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Research Article

## Behavior to Overcome Rheumatic Pain in the Elderly

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### Abstract

Rheumatism is an autoimmune disease in which the joints experience inflammation, resulting in swelling, pain and often causes damage to the inside of the joints. The high incidence of rheumatism in the elderly is due to the demographic characteristics of the elderly and their behavior in dealing with rheumatic pain is not maximal. The purpose of this study is to describe the behavior of dealing with rheumatic pain in the elderly in Mengwitani Village, Mengwi District, Badung Regency in 2021. This research is a descriptive study using a cross sectional approach. The sampling method in this study is to use non-probability sampling with consecutive sampling. The research was conducted in January - April 2021 in Mengwitani Village with a total sample of 66 respondents. The results of this study, in terms of the characteristics of the respondents, found that the most age suffered from rheumatic pain was 60-74 years, 50 respondents (75.8%), with the most gender being 43 respondents (65.2%), the most education was SD 53 respondents (80, 3%), and most jobs are traders 24 respondents (36.4%). Based on the results of the research on the behavior of dealing with rheumatic pain in the elderly, a small proportion of them had less knowledge as much as 8 respondents (12.1%), most of them had sufficient attitudes, namely 53 respondents (80.3%), and 24 respondents (36.4%) have actions that are classified as good in dealing with rheumatic pain. For the elderly it is recommended to make lifestyle changes so that they can reduce the risk of rheumatism.

**Keywords:** Rheumatic pain, behavior, elderly

## INTRODUCTION

The increasing number of elderly people in several countries, one of which is Indonesia has changed the population profile both world and national which is increasing very rapidly. Based on data from the World Health Organization (WHO) from 2015 to 2050, the proportion of elderly people in the world is estimated to be almost two fold from about 12% to 22%. In absolute terms, this is an increase from 900 million to 2 billion elderly people. It is estimated that the number of elderly people in Indonesia will continue to grow by around 450,000 people per year.<sup>1,2</sup>

In 2018 the percentage of the elderly reached 9.27% or around 24 million people, while in 2020 it is estimated that the number of elderly people in Indonesia is 24.49 million people or 9.77% of the total population. The number of elderly is predicted to equal the number of children under five. Eleven percent (11%) of the 6.9 billion world population are elderly.<sup>3</sup>

The number of elderly proportions in Bali according to BPS data from Bali Province in 2020 is 12.47%, this figure is an increase when compared to 2010 which was only 9.77%. Thus, it can be concluded that in 2020 Bali has entered the era of aging population, when the percentage of the population aged 60 years and over reaches more than 10. As a result of the increasing number of elderly people, various diseases arise due to the aging process.<sup>4,5</sup>

Minister of Social Affairs Regulation Number 5 of 2018 concerning National Standards for Social Rehabilitation of

the elderly to respond to the increasing number of UHH and the number of elderly people with the complexity of their problems requires institutional standards and social rehabilitation of the elderly. WHO and Law Number 13 of 1998 concerning the Welfare of the Elderly in Chapter 1 Article 1 Paragraph 2 state that an elderly person is someone who reaches the age of 60 years and over (Ahdaniar, et al, 2014). Old age is a natural process that is determined by God Almighty. Old age is part of the process of growth and development. Humans do not suddenly grow old, but develop from infants, children, adults and eventually become old. This is normal, with predictable physical and behavioral changes occurring in all people as they reach certain chronological stages of development. Elderly is someone who experiences physical, mental and social decline gradually.<sup>6-8</sup>

Everyone will grow old because aging is natural, over time we will get older. Old age and health problems are like two sides of a coin that cannot be separated. Complaints that are often conveyed by the elderly are joint pain. Joint pain is a subjective experience which can affect the quality of life of the elderly, including impaired functional activity of the elderly. Along with the increase in the percentage of the elderly, there is also an increase in the number and incidence of chronic diseases, especially rheumatism caused by a decrease in the body's ability to adapt to environmental stress and weakness in the elderly.<sup>9,10</sup>

