The Relationship Of Elderly Exercise With Decrease Rheumatoid Arthritic Pain Scale In The Elderly At UPT PS Elderly Binjai-Province Social Office North Sumatra Year 2021

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ABSTRACT

Elderly is someone who has reached the age of 60 years and over. People who are elderly (elderly) will experience a decrease in the ability of body tissues to repair themselves. In addition, being included in the elderly group can cause various health, psychological, and socio-economic problems. One of the health problems that often occurs in the elderly is rheumatoid arthritis. Rheumatoid arthritis (RA) is a chronic, multisystemic inflammatory immune-mediated disease characterized by articular and extra-articular manifestations along with systemic manifestations in the form of malaise and fatigue leading to pain. One of the efforts to reduce rheumatoid arthritis pain is by giving elderly exercise. The purpose of this study was to determine whether there was a relationship between elderly exercise and a decrease in the rheumatoid arthritis pain scale in the elderly. Methods: This study uses descriptive analytic with a cross sectional approach with the number of respondents as many as 40 people with purposive sampling technique sampling. The instrument or tool used is a questionnaire. Results: The results of statistical tests using the chi-square test showed that there was no relationship between elderly gymnastics and a decrease in the rheumatoid arthritis pain scale in the elderly at UPT Binjai Social Services, North Sumatra Province Social Service in 2021.

Keywords: Elderly, elderly exercise, rheumatoid arthritis pain

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INTRODUCTION

Elderly is someone who has reached the age of 60 years and over, and is an age group that is entering the final stages of the life phase (Siska, 2020). People who are elderly will experience a decrease in the ability of body tissues to repair themselves. In addition, being included in the elderly group can cause various health, psychological, socio-economic problems (Kusumawardani & Andanawarih, 2018). The number of elderly people in the world is estimated at 500 million with an average age of 60 years. WHO estimates that 75% of the world's elderly population in 2025 will be in developing countries such as Indonesia (Ningsih et al., 2016).

One of the health problems that often occurs in the elderly is rheumatoid arthritis. Rheumatoid arthritis (RA) is a chronic, multisystemic, immune-mediated inflammatory disease characterized by articular and extra-articular manifestations along with systemic manifestations in the form of malaise and fatigue (Kucharski, 2019). Rheumatoid arthritis is a disease that ranks first (44%) of chronic diseases experienced by the elderly. The etiology of this disease is still unclear, but rheumatoid arthritis causes joint pain. One of the factors that influence the origin of arthritis is age, genetics, gender and lifestyle.

Based on SIRS 2015, cases of rheumatoid arthritis were most commonly found in women (971 cases) compared to men (577 cases). According to the World Health Organization (2016), the number of rheumatoid arthritis sufferers worldwide has reached 335 million, and it is estimated that the number of rheumatoid arthritis sufferers will always increase. It was found that 20% of the world's population suffers from rheumatoid arthritis, 5-20 years by 5-10% and 20% of those aged 55 years. Rheumatoid arthritis is the most common form of autoimmunite arthritis, affecting more than 1.3 million people in America. Of these, about 75% are women. For countries in Southeast Asia, data obtained is 0.4% with a lower prevalence in men with a value of 0.16% compared to women, which is 0.75% and is stated to be statistically significant and there are about 2.6 million men and 12.21 million women suffer from rheumatoid arthritis in Indonesia, rheumatoid arthritis is about 23.3%-31.6% of the total population of Indonesia. The number of cases of rheumatoid arthritis in Indonesia reaches 2 million people (Elsi, 2018).

Rheumatoid arthritis is more common in women than in men. This is because a woman's body contains the hormone estrogen. The hormone estrogen is more widely owned by women than men (Elsi, 2018). Efforts in handling rheumatoid arthritis pain can be done by giving exercise to the elderly. Which is where elderly gymnastics is a physical exercise that has a good influence on increasing the ability of joint muscles. The ability of the joint muscles if they are often trained or moved, the synovial fluid in the joints will increase. Doing exercise regularly is one of the efforts to improve good physical fitness. Elderly exercise therapy is very effective in reducing knee pain in the elderly (Pangaribuan, 2020).

