



Application of Rheumatic Gymnastics Therapy to Address Acute Rheumatic Pain Nursing Problems in the Elderly at Nursing Home: A Case Study

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ABSTRACT

Rheumatism in the elderly occurs due to swollen joints, inflammation or damage caused by damaged joints and tense muscles. These changes include the presence of disease that causes damage to cartilage, degenerative joints and nearby bones, and can cause inflammation of the inner lining of the joint. Complaints that are often felt by someone who has arthritis are pain in the limbs, inflammation of the joints, joint stiffness, joint sounds. The purpose of this scientific work is to overcome the application of rheumatic gymnastic therapy in dealing with acute pain in rheumatic clients. The research method used was a case study through a process of assessment to evaluation of nursing related to acute pain experienced by rheumatism sufferers and given therapeutic interventions by rheumatic gymnastics. Rheumatic gymnastics is an alternative treatment for the health of the elderly body and trains the ability of joint muscles so that they do not experience joint stiffness, rheumatic gymnastics also prevents degenerative growth in aging, facilitates adjustments in health. Therapy was given for 3 days with a duration of 15 minutes, analyzed to find a reduced time in 30 minutes which was carried out at least 2 times in 1 week. And these exercises are very effective and in accordance with the energy released by the elderly. Physical exercise time that is carried out for more than 30 minutes can cause fatigue in the elderly which can cause discomfort. The results of the evaluation of the use of rheumatic gymnastics in reducing the client's acute pain were that after 3 days the evaluation of the client said it was better and in accordance with the outcome criteria where there were complaints of decreased pain. Suggestions for future researchers are expected to be able to develop the theory used and other therapies to reduce client fatigue levels.

Keywords: Rheumatic Gymnastics Therapy, Pain, Nursing, Elderly

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I. INTRODUCTION

Elderly is the final stage of life development in humans who have reached the age of 60 years. The process of aging which is important in the elderly can experience physical setbacks characterized by sagging skin, graying of hair, impaired hearing, reduced vision, mental and social so that they cannot carry out daily activities (Udianto A. M. 2016). According to WHO, the elderly population in Southeast Asia is 8% or around 142 million people. The increase in the elderly population can be predicted to reach 3 times in 2050. In 2025, the number of elderly people is projected to number 33.7 million or around 11.8% and in 2035 it will reach 48.2 million or around 15.8%. (Sulastri & Humaedi., 2017). According to Central Statistics Agency (BPS) data, the number of elderly people has increased from 18 million people (7.6%) in 2010 to 27 million people (10%) in 2020. The number is expected to continue to increase to 40 million people (13.8%) in 2035.

Rheumatoid arthritis is an inflammatory non-bacterial disease that is systemic, progressive, tends to be chronic and affects the joints and joint tissues symmetrically. Musculoskeletal disease in rheumatoid elderly has increased to reach 335 million people in the world. (Udianto, Rudiyanto. 2016). Based on WHO in

Sabara 2013 the prevalence in the world in 2004 reached 151.4 million people and 27.4 million people were in Southeast Asia. In Indonesia alone it reaches 5% at the age of <40 years, 30% at the age of 40-60 years and 65% at the age of > 61 years. Meanwhile, based on research conducted by the Center for Disease Control and Prevention (2007), as many as 38% (17 million) suffer from rheumatic diseases. Meanwhile, based on the diagnoses of health workers in Indonesia, the highest symptoms were in East Nusa Tenggara (33.1%), West Sumatra (33%), West Java (32.1%), and Bali (30%) (Siregar, Ramadhani. 2019).

Rheumatic gymnastics is a physical exercise that is carried out regularly in strengthening damaged joint supporting muscles, and reducing pain in the joints. Rheumatic gymnastics is also a good method for prevention and symptom relief that can serve as additional therapy. Giving rheumatic gymnastics techniques in increasing joint stability and surrounding muscle strength due to rheumatic gymnastic movements is useful for reducing irritation that occurs on the surface of the bones, and rheumatic gymnastics will also cause physiological effects to grow with a vasodilation effect, increasing cell metabolism (Udianto, Rudiyanto. 2016).

Based on the background above, students want to analyze the application of nursing care problems for acute pain patients with rheumatic gymnastics therapy for rheumatic patients at nursing home (Social Services Tresna Werdha or PSTW) Jember.

