PengabdianMu: Jurnal Ilmiah Pengabdian kepada Masyarakat
Volume 9, Issue 6, Pages 1122-1128 Juni 2024 e-ISSN: 2654-4385 p-ISSN: 2502-6828
https://journal.umpr.ac.id/index.php/pengabdianmu/article/view/6786
DOI: https://doi.org/10.33084/pengabdianmu.v9i6.6786

Kegiatan Senam Ergonomic Berbasis Spiritual untuk Mengurangi Nyeri Gout Arthritis pada Lansia di Wilayah SP.6 Sari Bunga Mas Lahat Tahun 2023

Ergonomic Exercise with Spiritual Basis Activity to Reduce Gout Arthritis Pain in Older Adults in SP.6 Sari Bunga Mas Lahat District Area in 2023

Dodi Aflika Farama [1]

Abdul Gani [1]

Eri Fauzia [1]

Wahyu Dwi Ari Wibowo [2*]

[1]Nursing Department, Poltekkes Kemenkes Palembang, Indonesia

[2]Nursing Department, Poltekkes Kemenkes Palembang, Indonesia

email:
wahyudwi74@poltekkespalembang.ac.id

Kata Kunci
Gout arthritis
Nyeri
Senam Ergonomis

Keywords:
Gout arthritis
Pain
Ergonomics Exercise

Received: March 2024
Accepted: April 2024
Published: June 2024

Abstrak

Gout arthritis adalah penyakit radang sendi yang seringkali menyebabkan rasa sakit yang parah akibat penumpukan kristal asam urat di persendian. Kondisi ini umumnya menyebabkan pembengkakan, kemerahan, dan nyeri pada satu atau beberapa persendian, terutama pada jempol kaki. Penyakit ini berkaitan dengan kadar asam urat yang tinggi dalam tubuh, yang dapat memicu serangan gout yang sangat menyakitkan, sehingga kegiatan aktifitas fisik dan penyuluhan kesehatan merupakan langkah awal dalam mengatasi keluhan nyeri dan peningkatan kada asam urat dalam darah para lansia dengan gout arthritis. Kegiatan ini dilakukan dengan memberikan pelatihan senam ergonomis, dengan metode ceramah, simulasi, dan praktik. Hasilnya terjadi penurunan intensitas nyeri para lansia sebelum dan sesudah kegiatan yang dilakukan dalam kurun waktu 1 bulan, dengan 4 kali pertemuan. Selanjutnya diharapkan adanya kesadaran dari pemerintah dan pemangku jabatan untuk menghadirkan kegiatan terjadwal dan terstruktur berbasis masyarakat sebagai alur awal dalam mengatasi masalah kesehatan, khusunya para lansia.

Abstract

Gout arthritis is an inflammatory joint disease often causing severe pain due to the accumulation of uric acid crystals in the joints. Typically, it results in swelling, redness, and pain in one or multiple joints, particularly in the big toe. This condition is associated with high levels of uric acid in the body, triggering harrowing gout attacks. Thus, physical activities and health education are initial steps in addressing pain complaints and elevations in uric acid levels among older adults and individuals with gout arthritis. This involves providing ergonomic exercise training through lectures, simulations, and practice sessions. The results show a reduction in pain intensity among older adults before and after the activity conducted over a month with four meetings. Furthermore, there is an expectation for the government and stakeholders to introduce scheduled and community-based structured activities as an initial step in addressing health issues, particularly among older adults..

PENDAHULUAN

Gouty arthritis is a common painful form of inflammatory arthritis characterized by pain due to the buildup of uric acid crystals in the joints, causing swelling, redness, and pain in one or more joints, most commonly in the big toe (CDC, 2020). This condition occurs in individuals with high uric acid levels, which can cause harrowing gout attacks accompanied by redness, swelling, and warmth (Yuniarti, 2022). The incidence and prevalence of gouty arthritis continue to increase globally,

How to cite: Somad, A., Destiana, Lusiana, Wibowo, W, D, A. (2024). Kegiatan Senam Ergonomic Berbasis Spiritual untuk Mengurangi Nyeri Gout Arthritis pada Lansia di Wilayah SP.6 Sari Bunga Mas Lahat Tahun 2023. *PengabdianMu: Jurnal Ilmiah Pengabdian kepada Masyarakat*, **9**(6), 1122-1128. https://doi.org/10.33084/pengabdianmu.v9i6.6786

with an estimated 0.6 to 2.9 per 1,000 people/year diagnosed with gouty arthritis (Jason Lady, 2020). Based on data from the Global Health Data Exchange (GHDx) and the World Health Organization (WHO) database, there were 41.2 million cases of Gout arthritis worldwide from 1999 to 2017, with 1.3 million people experiencing disability due to Gout arthritis (Jason Lady, 2020; Mattiuzzi & Lippi, 2020).

