International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

Comparison between Warm Compress and Massage to the Pain Intensity for Elderly Who Have Arthritic Pain in Bina Lanjut Usia Compound Jayapura

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Abstract: ***Background: Approximately 40% of the total Indonesian population aged over 40 years old have joint and muscle pain. Arthritis pain in the joints can be overcome pharmacologically and non-pharmacological treatment. In Non-pharmacologic can use either pain management techniques by physical exercise, massage, warm compresses even by diet. This study aims to identify differences between the provision of warm compresses and massage to the intensity of pain in elderly people who have complaints of pain from rheumatoid arthritis in "Panti Bina Lansia Sentani" district Jayapura 2016. The research is designed using queasy Experiment with posttest control only by group design using statistical test repeat Anova. Sampling experience was conducted by random sampling with 12 people as sample which were intervention group contain 6 people and the control group consisted of 6 people too. The results showed differences in pain intensity change which is obtained P = 0.046 means that there is a differences between non-pharmacological therapy is giving a warm compress and massage on the elderly who have complaints of joint pain. Conclusion: There are significant differences between warm compresses and massage therapy in reducing pain intensity of Knee Joints In Elderly people at "Panti Bina Lansia" Jayapura District. Discussion; based on the research above we could suggest to all people who has pain as caused of Arthritic can use massage and warm compress as the first aid for being treated.***

Keywords: warm compress, massage, rheumatoid arthritis pain, pain intensity.

1. Introduction

According to the World Health Organization that the elderly population in Indonesia in the upcoming 2020 already reach 11.34% or recorded 28.8 million people, 6.9% live under 5 years that causes the elderly population in the world. The Central Bureau of statistics (BPS) Province with the age of the higher life expectancy also has a population of seniors. An area called the old structured if the percentage of ancient of over 7%. From across the province in Indonesia was a province, there were 11 inhabitants of elderly was more than 7%, i.e. the special region of Yogyakarta, East Java, Central Java, Bali, South Sulawesi, West Sumatra, North Sulawesi, West Nusa Tenggara, West Java and Nusa Tenggara East. While the five provinces with the lowest percentage of elderly are: Papua (2.15%); West Papua (2.92%), Riau Islands (3.78%), East Kalimantan (4.53%), and Riau (4.86%).

About 40% of the total population of Indonesia are aged over 40 years have complaints of aching joints and muscles. On the other hand, understanding and concern societies, health and Government circles against the disease are still not adequate (Indonesian Arthritis and Rheumatism Council/INARC, 2013). According to a report from Jayapura Regency Social Service that the number of elderly residents in Jayapura, Sentani at Panti Bina Lansia there are a number of 21 people suffer from rheumatoid arthritis each of 9 men and 12 women for the year 2015.

Arthritis pain in the joints can be addressed are pharmacological and non-pharmacological. Non-pharmacological basis may use either pain management techniques with physical exercise, massage, warm compress settings and diet. From the results of interviews with some of the elderly who experience pain complaints in a Panti Bina Lansia, treated that they often use is massage using oil in areas that experience pain in the joints and there hasn't been an elderly used a warm compress to relieve the pain. From the results of the interview also obtained method using oils turns out effective massage for some elderly and there are still some elderly who still complain of pain.

A warm compress in principle will increase blood flow to the area so that the process of developing joint inflammation is reduced (Thys Michels, 2006). In addition to hot therapy will be waging a blood circulation, increases the flexibility of the network so as to reduce the pain as well as allowing therapeutic results obtained optimally lowering blood viscosity, reduce muscle tension, increase metabolic networks and increase capillary permeability (Kusuma astuti, 2008). Based on the background of the above the author very interested to identify difference granting a warm compress and pain intensity against massage on the elderly who have complaints of soreness arthritis rheumatoid in Panti Bina Lansia Sentani 2016.

2. Methods

The location and design of the Research study was carried out in The Community Elderly Sentani Regency Jayapura. This type of research is the queasy experiments with posttest only with control group design.

a. Location and Timetable

The collection of data on research was held at Panti Bina Lansia Sentani Regency Jayapura. Data collection on this research for approximately 7 days in October 2016.

b. Collecting Data

Data collection in this research by conducting questionnaire against charging the respondent with the use of a detailed questionnaire that was available to get the public identity of the patient, then do massase therapy and warm compress and then done observations based on the intensity of the pain is either given a warm compress or masasse technique in the control group and the treat.

c. Data Analysis

Data analysis done in a univariate and bivariate. Data obtained in the form of numerically analyzed using appropriate statistical tests, this test is intended to determine whether there is a difference of granting a warm compress and pain intensity against massage rheumatoid arthritis in the elderly with confidence level of 95% or α = 5% (0.05).

