EFFECTIVE WARM COMPRESSIVE EFFECTIVENESS JOINAL PAIN IN ELDERLY

***Sandy Kurniajati, **Diana Puspandari**
*Lecture at STIKES RS Baptis Kediri
** undergraduate at STIKES RS Baptis Kediri
Email: sandykurniajati@gmail.com

ABSTRACT

Elderly experience changes in joint flexibility, causing pain (Azizah, 2011). Non-pharmacological measures to overcome pain in the elderly with warm compresses (Wahit, 2015). The purpose of this study is to analyze the Effectiveness of Warm Compresses on Joint Pain in the Elderly. Study design with a literature review of researchers that used pre-post design with the Bourbanis pain scale. Population of articles from research journals from 2010 to 2020. The inclusion criteria in this study were published by the Open Access Journal system, journal manuscripts consisting of abstracts and full text, Indonesian language articles or English journals from Indonesia indexed by Google scholar 1,770 data and SINTA 20 data. The number of references used is 8 articles. Data identification through PICO (Population, Intervening, Comparison, and Outcome) approaches. The results showed that the elderly had joint pain with an average on a scale of 4.66. (Moderate degree of pain).Joint pain after giving a warm compress with an average pain of 2.35 (mild pain). Giving warm compresses was proven effective in reducing joint pain with an average statistical test results p = 0.001 with all Wilcoxon statistical test results below α = 0.05, with an average reduction of 2.31. It was concluded that warm compresses are effective in reducing joint pain in the elderly, so that the administration of warm compresses can be given as a non-pharmacological treatment for elderly joint pain.

Keywords: Joint Pain, Warm Compress, Elderly

Introduction

The process of aging is a lifelong process, not only starting from a certain time, but starting from the beginning of life. Growing old is a natural process, which means someone has gone through three stages of life, namely children, adults, and old people. Entering old age means experiencing setbacks, such as physical setbacks that are characterized by sagging skin, graying hair, teeth begin to toothless, hearing is unclear, vision is getting worse, slow motion, and body figures that are not proportional (Untari, 2018). Elderly experience changes in the cardiovascular system, respiratory system, gastrointestinal system, musculoskeletal system, vision system, integumentary system, neurology system, genitourinary system, sensory system, endocrine system (Padila, 2013).

Changes that occur in the musculoskeletal system one of which decreases strength and stability. The problem that occurs in the musculoskeletal system is the change in collagen which is a cause of decreased flexibility in the elderly resulting in pain effects, decreased ability to increase muscle strength, difficulty moving from sitting to standing, squatting and walking and obstacles in carrying out daily activities (Azizah, 2011). Elderly at the Health Care Post Office of GerejaBaptis Indonesia Getsemani Kota Kediri, many experienced joint pain in the knee joints and legs.

Based on the 2007 Basic Health Research report (Riskesdas) said that the national prevalence of joint disease was 30.3% and the diagnosis of health workers was 14% (Triatmaja, 2013). While based on the results of Riskesdas (2013) the prevalence of joint pain based on diagnosis by health professionals in Indonesia was 11.9% and based on symptoms as much as 24.7%. The highest prevalence of joint pain in Indonesia is in East Nusa Tenggara as much as 33.1, while in East Java it is 26.9%. The results of the pre-study at the Health Care Post ofGerajaBaptis Indonesia Kota Kediri on January 26 to 28, 2020 of 34 elderly who experienced joint pain with a purposive sampling calculation of 24 elderly with a prevalence of 70.5%. Elderly experiencing degeneration process, degeneration of joint disease in the early stages of the cartilage of the joints are seen damaged and efforts arise to improve the process. Joints are parts of the body that are often affected by inflammation and degeneration seen in joint pain. Despite having diversity ranging from abnormalities confined to a single joint to systemic multi-system disorders, all rheumatic diseases include inflammation and degeneration to some degree that is common at once. Inflammation will be seen in the joints as synovitis. In gout, inflammation is a primary and degenerative process which is a secondary process that arises due to the formation of pannus (synovial tissue proliferation). Inflammation is a result of the immune response. Conversely in degenerative joint pain can occur a secondary inflammatory process.This synovitis is usually milder and represents a reactive process, and are more likely to be seen in advanced disease. Synovitis can be associated with the release of cartilage proteoglycans that are free of articular cartilage which degenerates although immunological factors may also be involved. Factors affecting the experience of pain are physiological, social, spiritual, psychological (Sulistyarini, 2017). If the pain is not treated it will have an impact on physical signs and symptoms, behavioral effects, influence on daily activities (Wahit, 2015). Joint pain in the elderly has an impact on decreasing daily activities. Complaints in the joints begin with feeling stiff or sore when you wake up in the morning, which generally lasts only briefly and then is moved around. Then the pain arises in the newly used joint and disappears after rest. Over time the pain in the joints is felt continuously, even though the affected joint is moved lightly or even at rest Insome people, if the affected joint is moved, there will be sounds like bone clashing so that this reduces the quality of life of the elderly. Family and social support, pain people sometimes depend on other family members or close friends for support, help, or protection. Although pain is still felt, the presence of family or friends can sometimes make the experience of pain that causes stress to be reduced (Sulistyarini, 2017).