According to Basic Health Research Riset Kesehatan Dasar (RISKESDAS), in 2018, the prevalence of joint and muscle problems, including Gouty arthritis, was the second most common health problem in Indonesia, affecting 713,783 people (7.30%), 22,013 people in South Sumatra Province, and 1159 patients in Lahat Regency (RISKESDAS SUMSEL PROVINCE, 2018). According to Wijaya & Putri (2013), "the main complaint of patients with gouty arthritis is pain". Chronic pain experienced by clients is a sensory and emotional experience related to actual or functional tissue damage, with sudden or slow symptoms that last for more than three months (PPNI, 2017).

Preventive measures to prevent the worsening of the condition of patients with Gouty arthritis require the family to change the diet and lifestyle of older adults with this disease through weight loss, limiting alcohol consumption, simple physical activity, and managing diet by reducing foods rich in purine levels. For example, red meat or offal can reduce the risk of increasing uric acid levels in the blood (Ariyanti & Imam, 2021). Pain in Gouty arthritis can be treated and managed effectively with medical care and self-management strategies; pain management can be done with non-steroidal anti-inflammatory drugs (NSAIDs) and non-pharmacological measures to reduce pain symptoms (Wen *et al.,* 2022). NSAIDs, including medications like ibuprofen and naproxen, are commonly used to alleviate pain and inflammation in gout arthritis; while primarily intended for pain relief, NSAIDs also help reduce the inflammation characteristic of gout attacks. Other medications used to treat gout arthritis include colchicine, corticosteroids like prednisone, uricosuric agents such as probenecid, xanthine oxidase inhibitors like allopurinol and febuxostat, and enzyme therapy like pegloticase. These medications can be prescribed alone or in combination to manage symptoms effectively and prevent recurrent gout attacks (CDC, 2020).

Although no drug can completely treat joint pain in older adults with Gouty arthritis, many different treatment options are available to relieve symptoms and prevent long-term joint damage through accompanying pharmacological treatment (drugs), lifestyle changes, or complementary treatments to reduce the intensity of pain (Sari *et al.,* 2022). According to the PPNI DPP SLKI Working Group (2018), the primary interventions for clients diagnosed with chronic pain are pain management, comfort care, and relaxation therapy. One non-pharmacological technique to reduce pain is to carry out ergonomic exercise therapy and relaxation through spiritual activities, according to each person's beliefs. Through this exercise, patients can improve or maintain joint function, improve quality of life, and reduce pain levels, especially in older adult patients with gouty arthritis; this exercise must be adapted to the patient's physical condition, requiring little energy, but still effective in increasing strength and joint flexibility as well as reducing the risk of damage to the joints (Yuniarti, 2022). According to (Erman *et al.,* 2021), this exercise reduces pain intensity, but don't show decreasing uric acid level r in older adults, supported by research conducted (Sabila, 2020), which implemented spiritual care-based ergonomic exercise therapy to reduce pain intensity. The results showed a significant reduction in pain levels in people living with gouty arthritis in Giwangretno Village, Sruweng District after four meetings. Spiritually based ergonomic exercise has the potential to reduce gouty arthritis pain through a holistic approach to physical and mental health; by combining spiritual elements such as meditation, deep breathing, and positive affirmations, this exercise helps reduce stress and emotional tension, which can worsen complaints in gout pain (Emilia Veranica, 2021).

According to a preliminary study from data from the Lahat Health Service, gouty arthritis is ranked third among the ten most common diseases in Lahat district, SP6 Saribungamas subdistrict, Lahat subdistrict, Lahat district.) Older adults experience gouty arthritis pain and similar joint problems. The general aim of this activity is to reduce the intensity of pain in the older adults in the SP6 Saribungamas area, Lahat sub-district, Lahat district, by carrying out spiritual-based ergonomic exercise activities for four meetings within one month, which is expected to reduce the intensity of pain in the older adults with gouty arthritis problems.

METODE

Tools and Materials

This activity uses counseling materials, leaflets, posters, PowerPoint materials, and ergonomic exercise videos, as well as LCD projectors and screens.

Implementation Method

Preparation Stage

Preparation for this community service is to find the proper schedule for carrying out this training activity. This training has been carried out in 4 (two) stages, held every Tuesday for 30 minutes from 15 August 2023 to 05 September 2023, with the theme "Ergonomic Gymnastics with the Older adults," with 35 older adults participants. After determining the schedule, the implementing team prepared leaflets, PPT materials, ergonomic exercise videos, and ergonomic exercise guides for students who had memorized the ergonomic exercise movements.