3. Result

a) Elderly Characteristic

Table 5.1: The distribution of Respondents according to the characteristics of the age, gender, education and ethnic/tribal and Religious on Panti Bina Lansia Jayapura.

No	Characteristic	n	%
1	Age		
	a. 65-70 Year	8	66,7
	b. 71-75 Year	4	33,3
Amount		12	100
2	Sex		
	a. Male	6	50
	b. Female	6	50
Amount		12	100
3	Religion		
	a. Islam	2	16,7
	b. Protestant	10	83,3
Jumlah		12	100
4	Pendidikan		
	a. Tidak sekolah	2	16,7
	b. SD	8	66,6
	c. SMP	2	16,7
Amount		12	100
5	Race		
	a. NonPapuan	4	33,3
	b. Papuan	8	66,7
Total		12	100

Source: Primary Data, 2016

Based on table 5.1 distribution characteristics of the elderly most in the age group 65-70 years on as many as 8 people (66.7%), gender men and women each of as many as 6 people (50%), the largest Protestant people (as many as 10 83.3%) and most educated of the SD as many as 8 people (66.6%) and most with non-Papua as many as 8 people (66.7%).

b. Knee Joint Pain Intensity (Arthritis Joints) In An Elderly Community Centers After Massage

Table 5.2: Distribution of Respondents based on the intensity of the pain after done massage in an Elderly Community Sentani Regency Jayapura.

Respondents	Intensity		
	Day 1	Day 2	Day 3
1	1	0	0
2	4	2	1
3	3	3	2
4	4	2	1
5	3	3	2
6	4	4	2
Average	3,2	2,3	1,3
Repead Anova	P= 0,024	P= 0,024	P= 0,024
Pairwise Comparisons	Comparison day 1 and 2	Comparison day 2 and 3	Comparison day 1 and 3
	P = 0,093	**P = 0,012**	**P = 0,006**

Source: Primary Data, 2016

From the table above was obtained by a group of elderly get preferential treatment with the median average, Massage – Pain Intensity decreased from 3.2 on the first day being 1.3 on day three. Test results from the Anova repeat obtained the value of P = 0.05, or 0.024 < so it can be inferred the non-pharmacological management therapy with the elderly in massage have complaint pain knee joint there is a difference on day 1 and 3. Test results from the Anova repeat (Pairwise Comparisons) seem significant differences on day 1 and 3 that is the value of P = 0.006, although on day 1 and day 2 is not yet Apparent difference.

c. Pain Intensity at Knee Joint (Joint Arthritis) In Bina Lansia of The Elderly After Performed A Warm Compress.

Table 5.3: Distribution of Respondents based on the intensity of the pain after performed a warm compress on The Bina Seniors Sentani Regency Jayapura

Respondents	Intensity		
	Day 1	Day 2	Day 3
1	3	1	1
2	6	3	2
3	3	3	3
4	3	1	1
5	6	3	3
6	3	3	2
Average	4	2,3	2
Friedman test	**P= 0,015**	**P= 0,015**	**P= 0,015**
Analisys Post Hoc	Comparison day 1 and 2	Comparison day 2 and 3	Comparison day 1 and 3
	P = 0,063	**P = 0,157**	**P = 0,042**

Source: Primary Data, 2016

From the table above was obtained by a group of elderly get preferential treatment with warm Compresses, flat median decline – Pain Intensity of 4 on the first day into 2 on day three. Friedman's test results from test obtained P value = 0.015, 0.05 or < so it can be inferred the non-pharmacological management therapy with a warm compress on the elderly who have complaints of knee joint pain there is a difference on day 1 and 3. The Post Hoc test results from

retrieved results day 1 and 2 does not to appear to be a difference, as does the day 2 to day 3 no changes but if viewed from day 1 up to 3 new Visible changes.

d. Knee Joint pain Intensity difference (Arthritis joints) At Bina Lansia After Having Done a warm compress and Massage

Table 5.4: Distribution of Respondents based on the difference in the intensity of pain on day 3 after performed a warm compress and Massage in an Elderly Community Sentani Regency Jayapura

Respondents	Intensity	
	Post Warm Compress Day 3	Post Massage day 3
1	1	0
2	2	1
3	3	2
4	1	1
5	3	2
6	2	2
Average	2	1,3
Wilcoxon test	**P= 0,046**	**P= 0,046**

Source: Primary Data, 2016

From the table above was obtained by a group of elderly get preferential treatment with warm Compresses and massage on day 3 saw no difference in the change of the intensity of the Pain which the obtained value P = 0.046 means that there is a difference between the giving of non-therapy warm compresses and granting pharmacological massage on the elderly who have complaints of joint pain.