2. METHODS

The writing method used in this study is descriptive analytic with a case study design using a nursing care process approach. The focus of the problem in this research is the elderly who have arthritis. The implementation of nursing care was carried out on November 26 - December 10 2022 at Wisma Cempaka UPT Social Services Tresna Werdha Jember. Subjects in this study used one patient who was adjusted according to the inclusion and exclusion criteria. The inclusion criteria in this study were patients with rheumatic problems. Patients who are cooperative, while the exclusion criteria are patients who refuse to be treated as patients, patients with hearing impairments and patients with visual impairments. Data collection was carried out by observational assessment.

This study used primary data analysis, namely interviews with patients directly and also secondary data analysis, namely from activities carried out by the

elderly at Wisma Cempaka UPT Social Services Tresna Werdha Jember. Researchers use therapeutic communication in nursing in conducting interviews and nursing assessments of patients. This research is a case study of gerontic nursing care at Wisma Cempaka UPT Social Services Tresna Werdha Jember so that before conducting data collection, the researcher conducted guidance first and asked for permission to be used as a managed case from the PSTW supervisor. After obtaining permission to carry out nursing care in managed cases, the researcher then carried out the orientation stage for the patient. At the orientation stage the researcher tries to ask about the patient's general health condition to identify the extent of the patient's readiness to be interviewed.

Research creates a comfortable environment and builds a trusting relationship with patients. During the work stage the patient carries out a gerontic nursing assessment starting from identity, predisposing factors, precipitating factors to the medical therapy the patient receives. At the termination stage, the researcher closes and ends the nursing assessment by saying thank you and then contracts again to carry out nursing implementation on the patient. The data analysis technique in this research

is by using No-pharmacological therapy such as rheumatic gymnastics, then the researchers adjust it to previous theories and research that are appropriate to this case and also adjust it to the Indonesian Nursing Diagnosis Standards (SDKI), Indonesian Nursing Outcomes Standards (SLKI), and Indonesian Nursing Intervention Standards (SIKI).

3. RESULTS

Patient Mr. A is 74 years old, male, divorced and Muslim, the patient said that his last job was a pedicab driver. The client at this time is only active in the PSTW environment such as gymnastics, meeting in the hall, cleaning, and praying at the mosque. The patient entered the nursing home since 8 years ago. The client lives alone since his wife died. The client also works as a pedicab driver to fulfill his own needs. The client has 2 stepchildren who are already married, but the client says his two stepchildren do not want to take care of him and do not care about his condition. The client said that the sub-district head in his environment knew him from social institutions and offered to live in PSTW, the client agreed to live in PSTW and was taken care of by the sub-district head until finally he is currently living in PSTW.

The client says he has had pain in the leg area for about 5 years. The client

complains of pain in both lower extremities and walks using a cane. The client also said that his vision was blurry and he was advised to have surgery on the eye, but the client did not want it because he was afraid of defects/complications. The client said he had diarrhea about 5 days ago for 3 days so he couldn't do activities like everyday. The client said he felt pain in the legs, especially the knee area and radiated to the back of the waist. P: Pain in the pelvic area, age factor, Q: pain like tingling, R: hip area that radiates to the knee, S: 5 NRS, T: intermittent. The results of the study also showed that the patient Mr. A with associated clinical conditions Mr. A with traumatic injuries with management with acute pain will subside and disappear along with the rate of healing of diseased tissue. Such as physical exercise with rheumatic gymnastics. Rheumatic gymnastics is to reduce joint pain to maintain balance in rheumatic sufferers. (Desmonika et al., 2022).

Based on the data obtained, the patient experienced acute pain nursing problems Acute pain b.d. physiological agents (decreased physiological function) d.d The client complains of pain in his hip that radiates to his knee, the client looks grimacing when moving from a sitting position to a standing position, Assessment of Pain (P: Hip pain; Q: Pain like tingling;

R: hip area radiating to the knee; S: 5 (moderate pain); T: intermittent), NRS pain scale assessment obtained a score of 5 which means moderate pain, TTV results (BP 140/90, N 76x/m, RR 19x/m, S 36,7). With the intervention that will be carried out using pain management with the implementation of non-pharmacological therapies such as rheumatic gymnastics therapy. In general, rheumatic gymnastic therapy can improve movement ability, function, muscle strength and endurance, aerobic capacity, balance, joint biomechanics and sense of joint position. Rheumatic gymnastics can concentrate on joint movement by stretching the muscles, because muscles can support joint stiffness. Carrying out rheumatic gymnastics can help improve the quality of life of the elderly so that they can carry out the Activities of Daily Living (ADL) properly and do not harm other patients. (Fatmawati & Ariyanto, 2020).