Implementation Stages

Participants attended according to the agreement in the SP.VI Sari Bunga Mas Hall then started with a pre-test by measuring pain intensity and uric acid levels, followed by delivering material on gouty arthritis; apart from the basic concepts of the disease, instructors also accompanied education on diet management for the older adults by gout, then the implementing team carried out demonstrations and re-demonstrations to the ergonomic exercise training participants and ended with ergonomic exercise and counseling activities that were taught, and repeated once a week, for one month. The activity ends with a post-test to measure the progress obtained, focusing on measuring pain intensity and uric acid levels.

HASIL DAN PEMBAHASAN

a) Analysis of Respondent Descriptions

The purpose of descriptive analysis is to find out the general description of the respondents. The following is a descriptive analysis table for this activity;

Tabel I. Results of Descriptive Analysis of Respondents

Charateristic	Frequency	Persentage (%)
Sex		
Male	2	4%
Female	35	96%
Ages		
60-65 Tahun	24	65%
65-70 Tahun	10	27%
≥ 70 Tahun	3	8%
Education		
Primary	2	5%
Secondary	2	5%
Senior High School	30	81%
College	3	8%

The results of the descriptive analysis of respondents are presented in Table 1, which summarizes the characteristics of respondents based on gender, age, and education. A total of 35 older adults participants, 35 female (96%) and two male (4%); the largest age group was 60-65 years old, 24 (65%), and the highest education was high school, 30 (81%).

b) ***Comparison of the Pain Intensity Scale before and after the activity, measurement by numeric pain scale (Zakiyah, 2015).***

Tabel II. Categories and Pain Intensity Scale Before Activities

	Pain Intensity			**Avarage of Pain Instensity**
	High	**Modorate**	**Mild**	
Before	**2**	**32**	**3**	**4.32**
AFter	**0**	**6**	**31**	**2.43**

Tabel III. Average Uric Acid Levels of Participants Before and After the Activity

Average Uric Acid Levels of Female Participants n(35)	
BEFORE	8.32
AFTER	7.21
Average Uric Acid Levels of Female Participants n(2)	
BEFORE	8.74
AFTER	8.01

Table 3 shows the average level values before and after the procedure for 35 older adults, 35 female participants, and 2 male participants. The results show a decrease in uric acid levels in the blood after being given ergonomic exercise activities and a decrease in the average uric acid levels in the normal limit category before and after activities.

Gambar 1. Ergonomic Gymnastics Training.

Gambar 2. Ergonomic Gymnastics Activities

DISCUSSION

Spiritually based ergonomic exercise activities carried out in the SP.6 Villabungamas community, Lahat Regency, reduced the average pain intensity and categories of older adults before and after the action. Spiritually based ergonomic exercise can reduce gouty arthritis pain through a holistic physical and mental health approach. Combining spiritual elements such as meditation, deep breathing, and positive affirmations helps reduce stress levels and emotional tension, which can worsen pain due to gout arthritis (Veranica, 2021). In addition, spiritually-based ergonomic exercises tend to be gentle and slow, designed to increase flexibility, strength, and body balance. Through these coordinated movements, blood circulation can increase, joint stiffness can decrease, and the body can respond by releasing endorphins, which are natural pain-reducing substances (Erman *et al.,* 2021). Emotional and mental aspects are also crucial in spiritually based ergonomic exercises for dealing with chronic pain. By focusing on present experiences, individuals can develop deeper self-awareness and the ability to deal with pain more effectively. This holistic approach also provides more significant meaning and purpose in overcoming health challenges, which can encourage individuals in their recovery process (Ardhi, 2018).

This is supported by a study by (Hasina *et al.,* 2020) This study shows that an ergonomic exercise program effectively reduces pain intensity, improves physical function, and improves quality of life in patients with gouty arthritis. After carrying out the intervention for one month, throughout four meetings, ergonomic exercise activities also showed a decrease in the intensity of pain in the older adults; it has shown a decrease in uric acid levels in the older adults; this is closely related to physical activity, education on diet management, assistance with medication use, and physical activity of the older adults.

Ergonomic exercise cannot significantly reduce uric acid levels in the blood for several reasons; besides having benefits in reducing pain, activities can reduce uric acid levels. These results are supported by the research conducted by Talib *et al.* (2019), which shows a significant effect on reducing uric acid levels before and after ergonomic exercises. Genetics, diet, and an individual's age can also influence uric acid levels in the blood. Hence, educating older adults about gout, arthritis, and diet problems during activities is crucial in reducing uric acid levels in the blood. These results are in line with research conducted by (Susanti *et al.,* 2022), which states that the results of the study state that providing counseling using various media can be a solution to help reduce pain and reduce a person's uric acid levels, namely through counseling or nutritional education accompanied by ergonomic exercise activities.