Managing joint pain in the elderly, needs to be given appropriate treatment both pharmacologically and non-pharmacologically (Arya& Jain, 2013 in Iwan, 2017). Provision of elderly analgesics should be only when pain, but in some elderly sometimes require long-term therapy. Long-term treatment, other alternatives should be considered such as the application of heat and cold in the joints to relieve pain complaints (Padila, 2013). Pharmacological action can be given by administering analgesics (Perry, 2009 in Sulistyarini, 2017). Non-pharmacological measures to overcome pain in the elderly by doing distraction, relaxation, massage (massage), warm compresses (Wahit, 2015). Nurses play a role in overcoming joint pain in the elderly is very important by providing non-pharmacological nursing measures to reduce joint pain. Non-pharmacological measures that can be given are with warm compresses, warm compresses are useful, for the treatment of pain and relaxing tense muscles. The purpose of this study is to analyze the Effectiveness of Warm Compresses on Joint Pain in the Elderly.

Research methods.

Researchers conducted a research literature review design with measurement of joint pain on the Bourbonis scale (Wahit, 2015). This review aims to determine and examine the literature (examine literature) whether there is effectiveness of warm compresses in elderly joint pain. Population of articles from research journals from 2010 to 2020. The online data base used is from repositories from Indonesia or other countries that use international languages. The inclusion criteria in this study were published by the Open Access Journal system, journal manuscripts consisting of abstract and full text, Indonesian language articles or English journals from Indonesia indexed by Google Scholar and SINTA. Number of SINTA articles: 20 data and Google Scholar articles: 1,770 data The number of references used in the literature review are 8 main articles in full text. The researcher identified the data through the PICO (Population, Intervening, Comparison, and Outcome) approach.

Research result.

Table 1 Analyzing Joint Pain in the Elderly Given Warm Compress Therapy Based on Literature Review Results

No.	Journal	Pain Scale Before	Pain Scale After	Change	P Scale
1	Henricha Evalina Sinaga, Dkk (2015)	Warm Compresses 2.93 Control Group 2.13	Warm Compresses 0.73 Control Group 1.66	Warm Compresses 2.20 Control Group 0.47	Warm Compresses P = 0.001 P = 0.905 Control Group P = 0.004
2	Mujib Hannan, Dkk (2014)	5,50	2,87	2,63	P = 0,000
3	Ani Dwi Pratintya, Dkk(2014)	Warm Compresses 5.25 Control Group 5.50	Warm Compresses 1.25 Control Group 4.30	Warm Compresses 4.00 Control Group 1.20	Warm Compresses P = 0.000 P = 0.000 Control Group P = 0.001
4	Selawati, Dkk (2016)	Warm Compresses 4.90 Warm Compresses Of Ginger 5.15	Warm Compresses 3.15 Warm Compresses Of Ginger 3.25	Warm Compresses 1.75 Warm Compresses Of Ginger 1.90	Warm Compresses P = 0.000 P = 0.710 Warm Compresses Of Ginger P = 0.000
5	Iwan Muliawan, Dkk (2017)	Warm Compresses 4.86 Back Massage 5,33	Warm Compresses 3.40 Back Massage 3.06	Warm Compresses 1.46 Back Massage 2.27	Warm Compresses 0.002 P = 0.00 Back Massage 0.000
6	Mellynda Wurangian, Dkk (2014)	6,23	3,30	2,93	P= 0,000
7	Yohana, Dkk (2017)	5,32	2,84	2,48	P= 0,000
8	Hasrul, Dkk (2018)	2,40	1.30	1,10	P=0,000
	Average (warm compress) (min-max)	4,66 (2,4-6,23)	2,35 (0,73-4,3)	2,31 (1,10-4.00)	P= 0,001 (0,000-0,004)

Based on 8 research articles found that the elderly have joint pain with an average on a scale of 4.66, with a minimum pain scale of 2.4 and a maximum pain scale of 6.23. This shows the elderly have moderate pain. Joint pain after giving a warm compress with an average pain of 2.35

with a minimum pain scale of 0.73 and a maximum pain scale of 4.3. This is aimed after giving the pain compresses decreased to mild degrees of pain. The application of warm compresses has been proven to be effective in reducing joint pain with an average statistical test result of p = 0.001 with all Wilcoxon statistical test results below α = 0.05, with an average reduction of 2.31, a change of at least 1.10 and a maximum change of 4.