4. DISCUSSIONS

Assessment Analysis Related to Case Description

The data focus on the primary diagnosis of acute pain, acute pain is a sensory or emotional experience related to actual or functional tissue damage, with sudden or slow onset and mild to severe intensity lasting less than 3 months. With

causes suffered by physical injury agents (eg abscess, amputation, burns, cuts, heavy lifting, surgical procedures, trauma, excessive physical exercise) with major or minor symptoms and signs with subjective: complaining of pain in the hip area and leg area, objective: grimacing, being protective (eg alert, position by avoiding pain and having difficulty sleeping) with clinical conditions related to Mr. A with traumatic injuries with management with acute pain will subside and disappear along with the rate of healing of diseased tissue. Such as physical exercise with rheumatic gymnastics. Rheumatic gymnastics is to reduce joint pain to maintain balance in rheumatic sufferers. (Desmonika et al., 2022) Rheumatic gymnastics is gymnastics that is designed to continue after and rheumatic gymnastics is an alternative treatment to have a good effect on the health of the elderly body by training the ability of joint muscles in the elderly so that they do not experience joint stiffness, rheumatic gymnastics can also slow down degeneration due to age growth, facilitating adjustment to physical health in life, improving reserve power with increasing needs, such as joint pain is a problem for patients in all age groups which can be experienced in a person's joints resulting in factors that affect individual pain, namely age, gender,

cultural meaning of pain, concern, anxiety, fatigue, coping styles, and family social support. (Elviani et al., 2022)

Nursing Problem Analysis in Primary Nursing Diagnoses

The client has a priority nursing problem of acute pain. Where is acute pain b.d. physical injury agents (decreased physical function) d.d clients complain of knee and low back pain when standing for too long and often feel intermittent pain. The client looked grimacing, there was no lump in the knee, the NRS pain scale assessment obtained a score of 5 which means moderate pain, and the examination results obtained TTV (BP 140/80, N 81 x/minute, P 19 x/minute, S 36.7°). This is in accordance with nursing guidelines for making nursing diagnoses where the diagnosis of acute pain can be taken with major and minor data as follows (PPNI, 2017): Major or Minor Symptoms and Signs: Major Symptoms and Signs Subjective: says pain, Objective: looks grimacing, be protective. Symptoms and Minor Signs Subjective: not available, Objective: increased blood pressure, changes in appetite, disturbed thought processes, withdrawal, self-focused, diaphoresis. (PPNI, 2017)

Besides that, in rheumatic diseases there are symptoms that may be found such

as joint stiffness which generally occurs for 15 minutes or more due to changes in the joint muscles, enlargement of the joints, experiencing changes in style when walking, and experiencing inflammation of the joints, impaired movement, and pain which increases with activity. (Desmonika et al., 2022). According to research that is in line with Fatkuriyah's research (2010) it can show that rheumatic gymnastics can reduce joint pain which can be done for 5 weeks. In improving independently in the elderly caused by joint pain can be reduced so that the elderly can be able to perform ADLs independently. (Riyanti & Kp, 2019).

Nursing Intervention Analysis on Primary Nursing Diagnoses

Nursing interventions to address problems in managed clients in accordance with the Indonesian Nursing Intervention Standards are (PPNI, 2018a). in the case managed by Mr. A main management intervention is acute pain which includes: Pain Management (I. 08238). Measures (Observation) such as: Identification of pain scale: assessing pain using the Numeric Rating Scale (NRS), Identification of non-verbal pain responses, Monitor the success of complementary therapies that have been given. (Therapeutic) Provide non-pharmacological therapy to reduce pain:

(EBN: Rheumatic Gymnastics Therapy to reduce joint pain stiffness, and help patient fitness), Control the environment that aggravates pain (Education) Explain causes, periods, and triggers of pain, Explain strategies relieve pain, teach non-pharmacological techniques to reduce joint pain. (Collaboration) Collaborative administration of analgesics, if necessary

One of the non-pharmacological therapies is rheumatic gymnastic therapy with SOP which can be done to relax joint stiffness in muscles. In rheumatic gymnastics by doing several stages: Both hands on the waist and after that shake the body to the right and left, with 5 counts, Hands on the waist and then turn the body to the left and right with 5 counts, Bend both fingers - toes up and down for a count of 5, lift your right leg and then move your foot up and down alternately with your left foot for a count of 5, lift your right leg forward and raise your knee up and down , do alternately, as much as 5 times the count

The plan for PSTW itself is to be able to collaborate with the nurses in the PSTW to continue to do one of the rheumatic gymnastic therapies by combining gymnastics which are always routinely performed every week. There is an action plan for the therapy of this rheumatic exercise so that those who have complaints

of joint stiffness can do all rheumatism every day, not just on certain days.