RESEARCH METHOD

The method used in this study used an analytical research design with a cross sectional approach. Respondents in this study amounted to 40 elderly people at the UPT Binjai Social Service, North Sumatra Province Social Service in accordance with inclusive criteria and were willing to become respondents and sign a letter of agreement.

The instrument used in data collection is in the form of a questionnaire. Questionnaires were distributed directly to respondents using purposive sampling technique. Before filling out the questionnaire, the researcher gave an explanation regarding the questionnaire that would be distributed to the respondents.


RESULTS

The results of research on elderly exercise with a decrease in the rheumatoid arthritis pain scale in the elderly at the Binjai Social Service UPT, North Sumatra Province Social Service in 2021.

Table 1. Distribution of Respondents Based on Demographic Data (Age, Gender, Ethnic group, Religion, Education) in the Elderly at UPT Social Services Binjai Social Service Office of North Sumatra Province in 2021

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-74 years old</td>
<td>33</td>
<td>82.5</td>
</tr>
<tr>
<td>75-90 years old</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Gender
Based on table 1, the data obtained from the majority of respondents are in the age range of 60-74 years totaling 33 people (82.5%), minorities are in the age range of 75-90 years as many as 7 people (17.5%). Data The gender of female respondents was 27 people (67.5%) and male respondents were 13 people (32.5%). Data on ethnicity of the majority of respondents are Toba Batak 12 people (30.0%) and minority Batak Simalungun 1 respondent (2.5%), Minang 1 respondent (2.5%), Nias 1 respondent (2.5%), Gayo 1 respondents (2.5%), Sundanese 1 respondent (2.5%), Malay 1 respondent (2.5%). The religious data of the majority of respondents are Muslim as many as 34 people (85.0%) and the minority is Catholic as many as 2 people (5.0%). The education data of the majority of primary school respondents is 16 people (40.0%) and other minorities are 2 people (5.0%).

**Table 2. Frequency Distribution of Respondents Based on Elderly Gymnastics For the Elderly at the Binjai Social Service UPT, North Sumatra Province Social Service in 2021.**

<table>
<thead>
<tr>
<th>No</th>
<th>Elderly exercise</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Held</td>
<td>35</td>
<td>87.5</td>
</tr>
<tr>
<td>2.</td>
<td>Not implemented</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on table 2. It was found that the elderly gymnastics were in the category of the majority of gymnastics as many as 35 respondents (87.5%) and the gymnastics minority as many as 5 respondents (12.5%).

**Table 3. Frequency Distribution of Respondents Based on Rheumatoid Arthritis Pain in the Elderly at UPT Social Services Binjai Social Service of North Sumatra Province in 2021.**

<table>
<thead>
<tr>
<th>No</th>
<th>Rheumatoid Arthritis Pain</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Light</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>2.</td>
<td>Currently</td>
<td>19</td>
<td>47.5</td>
</tr>
<tr>
<td>3.</td>
<td>Heavy</td>
<td>16</td>
<td>40.0</td>
</tr>
</tbody>
</table>

Based on table 3. It was found that the elderly gymnastics were in the category of the majority of gymnastics as many as 35 respondents (87.5%) and the gymnastics minority as many as 5 respondents (12.5%).
Based on table 3, it was found that rheumatoid arthritis pain in the elderly in the majority was in the moderate category as many as 19 respondents (47.5%) and the minority in the mild category as many as 2 respondents (5.05%).

Table 4. Correlation results of elderly exercise with a decrease in rheumatoid arthritis pain scale in the elderly at the Binjai Social Service UPT, North Sumatra Province Social Service in 2021.

<table>
<thead>
<tr>
<th>Elderly Exercise</th>
<th>Rheumatoid Arthritis Pain</th>
<th>Total</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Light</td>
<td>Currently</td>
<td>Heavy</td>
</tr>
<tr>
<td>Held</td>
<td>2</td>
<td>18</td>
<td>16.6</td>
</tr>
<tr>
<td>Not Held</td>
<td>0</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>2.0</td>
<td>5.0</td>
<td>19.0</td>
</tr>
</tbody>
</table>

Based on table 4, the distribution of the results from the Chi-square statistical test obtained p-value 0.398 (p>0.05), which means that there is no relationship between elderly gymnastics and a decrease in rheumatoid arthritis pain scale in the elderly at UPT Binjai Social Service, North Sumatra Province Social Service. 2021. Because there are 6 cells (75.0%) which have an expected count value of less than 5, which means that the alternative Pearson chi square test is not fulfilled.