Rheumatism is one of the joint diseases that are often suffered by the elderly apart from hypertension, diabetes mellitus, gout and other diseases that can cause musculoskeletal disorders. The incidence of rheumatism in 2016 reported by the World Health Organization (WHO) is 335 million people in the world who experience rheumatism. Based on the results of the 2013

Basic Health Research, joint disease became the second most common disease in the elderly, at the age of 55-64 years as many as 45%, at the age of 65-74 years as much as 51.9%, and age over 75 years as many as 54.8%.<sup>11-13</sup>

The prevalence of rheumatic disease based on diagnosis in Indonesia is 11.9% and based on symptom diagnosis is 24.7%. The prevalence based on diagnosis was highest in Bali 19.3%, followed by Aceh 18.3%, West Java 17.5%, and Papua 15.4%. The prevalence of rheumatic disease based on diagnosis was highest in East Nusa Tenggara 33.1%, followed by West Java 32.1%. The prevalence of rheumatic diseases based on interviews diagnosed increases with age.

The highest prevalence was at age 75 years, 33% and 54.8%, respectively. The prevalence of being diagnosed in women was 13.4% compared to 10.3% in men. Rheumatism generally attacks small joints, 90% with the main complaint being pain. It is estimated that this figure will continue to increase until 2025 with an indication that more than 25% will experience paralysis due to bone and joint damage (Trilia, et al, 2015). In 2016 the number of rheumatic patients was 23.8%.<sup>12,14</sup>

The 2017 recapitulation in Bali placed rheumatism as the fourth rank out of the top ten diseases that first suffered by the elderly, namely the number reached 29,889 people. Meanwhile, data from the Badung District Health Office stated that diseases of the musculoskeletal system ranked 2nd out of the 20 most reported diseases from all Puskesmas in Badung Regency. This rheumatic disease is the cause of activity limitations. Limitations of activity in the elderly due to rheumatic pain can cause immobilization and decreased range of motion in the elderly, the physiological impact of immobilization and inactivity is an increase in protein catabolism resulting in a decrease in range of motion and muscle strength.<sup>15,16</sup>

Based on research by Pragholapati & Munawaroh, said that 37.5% of patients cope with pain by buying their own medicine. A total of 33.3% chose to massage while giving balm as a pain reliever, and 0.4% chose a traditional healer to ask for help. Only 16.1% of joint pain sufferers seek medical attention. The results of a preliminary study conducted in Mengwitani Village showed that there were 80 elderly people who experienced rheumatic pain, of which 45 were women and 35 were men. They say they experience joint pain, especially in the morning and many say when joint pain appears the only thing they do is apply balm on the painful joints and even then sometimes not every day. The increase in rheumatic diseases from year to year is influenced by the behavior of the elderly who are less precise on how to deal with rheumatic pain.<sup>17,18</sup>

## MATERIALS AND METHODS

This research is a descriptive study with a cross sectional design. The study was conducted in January - April 2021 in Mengwitani Village with a total sample of 66 respondents. The sampling method in this study was using purposive sampling with inclusion criteria: Elderly age with rheumatic pain in Mengwitani Village, elderly who are willing to be respondents and age limit 60 and over.

The data collection instrument used in this study was a questionnaire designed by the author. The research instrument is a measuring instrument used to measure the observed natural and social phenomena. Specifically, all of these phenomena are called writing variables.<sup>19</sup> The questionnaire in this study was made by the author himself, which had been tested for validity and reliability using computer analysis. The questionnaire consisted of 10

questions covering knowledge, attitudes and actions to deal with rheumatic pain in the elderly. The data analysis technique used is descriptive analysis, which is a data processing procedure by describing and summarizing data in a scientific way in the form of tables or graphs.

