center as many as 30 people. The sample in this study was determined by using a sample using the Frederer formula with purposive sampling technique. The number of samples is 17 people. The inclusion criteria of research subjects were elderly aged 59-66; female gender; elderly who are willing to do back massage; in composmentis awareness, good communication, and moderate pain level, and she did not use painkillers during the study. Meanwhile, the inclusion criteria in this study were the elderly who have allergies when given oil rubs, and cannot communicate well..

Place and time of research

The research was carried out for 4 weeks, at the Marelan Elderly Social Center, Medan City..

Measurement Instruments and Procedure

Data Collection was done using a questionnaire of respondents' characteristics and pain measurement observation sheets. Pain was measured using a visual analog scale. Pain measurements were carried out before and after being given back massage therapy with jambalang essential oil.

Data Analysis

Data Analysis used in this study was a paired t-test.

Intervention

The intervention was carried out by giving a back massage with a combination of jambalang essential oil and coffee which was carried out 2 times a week in the morning for 4 weeks.

RESULTS OF STUDY

Characteristics of Respondent

Table 1

Characteristics of Respondent at Marelan Social Center In Medan City (n=17)

Characteristics	f	%	Age
60-74	17	100	
75-90	0	0	
Gender			
Men	0	0	
Women	0	0	
Job			
ART	6	35,3	
Self-employed	5	29,4	
Not Working	4	23,5	
Farmer	2	11,8	
Lama Nyeri Really Down			
1-2 year	12	70,6	
< 1 year	5	29,4	

The results of the analysis of the frequency distribution of the respondent's characteristic data can be seen that the age of respondents with low back pain is mostly at the age of 60-74 with 17 respondents (100%). The most common type of work is ART with 6 respondents (35.3%). The longest period of suffering from low back pain was 1-2 years, with 12 respondents (70.6%).

Table 2

The Effect of Back Massage with Jambalang Essential Oil at Marelan Social Center in Medan City Year 2022 (n=17)

Variable	f	%	Mean	SD	p-value
Pre Test					
No Pain	0	0			
Mild Pain	4	23,5			
Moderate Pain	13	76,5	4,47		1,37
Severe Pain	0	0			

Very Severe	0	0		
Post Test				
No Pain	13	23,5		
Mild Pain	4	76,5		
Moderate Pain	0	0	0,47	0,87
Severe Pain	0	0		
0,000				
Very Severe	0	0		

Based on table 2 above, the result obtained was that those who were in a moderate pain scale of 13 respondents (76.5%) and a mild pain scale of 4 respondents (23.5%) with an average pain scale before back massage with a combination of jamblang essential oil, and coffee was 4.47. After doing back massage, 13 respondents (76.5%) had no pain and 4 respondents (23.5%) had a mild pain scale with an average pain scale after back massage with a combination of jamblang essential oil and coffee. 0.47. The difference in the average pain scale before and after the back massage intervention with a combination of jamblang essential oil and coffee was 4.47, decreasing to 0.47 with a dif mean of 4, with a statistically significant p value = 0.000 (<0.05). The statistical results indicate that there is an effect of back massage with a combination of jamblang essential oil and coffee on lower back pain in the elderly.

DISCUSSION

Characteristics of Respondent

Respondents based on the age of the elderly at the Marelan Elderly Social Center, it was found that the respondents who were over 50 years old with a maximum age of 60-74 years were 17 in number (100%). Age is a factor that aggravates the occurrence of low back pain, so it is usually suffered by elderly people due to a decrease in body functions, especially the bones so that they are no longer as elastic as when they were young. This is in accordance with the research of Nurlis, Bayhakki, & Erika (2012), who said that the risk of low back pain increases in the elderly who are getting older. With increasing age, there will be a process of fibrosis and classification of the spine sequentially and close to each other, thus facilitating the onset of pain in the spinal area.

At the age of >54 years due to the presence of intervertebral discs, damage, scar tissue, reduced body part reduction, body disorders, especially in the back. This happens because of middle age, muscle strength and endurance begin to decline so that the risk of muscle complaints increases (Tarwaka, 2014).