DISCUSSIONS

The results of the research on measuring the pain scale after the elderly exercise are carried out are in accordance with the theory that has been conveyed that elderly exercise is a physical exercise that has a good effect on increasing joint muscle ability.

Based on data obtained from respondents, the majority of the elderly who experience rheumatoid arthritis pain are in the age range of 60-74 years totaling 33 people (82.5%), the minority being in the age range of 75-90 years as many as 7 people (17.5%) . And for the gender classification of respondents, there are 27 women (67.5%) and 13 men (32.5%).

From the results of the study, it was found that more respondents experienced moderate pain. This study uses a pain scale measurement with a numerical scale rating where the pain scale is 0 = no pain, 1-3 = mild pain, 4-6 = moderate pain, 7-9 = severe pain, 10 = very severe pain. Based on the results of research conducted by researchers, after the elderly exercise was carried out for the elderly who experienced rheumatoid arthritis pain, the results showed that the results carried out with the chi square test obtained a p-value of 0.398 (p> 0.05), which means there is no significant relationship between elderly exercise and a decrease in the rheumatoid arthritis pain scale in the elderly at the Binjai Social Service UPT, North Sumatra Province Social Service in 2021.

The researcher assumes that the results of the research obtained in the field in general do not have a significant relationship with the decrease in the rheumatoid arthritis pain scale in the elderly because the exercise is still not effective, which sometimes the elderly do not follow the gymnastics according to the time and the elderly do not follow the overall procedure of the gymnastics. according to the instructions and SOPs given.

From the results of the study above, it is not in line with research according to Debra (2015), pain can be reduced by doing sports, one of which is by doing elderly gymnastics. Exercise that is done regularly can strengthen the muscles around the joints, reduce pain or pain, improve balance and provide more energy in the body. A study conducted by Harvard Ostras, Tom Arild Torstensen and Berit Ostras entitled "High-Dosage Medical Exercise therapy in patients with Long-trem subacromial Shoulder Pain" showed that by administering medical exercise therapy there was a reduction in the pain scale in the shoulder using the measure VAS (Visual Analong Scale) (Havan, 2009).
This is in accordance with research conducted by Afifka (2012), which states that by doing exercise for the elderly with rheumatoid arthritis with knee pain, it can overcome knee pain in the elderly with results on a mild to no pain scale (pain disappears). In line with Anggreeini Rina's research (2019), states that there is a relationship between elderly exercise and a decrease in the rheumatoid arthritis pain scale in the elderly. Research according to Pangaribuan (2020), which says elderly exercise is one of the most effective therapies in overcoming knee pain in the elderly.

Research that has been obtained in the field is in line with research by Dayanti (2020) which says that rheumatoid arthritis pain does not heal completely due to several factors that accompany several factors that influence rheumatoid arthritis, such as age, gender, obesity and other comorbidities. The data above is also supported by Nailul's research (2019), which says that rheumatoid arthritis is a chronic and fluctuating disease that often results in joint damage and disability. In line with Aulianah's research (2018) Rheumatoid arthritis is caused by genetic, environmental, hormonal, immunological and infectious factors.

### CONCLUSION

In general, the researchers concluded that the relationship between elderly gymnastics and a decrease in the rheumatoid arthritis pain scale in the elderly at the Binjai Social Service UPT, North Sumatra Province Social Service in 2021. In particular, researchers can draw the following conclusions:

1. The results of the study from 40 respondents showed that the implementation of elderly gymnastics was 35 respondents (87.5%).
2. The results of the study for the rheumatoid arthritis pain scale the majority experienced moderate pain as many as 19 respondents (47.5%).
3. There is no relationship between elderly exercise and a decrease in rheumatoid arthritis pain scale in the elderly at the Binjai Social Service UPT, North Sumatra Province Social Service with a p-value of 0.304 (p = > 0.05).

### REFERENCES


Kourilovitch, M., Galarza-Maldonado, C., & Ortiz-Prado, E. (2014). Diagnosis And Classification Of Rheumatoid