Nursing Implementation Analysis According to Evidence Based

The implementation carried out in this case study is rheumatic gymnastics therapy. Rheumatic exercise therapy to reduce joint pain that causes stiffness in the leg muscles. Therapy is given for 3 days with a duration of 15 minutes. In applying the application of rheumatic gymnastics to the elderly in the 5 articles analyzed, it was found that the time was reduced in 30 minutes which was carried out at least 2 times in 1 week. And these exercises are very effective and in accordance with the energy released by the elderly. Physical exercise time that is carried out for more than 30 minutes can cause fatigue in the elderly which can cause discomfort. (Minropa et al., 2022).

The implementation carried out in this case status is Rheumatic Gymnastics therapy. Based on research in the field, joint pain can be affected by the protective coating on the joints, which starts to thin and the bone fluid thickens, which causes the body to begin to experience stiffness and pain when moved, and pain that can be reduced by frequent morning exercise or gymnastics for the elderly. And patients who do elderly rheumatism can be

influenced psychologically, the elderly feel their muscles moving and fit after doing gymnastics, the elderly can improve social life during elderly exercise. And the direct psychological impact is that it can help give a feeling of relaxation, can reduce tension, increase feelings of pleasure when doing exercises to increase production or increase joint levels. (Elviani et al., 2022)

The research mentions gymnastics to improve the ability to walk in the elderly which can increase the independence of the elderly in moving and mobilizing. And one way to move places can improve the walking ability of the elderly and increase the independence of the elderly. By doing repetitive rheumatic gymnastics, it will increase the work of the joint muscles which improve blood flow and can cause the metabolism to increase. (Riyanti & Kp, 2019). With rheumatic gymnastics with this exercise, it can help nurses and the elderly in PSTW in doing this exercise to train the fitness of the elderly and so that it can be done by being included in the exercises which are always done every Tuesday and Friday.

Evidence Based Evaluation Analysis

The first evaluation when carrying out implementation on the first day of implementation was carried out on Wednesday, 30 November 2022 at 10.00

WIB. On the first day of evaluating the patient's pain scale 5, by assessing pain (P: Hip pain; Q: Pain like tingling; R: hip area that radiates to the knee; S: 5 NRS (moderate pain); T: intermittent), Subjective namely clients say they are more relaxed after doing rheumatic gymnastic exercises, on the objective that clients seem cooperative; the client is able to follow instructions from the nurse; the client can move his limbs but slowly with TTV (BP: 140/80 mmHg, N: 85 x/minute, RR: 20x/minute), the problem of acute pain has not been resolved, repeat the intervention, namely identifying the pain scale: assessing pain using Numerical Rating Scale (NRS); identify non-verbal pain responses; observing the success of complementary therapies that have been given; teach non-pharmacological techniques to reduce pain: (EBN: Rheumatic Exercise to reduce pain); collaboration in the administration of pain-reducing drugs, and the client after doing rheumatic gymnastics feels a relaxed sensation.

Rheumatic gymnastic exercises are useful for increasing physical fitness if carried out in the exercise zone for at least 15 minutes. According to research using a systematic method by showing that there is a significant influence in performing rheumatic gymnastic therapy on the joint pain scale felt by the elderly with

rheumatism and also showing that rheumatic gymnastics carried out routinely is able to reduce the joint pain scale and is expected to be able to apply rheumatic gymnastics actions to reduce joint pain in rheumatic patients, and regular rheumatic exercises also improve physical fitness in maintaining health. (Heart & Rahmadana Lubis, 2022).

5. CONCLUSIONS

Based on the results of the research that was discussed in the previous chapter, the following conclusions were obtained: The results of the study obtained by a client aged 74 years, gender Male had complaints of pain in the knee and waist area. Results of data analysis obtained acute pain became a nursing problem in the study In this case, nursing intervention in this study was pain management in accordance with the main nursing problems. Implementation of nursing in this study was non-pharmacological therapy such as rheumatic gymnastics. that the Rheumatic Gymnastics Technique with a duration of 15 minutes 2 times a week has a positive effect on the influence of rheumatic gymnastics.

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AUTHOR CONTRIBUTIONS

Substantial contributions to conception, data collection, and analysis: Efadatus Zakiyah, Fahrudin Kurdi, Hanny Rasni and Syahroni Bahtiar. Writing manuscript and revisions: Efadatus Zakiyah and Fahrudin Kurdi.

CONFLICT OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

DATA AVAILABILITY STATEMENT

The data are not publicly available due to privacy or ethical restrictions.

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