Discussion.

Elderly experience pain in the joints with an average on a scale of 4.66, with a minimum pain scale of 2.4 and a maximum pain scale of 6.23. This shows the elderly have moderate pain.

Aging (getting old) is a process of slowly disappearing the ability of the network to perform its function in meeting the needs in life. Aging is characterized by sagging skin, graying hair, decreased hearing, poorer vision, emotional sensitivity. The aging process is a continuous process (naturally) naturally (Priyoto, 2015). Changes in the musculoskeletal system in the elderly in the form of degenerative joint disease (Padila, 2013). The elderly experience an aging process that is slowly but surely (progressive) will experience a setback and it will be experienced by all the elderly and it is natural. This reduction process in the digestive system will affect collagen tissue and lead to progressive joint disease (PSD). Elderly joints tend to experience distortion. In the early stages of PSD in the elderly the cartilage of the joint is damaged and an attempt is made to improve the process. In certain circumstances, the repair process runs smoothly, but because the degeneration process goes faster than the repair process, the cartilage will lose proteoglycans and condritis, causing pitting and fissures accompanied by erosion. To compensate for these structural changes, the bone under the cartilage will experience sclerosis and the bone at the edge of the joint will form osteophytes (spurs).

Complaints of joint pain in the elderly include: neck and back pain, shoulder pain, buttocks pain, leg and knee pain and pain in the legs (Pandila, 2013). In the elderly, the most common causes of neck and bed pain can be degenerative joint disease, osteoporotic fractures, or spinal stenosis. Degenerative joint disease (PSD) generally affects the facet joints. In this situation, pain is often triggered by extension and rotation of the spinal bone. Elderly will experience soreness when bending like a sweep landau or circular movements of the waist. Shoulder pain in the elderly in the elderly can be caused due to other pain in the neck, also due to the stiffness of the biceps and triceps. Buttocks pain in the elderly can be influenced by degenerative factors and inflation in the muscles as a cushion for sitting and helping movement in standing can also be caused by other diseases such as tumors. Leg and knee pain in the elderly due to weight gain and this is compounded by muscle weakness due to lack of activity in the elderly. Pain in the elderly feet due to the fat pads on the soles of the feet are reduced so that the joints and bones are depressed when the elderly stand up.

Joint pain is an unpleasant sensory from an emotional accompanied by actual or potential tissue damage or overall tissue damage in any part of the bone junction, both of which allow the bones to move or

cannot move with each other (Lukman, 2012) . Joint pain is a disease that often irritates joint muscles. This disease is a single symptom that can interfere with the body's performance. Pain in the joints often weakens the body, so that it will disrupt daily activities. Joint pain is prone to be experienced by people who are elderly, obese, make repetitive movements, and inadequate physical exertion such as people who are too forced to work physically too hard every day (Ibnu, 2016). Elderly who experience joint pain can be due to damage to body tissues, especially in the joint muscles that can affect the motion of the elderly even up to the activity and fulfillment of the elderly's daily needs. Elderly with joint pain will try to maintain the position of the joints so as to experience limited movement, of course, will result in the elderly failing to meet their daily needs such as bathing, dressing, urinating and urinating and activities outside the home. Disruption of fulfillment of daily activities will make the elderly have dependence on other people especially families in meeting their needs.

The results of the study aimed at the elderly experiencing pain with an average scale of 4.66. Pain scale according to Bourbanis: 0 = no pain; 1-3 = mild pain; 3-6 = moderate pain; 7 - 10 = very painful (Wahit, 2015). Signs and symptoms of joint pain are as follows: inflamed joints feel painful, stiff, and swollen, fever, more severe pain when moved, redness in the painful joints, the body is uncomfortable when held (Ibnu, 2016). The elderly in this study experienced moderate pain, where pain ranged from pain range 3-6. Elderly with moderate pain can be marked by inflammation or inflammation in the joints, when you wake up in the morning when you start the activity of course the pain will increase, and with moderate pain pain response in the elderly will be increasingly visible both verbally and pain expression shown by the elderly.