## RESULT

**Table 1. Frequency distribution of respondent characteristics**

Variable	Frequency	Percentage (%)
<b>Age</b>		
60-74 years	50	75.8
75-89 years	16	24.2
total	66	100
<b>Gender</b>		
Male	23	34.8
Female	43	65.2
total	66	100
<b>Education</b>		
Elementary school	53	80.3
Junior high school	5	7.6
Senior high school	4	6.1
College	4	6.1
total	66	100
<b>Occupation</b>		
Retired civil servants	5	7.6
Trader	24	36.4
Farmer	23	34.8
Laborer	14	21.2
total	66	100

Table 1 shows that of the 66 respondents, most of the respondents were aged 60-74 years, namely 50 respondents (75.8 %). Based on gender, most of the respondents were female as many as 43 respondents (65.2%). Based on the education of most respondents with elementary school education as many as 53 respondents (80.3%). By occupation the most are traders as many as 24 respondents (36.4%) and the least jobs with retired civil servants were 5 respondents (7.6%).

**Table 2. Frequency distribution based on knowledge of rheumatic pain coping behavior in the elderly**

Knowledge	Frequency	Percentage (%)
Good	12	18.2
Sufficient	46	69.7
Less	8	12.1
Total	66	100

Table 2 shows that most of the respondents with sufficient knowledge are 46 respondents (69.7%) and a small proportion of respondents with less knowledge are 8 respondents (12.1%). This shows that most of the respondents have sufficient knowledge.

**Table 3. Frequency distribution based on attitude of rheumatic pain coping behavior in the elderly**

Attitude	Frequency	Percentage (%)
Good	8	12.1
Sufficient	53	80.3
Less	5	7.6
Total	66	100

Table 3 shows that the majority of respondents with sufficient attitudes are 53 respondents (80.3%) and a small number of respondents with less attitudes are 5 respondents (7.6%). This shows that most of the respondents have a sufficient attitude.

**Table 4. Frequency distribution based on action of rheumatic pain coping behavior in the elderly**

Action	Frequency	Percentage (%)
Good	24	36.4
Sufficient	39	59.1
Less	3	4.5
Total	66	100

Table 4 shows that the majority of respondents with sufficient action are 39 respondents (59.1%) and a small proportion of respondents with less action are 3 respondents (4.5%). This shows that most of the respondents have adequate measures in dealing with rheumatic pain.

## DISCUSION

Based on the results of the study based on the characteristics of the respondents, it was found that most of the respondents were aged 60-74 years. According to Notoadmodjo, the older the age, the mental development process decreases and affects the knowledge gained, but at the age approaching the elderly the ability to accept or remember a knowledge will decrease, the intelligence of the elderly will decrease. thus causing a lack of ability to understand a general knowledge and information. This is in line with Green's theory, a person's growth is directly proportional to age. This is because with increasing age a person will be more exposed to information so that there is a tendency to increase his knowledge.<sup>20,21</sup>

Based on the results of the study based on the characteristics of the respondents, it was found that most of the respondents female. The prevalence of women is higher than men, more than 75% of patients with rheumatism are women with a ratio of 3:1. According to Dorisno, there is no consistent difference between men and women in the level of knowledge, both in solving problems and analyzing problems. Generally, women face greater opposition in every activity so that the risk of calcification of the joints is higher in women. In addition, women are more consistent in their attitudes and actions in dealing with pain rheumatism.<sup>22</sup>

Based on the results of the study based on the characteristics of the respondents, it was found that most of the respondents with elementary school education. Education is the guidance given by someone to the development of other people towards certain dreams or ideals that determine humans to act and fill life in order to achieve safety and happiness. Education is needed to get information in the form of things that support health so that it can improve the quality of life. According Sihombing, the higher a person's education, the more knowledge they have and the easier it is for a person to receive new information.<sup>23</sup> On the other hand, low education will hinder a person's development of new values obtained. However, even though a person's education is high, if the information obtained or given is not considered properly, the knowledge obtained is also not optimal.