The distribution of respondents based on Aprilia's research (2009), found that the majority of lower back pain patients in the elderly at the Marelan Elderly Social Center were in one gender – female (100%). In accordance with the results of Kurniasih's research (2013), He stated that women have a greater risk of suffering from lower back pain than men. Thus, it shows that women suffer more pain response because they have menstruation and the menopausal process which causes a decrease in bone density due to a decrease in estrogen hormones..

Hendy, Untung, & Lantjip (2010) states that women are 2 times larger than men because women are influenced by obesity. The prevalence of lower back pain in women is 60.98% and in men 39.02% . Shiri, Karppinen, Leino-Arjas, Solovieva, & Viikari-Juntura (2009), stated that low back pain is more common in women compared to men because it is influenced by obesity.

Distribution of respondents based on the length of time suffering from low back pain in the elderly

at the Marelan Elderly Social Center, it was found that 12 respondents (70.6) had suffered from low back pain for 1-2 years and 5 respondents (29.4) had suffered from lower back pain for less than 1 year. Beckman, Waern, Gustafson, & Skoog (2008), found that the sufferers of back pain that continued for 12 weeks were more difficult to recover. This is because the longer the respondent experiences pain can change the patient's thinking and behavior towards pain. The patient's thoughts about pain can cause the patient to feel more sensitive to pain, feel pain and be afraid to move.

The Effect of Back Massage with Jamblang Essential Oil on Lower Back Pain in the Elderly

Results showed that the pain scale before doing back massage with a combination of jamblang essential oil and coffee obtained a moderate pain scale of 13 respondents (76.5%) and a mild pain scale of 4 respondents (23.5%) with an average of 4.47. Meanwhile, the pain scale after back massage with a combination of jamblang essential oil and coffee was found to be painless by 13 respondents (76.5%) and a mild pain scale of 4 respondents (23.5%) with an average of 0.47. The results of hypothesis testing obtained p value = 0.000 (<0.05).

Based on the results above, it can be seen that there are differences in pain perception even though the stimulus is the same. Pain management can be overcome by non-pharmacological therapy using back massage. The most common causes that can cause lower back pain are back muscle stiffness and spasm due to poor body activity and tense posture (Potter, Perry, Stockert, & Hall, 2012).

The Research conducted by Achjar (2012), where the level of pain before being given back massage with moderate pain category consists of 22 people with 5 people suffering mild pain. Those with level of lower back pain after being given back messages with the category of mild pain consist of 23 people, with no pain as many as 5 people and moderate pain as many as 2 people. The research above shows that back massage is effective for reducing lower back pain levels. In line with the research of Primayanthi, Azis, & Puspita (2016) found that the average pain before being given therapy was 4.83, and the pain most experienced by respondents was in a scale of 5. Meanwhile, after being given therapy, it was found that the average pain after being treated was giving therapy is 2.67, and the pain that is most experienced by respondents is in scale of 2, indicating that there is a significant difference between pain before and after being given slow stroke back massage therapy with essential oils.

The results of observations conducted, it is known that the decrease in pain scale is caused by back massage with a combination of jamblang essential oil and coffee, where respondents regularly do back massage with a combination of jamblang essential oil and coffee. This is done 2 times a week in the morning for 4 weeks with a duration of 10 minutes. Based on the explanation above, it can be concluded that compliance with back massage with a combination of jamblang essential oil and coffee can reduce the lower back pain scale. They assume that doing back massage routinely can reduce the lower back pain scale because previously the lower back pain scale was still high. Back massage is a skin stimulation performed to relieve pain, and it works by encouraging the release of endorphins, which blocks the transmission of painful stimuli (Potter et al., 2012).

CONCLUSION

Implications

Based on the results of research and data collection that has been carried out, this study concludes that there is an effect of back massage with a combination of jamblang essential oil and coffee on low back pain in the elderly. The results of this study provide opportunities for the development of

nursing science to develop nursing interventions according to evidence-based practice. The findings in this study can be used as basic nursing scientific data, specifically about complementary interventions in reducing pain on the elderly with low back pain.

Limitations

This study only involved female respondents due to the minimal number of male respondents experiencing low back pain at the study site. Further research is needed by involving male respondents in a wider population.

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