Factors Affecting Pain Experience includes physiological, social, spiritual, and psychological factors (Sulityarini, 2017). The elderly have decreased function and physiological changes, this of course leads to changes in the physiology of the joints both connective tissue and collagens in the weakened joints, so that the sensation of pain will also increase. Social factors in the elderly about pain this is because the elderly are too focused on pain, so that it will increase the pain response experienced. Spiritual factors in the elderly who are less supportive make the elderly tend to be trapped in weak conditions that do not receive spiritual support. This is especially true for elderly people who lack spiritual strength. Psychological factors of the elderly with pain will increase if the anxiety of the elderly in dealing with self-change and pain is high, so the elderly do not have a strong psychological ability to reduce pain and even the pain response will increase.

The physiology of pain in the joints is that each synovial joint has a certain range of motion even though each person does not have a certain range of motion even though each person does not have the same range of motion in movable joints. In normal synovial joints the articular cartilage wraps the ends bone in the joints and produces a smooth and ductile surface for movement. The synovial membrane coats the inner wall of the fibrous capsule and secretes fluid into the intercellular space. This synovial fluid functions as a shock absorber and shock that allows the joint to move freely in the right ndirection. Joints are

parts of the body that are often affected by inflammation and degeneration seen in joint pain. Despite having diversity ranging from abnormalities confined to a single joint to systemic multi-system disorders, all rheumatic diseases include inflammation and degeneration to some degree that is common at once. Inflammation will be seen in the joints as synovitis (Smeltzer, 2002 in Sulistyarini, 2017). Elderly people who experience pain are having synovial joints when there is friction due to reduced synovial fluid as a lubricant and friction between bones. This, if it is expected to be more advanced, can cause inflammation or slaughtering, of course, it will have an impact on increasing joint pain.

The application of warm compresses has been proven to be effective in reducing joint pain with an average statistical test result of p = 0.001. With a large decrease in the average 2.31 changes at least 1.10 and maximum changes 4. Joint pain after giving a warm compress with an average pain of 2.35 with a minimum pain scale of 0.73 and a maximum pain scale of 4.3. This is aimed after giving the pain compresses decreased to mild degrees of pain.

Warm compresses a method of using local warm temperatures that can cause some physiological effects, the therapeutic effect of giving warm compresses include reducing pain, increasing blood flow, reducing muscle spasms, and decreasing joint stiffness (Wahit, 2015). Warm compresses have the advantage of increasing blood flow to an area and may help reduce pain by accelerating healing. Warm compresses can reduce pain (Noor, 2016). Heat works to stimulate painless (non-non-receptor) receptors in the same receptors as the injury. Warm therapy can reduce prostaglandins, which strengthen the sensitivity of pain receptors and other subcutaneous at the site of injury by inhibiting the inflammatory process. To be effective. The use of heat has the advantage of increasing blood flow to an area and thus. Both dry and moist heat therapy are likely to provide analgesics but additional research is needed to understand their mechanism of action and indications for their appropriate use (Wahit, et al, 2015). Physiological effects of warm compresses: Vasodilation; Increase capillary permeability; Increase cellular metabolism; Relaxing the muscles; Increase blood flow to an area; Relieves pain; Sedative effect; Reducing joint stiffness alleviates bleeding (Sulistyarini, 2017). Giving warm compresses to the elderly with their own pain has proven to be effective in reducing joint pain. Warm compresses can provide a therapeutic effect by increasing blood flow to the compressed area which ultimately can stimulate the receptors without pain and prostaglandins so that the elderly experience relaxation. Relaxation in painful joints will reduce the sensation of pain in the elderly, so that pain reduction can occur. Giving warm compresses on painful joints in the elderly proved to be effective in reducing joint pain in the elderly because it was able to provide analgesic effect on the compressed area and the joints became no longer rigid, joint movements were freer sothat the elderly could increase their mobility and could increase their fulfillment needs. Live every day without having to depend fully on other people and families.

The results of the study address changes in joint pain in the elderly from moderate to mild pain. Pain scale according to Bourbanis: 0 = no pain; 1-

3 = mild pain; 3-6 = moderate pain; 7-10 = very painful (Wahit, 2015). The purpose of warm compresses: accelerate blood circulation, reduce pain, stimulate intestinal peristalsis, expedite inflammation inflammation (exudate), provide a sense of comfort / warmth and calm (Wahit, 2015). Decreasing the degree of pain in the elderly from moderate pain to mild pain will certainly affect the pain response experienced by the elderly. Elderly people will increase their sense of comfort in their daily activities, so that their help to others and their families can be reduced. Comfort that is owned by the elderly will stimulate the peristalsis to be normal and increase food intake in the elderly so that the degree of health in meeting nutritional needs can be met.