Based on the results of the study based on the characteristics of the respondents, it was found that most of the respondents with trading job. The work factor is also

closely related to one's knowledge in dealing with rheumatic pain. Work is an activity or activity of a person to earn income for his daily needs. Length of work is an individual experience that will determine growth in work. Seen from the cross-sectoral perspective, at one of the elderly posyandu the health workers always provide counseling or provide direction to rheumatism sufferers what should be avoided and should be done by someone who is at risk of rheumatism, such as reducing weight, what types of food should be avoided and must be diligent. doing sports so that the respondent's health status in overcoming rheumatic pain increases. Various activities with the workload and pressure that can aggravate the joints and work that uses a lot of hands for a long time. often the complaints that can be felt in every patient with rheumatic diseases.<sup>24,25</sup>

Based on the data obtained in the study, it shows that most of the respondents have sufficient knowledge. This is in line with Notoatmodjo's theory, knowledge is the result of knowing and this occurs after people have sensed an object. Knowledge can be obtained in various ways, either on their own initiative or by others, by seeing or hearing for themselves about reality or through communication tools. In addition, knowledge can also be obtained through experience and learning processes, both formal and informal.<sup>20</sup> So that knowledge does include memories that have been studied, either directly or indirectly and stored in memory. Factors that influence knowledge include education, information/mass media, social, cultural, and economic, environment, experience and age Knowledge of rheumatic diseases, for example, the elderly know about the signs and symptoms of rheumatic diseases. Lack of knowledge about rheumatism has an impact on attitudes and actions or inappropriate handling.<sup>26</sup>

Based on the results of the study, existing theories and previous research, the researcher assumes that how to deal with rheumatic pain is influenced by good knowledge. Good knowledge can be in the form of knowledge about the disease and knowledge about how to properly handle pain, considering that there are still many patients whose knowledge is not good so that the way to handle pain is not appropriate and as a result will slow down the patient's recovery.

Based on the results of the study indicate that most of the respondents have a sufficient attitude. This is influenced by the knowledge possessed. In addition to the knowledge that influences it, it can also be caused by intention or commitment in the tendency to behave towards the object of attitude. The attitude of the elderly about a healthy lifestyle can prevent the emergence of various diseases, especially rheumatic diseases. For the elderly who suffer from disease disorders, the application of a healthy lifestyle according to the type of disease will greatly help control the disease suffered so as to improve the quality of life of the elderly.<sup>27</sup>

According to Azwar, attitude not only influenced by knowledge there are several factors that influence the formation and change of attitudes, namely: personal experience, social and cultural, mass media, and emotional factors within. This shows that external factors have a great influence on the formation of a person's attitude. Both positive and negative attitudes are formed depending on the individual who responds to it.<sup>28</sup>

Based on the results of the study, existing theories and previous research, the researcher assumes that in dealing with rheumatic pain is influenced by a positive attitude. So that if the respondent's attitude is lacking or negative towards the way of handling pain, it can affect the handling of rheumatic pain and can even worsen the pain that it causes.<sup>18</sup>

Action is a real action from the attitude and knowledge it has. Based on the results of the study showed that most of the

respondents had adequate measures in overcoming rheumatic pain. The management of pain recommended by WHO recommends that pain treatment in the elderly be carried out conservatively and gradually to reduce side effects. The main principle in pain management is to eliminate attacks of pain. Effective pain management for the elderly can be done with pharmacological and non-pharmacological approaches. One of the non-pharmacological interventions that nurses can do independently is to reduce the rheumatic pain scale, namely complementary therapy. Complementary therapy is a group of various medicine and health care systems, practices and products that are generally not part of conventional medicine.<sup>29</sup>

Some independent actions that nurses can take to helping clients overcome rheumatic pain, namely by pain management to eliminate or reduce pain and increase comfort including relaxation techniques (using deep breaths), warm compresses and complementary techniques (massage or emphasis on the pain area). In addition, one form of complementary therapy to reduce pain intensity in rheumatic patients is to apply warm ginger compresses and give to the painful area.<sup>29</sup>