4. Discussion

a. Knee Joint pain Intensity difference (Arthrits joints) At Bina Lansia after having warm compress and after Massage.

From the results of research on the elderly who have complaints are conducted as well as a warm compress massage therapy the same as effective for reducing joint pain. From the results of the analysis of the action either compress or bivariate action has a positive influence massage towards a decrease in the pain that is retrieved the value P = 0.015 or 0.05 < to compress and P = 0.024 or 0.05 for massage <. However, after the Post Hoc analysis and the results of Pairwise Comparisons Appear the difference where the action is more effective in lowering massage pains. The real difference appears on the 2nd and the 3rd, massage already happening on changes and on the warm compress is yet to happen.

This is due to the touch and with a touch of relaxation or massage technical effleurage/polishing and parties/massage performed for 20 minutes will help elderly relaxed by massage gently around the knee joint. This happens because massage stimulates the body releasing compound endorphin which is a natural pain reliever. Massage techniques to pain mechanism of the knee joint can cause the increase of endorphin which in turn can relieve the pain because it stimulates the hormone endorphin's pain relief naturally (Nida dkk 2014).

Potter and Perry (2005), suggested a single sensation is pain caused by psychosocial factors and culture as well as endorphin someone, so that more people feel the pain. After given a warm compress, labor pain decline because the granting of a warm compress on the elderly.

A warm compress to dry depends on your use of a given heat for 30 minutes is also effective against a decrease in joint pain but a warm compress only give local effect by increasing the local temperature in the skin which increases circulation on the network to process the body's metabolism and it can reduce pain and reduce muscle spasm as well as provide comfort and serenity on the elderly. A warm compress has been given cause transmission of pain covered so the cortex cerebra cannot receive the signal because the pain is already blocked by the stimulation of the pain changed so warm with the warm stimulation to reach the brain first (Mander, 2004).

Joint pain that occurs in the elderly is caused by many factors and one of them the existence of the limitation of motion on the elderly who are less trained so that the knee joint is primarily the muscles of the quadriceps suffered atrophy and become weak. On the elderly who researched is elderly aged between 65-70 years and 71-75 years. On the measurement of pain by using a test lacquer and cross lacquer tests (O'conel) and stretch the pain intensity occurs in diverse elderly so found the elderly experience pain with a wide scale of pain ... Less activity as well as the presence of physical decline in elderly onset risk causing joint pain and a warm compress or massage action is aimed at reducing spasm and blood circulation in the local area.

The knee joint can experience pain and can increasingly excellent if not immediately effected the handling. This is due to the muscles surrounding the knee joint especially quadriceps muscle undergoing atrophy and become weak. Decreased muscle function will reduce the stability of the joints especially the joints weight so that it can make things worse diseases and cause deformities (Tulaar, 2011). Pain is a subjective sensation and emotional experiences that disagreeable showed discomfort verbally and non-verbal related to the tissue damage that actual and perceived potential in events where the crash (Potter & Perry, 2005 in Syahputra, 2013).

The elderly in The Community Elderly who have experienced joint pain are common joint cartilage deterioration, most occur at joints that withstand the weight and the formation of bone in the joint surface if not used anymore it might cause inflammation, pain, decreased mobility and joint deformities. The bone that the task of maintaining the body shape also experienced setbacks, limestone contains substances began to diminish, so easily broken and joints that are experiencing inflammation can cause serious pain. Feeling pain is felt the aged is reduced when compared at the age of adolescence.

The usual diseases that accompanied the great pain when suffered by young adults not felt anything, but by age, although people felt sick but it's hard to describe what is actually perceived. In addition to the incidence of bone

around the joint will interfere with movement and cause pain if the join is active. As you get this cartilage will shrink accompanied by aches and pains.

Despite the knee joint pain can be overcome in pharmacological therapy of non-pharmacologic but can be effective if done on a regular basis on the elderly. This therapy can be done by elderly independently moreover by ushers Parlors as a form of care to the Elderly by using simple equipment. Despite the warm compresses and massage therapy effective for lowering the knee joint pain in the elderly, these methods will be more effective if done combination treatment such as research conducted by Beautiful Lestari at el (2013) the results of the research conducted qualitatively in informant revealed after being given a warm ginger compresses and given massage centralized at knee for 20 minutes can reduce tension and anxiety of the elderly.

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