Conclusion

Giving warm compresses on the floor with pain has been proven to be effective in reducing joint pain from moderate to mild pain. Elderly with moderate pain can be given a warm compress therapy with a temperature of 50-60 ◦ C, with a dry warm compress using a bladder for 20 minutes on the area of the painful joint.

Suggestion

Giving warm compresses to reduce joint pain in the elderly can be carried out independently at home so as to reduce dependence on pharmacological treatment. The elderly can carry out independently at home or with the help of family support, because the warm compress procedure does not require special competence and can be trained in families and the elderly. The role of the Posyandu for the elderly and Puskesmas in providing training for the elderly with joint pain can be transcended and included in the work program in the elderly Posyandu. The development of counseling materials in the form of leaflets and bookleats can be disseminated as health promotion in improving the health status of the elderly.

Reference

Ani, dkk.(2014).Kompres hangat menurunkan nyeri persendian osteoartritis pada lanjut usia. Jurnal Kebidanan dan Keperawatan

Azizah, (2011). *Keperawatan Lanjut Usia.* Yogyakarta : Graha Ilmu

Hasrul, dkk (2018). *Pengaruh Kompres Terhadap Penurunan Intensitas Nyeri Gout Artritis Pada Lansia. JIKP Jurnal Ilmiah Kesehatan Pencerah, 7* (2), 84-89. Diakses pada tanggal 18 Juni 2020. Pukul 20.00 WIB

Henricha, (2015). *Pengaruh Kompres Hangat Terhadap Nyeri Sendi pada Lansia (60-70) Tahun).* http://eprints.undip.ac.id/46654/. Diakses pada tanggal 06 Januari 2020 Pukul 20.00 WIB

Ibnu, Cidadapi, (2016).*Ramuan Herbal Ala Thibun Nabawi.* Putra Danayu. https://books.google.co.id. Diakses pada tanggal 12 Desember 2019. Pukul 16.00 WIB

Iwan, dkk (2017). *Efektivitas Managemen Nyeri Non Farmakologi Kompres Hangat dan massage Punggung Terhadap Penurunan Skala Nyeri Sendi pada Lansia di Panti Wreda Pangesti Lawang*. *Nursing News: Jurnal Ilmiah Keperawatan*, *2*(3).Diakses pada tanggal 9 Januari 2020. Pukul 10.00 WIB

Mellynda, dkk (2014). *Pengaruh Kompres Hangat Terhadap*

Penurunan Skala Nyeri Pada Penderita Gout Arthritis Di Wilayah Kerja Puskesmas Bahu Manado. *JURNAL KEPERAWATAN*, *2*(2). .Diakses pada tanggal 18 Juni 2020. Pukul 18.00 WIB

Mujib, dkk (2019). *Pengaruh Terapi Kompres Hangat Terhadap Penurunan Nyeri Sendi Osteoarthritis Pada Lansia Di Posyandu Lansia Puskesmas pandian Sumenep*. *Wiraraja medika*, *9*(1), 1-10. Diakses pada tanggal 15 Mei 2020. Pukul 13.00 WIB

Noor, (2016).*Buku Ajar Gangguan Muskuloskeletal*.Jakarta:Salemba Medika

Padila, (2013). *Keperawatan gerontik.*Yogyakarta: Nuha Medika

Priyoto, (2015). *NIC Dalam Keperawatan Gerontik.* Jakarta : Salemba Medika

Selawati, dkk(2016). *Kompres hangat jahe atau tanpa jahe menurunkan nyeri sendi lutut lansia. Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, *6*(2), 45-53.. Diakses pada tanggal 29 Mei 2020. 09.00 WIB

Setiawati, (2019). Perbandingan Efektivitas Kompres Hangat dan Kompres Dingin Terhadap Nyeri Disminorea pada SMK pertanian pembangunan negeri lampung di lampung selatan. *Manuju: Malahayati Nursing Journal.*

Sulistyarini, dkk. (2017). *Kompres Hangat dan Senam Lansia dalam Menurunkan Nyeri Sendi Lansia*. Nganjuk: Adji Media Nusantara

Wahit, dkk. (2015). *Buku Ajar Ilmu Keperawatan Dasar.* Jakarta: Salemba Medika

Yohana, dkk. (2017). *Perbedaan Intensitas Nyeri Osteoatritis pada Lansia Sebelum dan Sesudah Dilakukan Kompres Hangat di Kelurahan Tlogomas Malang. Nursing News: Jurnal Ilmiah Keperawatan*, *2* (1). Diakses pada tanggal 18 Juni 2020. Pukul 19.00 WIB