Based on the researcher's assumption that in Mengwitani Village the elderly have a fairly good action if the rheumatic pain recurs, namely by giving massage oil or balm and by slightly massaging the massage until the rheumatic pain feels a little subside, besides that in the elderly often give boreh as a rheumatic pain reliever. The most feared thing from rheumatic disease is disability, both mild and severe (paralysis) caused by rheumatic pain in the joints. Lack of knowledge about rheumatism can have an impact on inappropriate attitudes or actions (handling) so that it can worsen the patient's condition.<sup>30</sup>

## CONCLUSION

Based on the results of the study, it can be concluded that the behavior of the elderly in dealing with rheumatic pain is in the sufficient category

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## CONFLICT OF INTEREST

The author declared that don't have conflict of interest

## ETHICAL CLEARANCE

This research has received ethical approval from the Research Ethics Committee, Denpasar Health Polytechnic No.LB.02.03/FA/KEPK/0148/2021.

## REFERENCES

- Wang Y, Jia R, Liang J, Li J, Qian S, Li J, et al. Dementia in China (2015-2050) estimated using the 1% population sampling survey in 2015. *Geriatr Gerontol Int*. 2019; 19(11):1096-100. <https://doi.org/10.1111/ggi.13778>
- Riswanto RB, Mangngi N. The Effect of Kegel Exercises on The Frequency of Urination in The Elderly in UPSTW Jombang in Pare. In: The 3rd Joint International Conference. 2021. p. 363-6.
- Krismiayati M, Putrianti B, Iswantiningsih E. Peningkatan kualitas hidup lansia melalui penerapan pola hidup sehat di dusun Gondang dan dusun Donoasih Donokerto Turi Sleman. *J Pengabd Masy Karya Husada*. 2019; 1(2):68-76.
- Statistik BP. Hasil Sensus Penduduk 2020 Provinsi Bali. *Ber Resmi Stat*. 2021; (08/01):51.
- Gandari NKM, Darmawan AAKN, Budiadnyani NK. Pengaruh Senam Ergonomis Terhadap Perubahan Nyeri Pada Lansia Dengan Rematik Di Sada Jiwa Banjar Pasekan Desa Sembung Kecamatan Mengwi Kabupaten Badung. *J Pendidik Kesehat Rekreasi*. 2019; 5(2):47-58.
- Ahdaniar A, Hasanuddin H, Indar I. Faktor yang berhubungan dengan kejadian penyakit rematik pada lansia di wilayah puskesmas kassikassi kota Makassar. *J Ilm Kesehat diagnosis*. 2014; 4(2):150-6.
- Boulton-Lewis GM. Education and learning for the elderly: Why, how, what. *Educ Gerontol*. 2010; 36(3):213-28. <https://doi.org/10.1080/03601270903182877>
- Hendry C, Farley A, McLafferty E. Development, growth and repair from conception to old age. *Nurs Stand*. 2012; 26(50). <https://doi.org/10.7748/ns.26.50.44.s56>
- Alexiou KI, Roushias A, Varitimidis SE, Malizos KN. Quality of life and psychological consequences in elderly patients after a hip fracture: a review. *Clin Interv Aging*. 2018; 13:143. <https://doi.org/10.2147/CIA.S150067>
- Sitinjak VM, Hastuti MF, Nurfiati A. Pengaruh Senam Rematik terhadap Perubahan Skala Nyeri pada Lanjut Usia dengan Osteoarthritis Lutut. *J Keperawatan Padjadjaran*. 2016; 4(2). <https://doi.org/10.24198/jkp.v4i2.234>
- Castellani C, Molteni E, Colafrancesco S, Conti F, Priori R, Scervo R. Rheumatic Diseases in the Elderly. *OBM Geriatr*. 2020; 4(4):1. <https://doi.org/10.21926/obm.geriatr.2004139>
- Risikesdas RI. Riset kesehatan dasar tahun 2013. Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI. 2013;
- Hasina SN, Khafid M. Pengaruh sleep hygiene dan ergonomic exercise berbasis spiritual care terhadap kadar asam urat dan kualitas hidup penderita arthritis gout. *J Keperawatan*. 2020; 12(2):203-16.
- Sety M, Suhadi M. Analisis Faktor Risiko Rematik Usia 45-54 Tahun di Wilayah Kerja Puskesmas Puuwatu Kota Kendari Tahun 2017. 2018;
- Atzeni F, Cazzola M, Benucci M, Di Franco M, Salaffi F, Sarzi-Puttini P. Chronic widespread pain in the spectrum of rheumatological diseases. *Best Pract Res Clin Rheumatol*. 2011; 25(2):165-71. <https://doi.org/10.1016/j.berh.2010.01.011>
- Offenbacher M, Sauer S, Riep J, Muller M, Grill E, Daubner A, et al. Contractures with special reference in elderly: definition and risk factors-a systematic review with practical implications. *Disabil Rehabil*. 2014; 36(7):529-38. <https://doi.org/10.3109/09638288.2013.800596>
- Pragholapati A, Munawaroh F. Resiliensi Pada Lansia. *J Surya Muda*. 2020; 2(1):1-8. <https://doi.org/10.38102/jsm.v2i1.55>
- Aulianah H. Hubungan pengetahuan & sikap lansia dalam mengatasi nyeri artritis rheumatoid di Kelurahan Srimulya Kec. Sematang Borang Palembang tahun 2017. *Jurnal Aisyiah Med*. 2018; 1(1). <https://doi.org/10.36729/jam.v1i1.243>
- Sugiyono. *Metode Penelitian Kuantitatif dan R&D*. Alfabeta; 2019.
- Notoatmodjo S. *Ilmu perilaku kesehatan*. Jakarta: rineka cipta. 2010; 200:26-35.
- Yulita I, Purnama T, Marliani Y. Knowledge and Attitudes of Dental and Oral Health Maintenance in Pregnant Women (Case Study: Obstetrics and Gynecology Polyclinic at Pertamina Central Hospital, Jakarta). *Int Res J Pharm Med Sci*. 2021; 4(2):9-11.
- Dorisno D. Hubungan Gender dengan Kemampuan Pemecahan Masalah Matematika. *Tarb Al-Awlad*. 2019; 9(1):19-28. <https://doi.org/10.36655/sepren.v1i02.209>
- Sihombing S. Hubungan pekerjaan dan pendidikan ibu dengan pemberian ASI eksklusif di Wilayah Kerja Puskesmas Hinai Kiri tahun 2017. *J Bidan*. 2018; 5(1). <https://doi.org/10.33860/jbc.v1i1.84>
- Bianchi SM. Family change and time allocation in American families. *Ann Am Acad Pol Soc Sci*. 2011; 638(1):21-44. <https://doi.org/10.1177/0002716211413731>

25. Bawarodi F, Rottie J, Malara RT. Faktor-faktor yang berhubungan dengan kekambuhan penyakit rematik di wilayah puskesmas beo kabupaten talaud. *J Keperawatan*. 2017; 5(1).
26. Wibowo D. Hubungan Tingkat Pengetahuan Dengan Sikap Keluarga Tentang Perawatan Arthritis Rheumatoid Pada Lansia Di Desa Pamalayan Kecamatan Cijeungjing Kabupaten Ciamis. *J Kesehat Bakti Tunas Husada J Ilmu-ilmu Keperawatan, Anal Kesehatan dan Farm*. 2018; 17(2):339-56.  
<https://doi.org/10.36465/jkbth.v17i2.261>
27. Kurnianto D. Menjaga kesehatan di usia lanjut. *Jorpres (Jurnal Olahraga Prestasi)*. 2015; 11(2).
28. Azwar S. Sikap manusia: teori & pengukurannya. Yogyakarta: Pustaka Pelajar. 2015;
29. Octa AR, Febrina W. Implementasi evidence based nursing pada pasien rematik: studi kasus. *Real Nurs J*. 2020; 3(1):55-60.
30. Sudiantara K, Mustika IW, Gama IK. Perilaku Pedagang Usia Lanjut Dalam Mengatasi Nyeri Diduga Reumatik. 2016