Research that has been conducted on the effect of ergonomic exercise on uric acid levels has provided significant results in reducing pain but doesn't show differences between uric acid levels before and after treatment (Azwaldi *et al.,* 2021). Therefore, to reduce uric acid levels and pain in people living with gouty arthritis, it is essential to do light physical activity (for example, ergonomic exercises) while still paying attention to healthy eating patterns, use of prescribed medications, and stress control This community service activity also aims to empower the community in disseminating health information. Empowerment is a health promotion strategy for overcoming health-related problems, with the community as the main target of health promotion activities (Rodiah *et al.,* 2016).

CONCLUSION

The result was a decrease in the pain intensity of older adults before and after activities carried out within one month, with four meetings. Furthermore, it is hoped that there will be awareness from the government and officeholders to present scheduled and structured community-based activities as an initial pathway in overcoming health problems, especially for older adults.

UCAPAN TERIMA KASIH

The author would like to thank the Poltekkes Kemenkes Palembang for providing financial support for this community service and thank village officials and the community in the SP area. 6 Saribungamas, Lahat Regency, for facilitating and participating in this activity so that it can run well and smoothly.

REFERENSI

Ardhi, N. R. (2018). Engaruh Senam Ergonomik Berbasis Spiritual Terhadap Perubahan Kadar Asam Urat Pada Lansia Di Desapelem Kecamatan Karangrejo Kabupaten Mageta. Gender and Development. http://www.uib.no/sites/w3.uib.no/files/attachments/1._ahmed-affective_economies_0.pdf%0Ahttp://www.laviedesidees.fr/Vers-une-anthropologie-critique.html%0Ahttp://www.cairn.info.lama.univ-amu.fr/resume.php?ID_ARTICLE=CEA_202_0563%5Cnhttp://www.cairn.info.

Azwaldi, A., Sulistini, R., & Erman, I. (2021). Terapi Non Farmakologi Perendaman Kaki Dengan Air Hangat Terhadap Tekanan Darah Penderita Hipertensi Wilayah Kerja Puskesmas Makrayu Palembang. *Abdi Dosen : Jurnal Pengabdian Pada Masyarakat*, **5**(3). https://doi.org/10.32832/abdidos.v5i3.908

CDC. (2020). Gout. Center For Disease Control and Prevention. https://www.cdc.gov/arthritis/basics/gout.html#:~:text=quality of life%3F-,What is gout%3F,no symptoms%2C known as remission

Emilia Veranica. (2021). Hubungan Aktivitas Fisik Dengan Kadar Asam Urat Pada Lansia: Literature Review Naskah Publikasi. 5–10.

Erman, I., Ridwan, R., & Putri, R. D. (2021). Pengaruh Senam Ergonomis Terhadap Kadar Asam Urat Pada Lansia di Wilayah Kerja Puskesmas Merdeka Kota Palembang. *JKM : Jurnal Keperawatan Merdeka*, **1**(2), 232–239. https://doi.org/10.36086/jkm.v1i2.1006

Hasina, S. N., Khafid, M., Putri, R. A., & Rohmawati, R. (2020). Ergonomic Exercise based on Spiritual Care in the Management of Pain Levels Reduction on Elderly with Gouty Arthritis. *Kresna Social Science and Humanities Research*, **1**, 1–4. https://doi.org/10.30874/ksshr.23

Jason Lady. (2020). Global cases of gout exceed 41 million with "alarming rate" of increased burden. Healio. https://www.healio.com/news/rheumatology/20200901/global-cases-of-gout-exceed-41-million-with-alarming-rate-of-increased-burden

Mattiuzzi, C., & Lippi, G. (2020). Recent updates on worldwide gout epidemiology. *Clinical Rheumatology*, **39**(4), 1061–1063. https://doi.org/10.1007/s10067-019-04868-9

PPNI, T. P. S. D. (2017). Standar Diagnosis Keperawatan Indonesia (3rd ed.). Dewan Pengurus Pusat PPNI.

Rodiah, Lusiana, & Agustine. (2016). Pemberdayaan Kader PKK dalam Usaha Penyebarluasan Informasi Kesehatan Jatinangor. *Jurnal Aplikasi Ipteks Untuk Masyarakat*, **5**(1), 34–37.

Sabila, A. S. (2020). Penerapan Terapi Ergonomic Exercise Berbasis Spiritual Care Untuk Menurunkan Intensitas Nyeri Pada Penderita Arthritis Gout di Desa Giwangretno Kecamatan Sruweng. Muhammadiyah Jombang.

Sari, N. N., Warni, H., Kurniasari, S., Herlina, H., & Agata, A. (2022). Upaya Pengendalian Kadar Asam Urat Pada Lansia Melalui Deteksi Dini Dan Penyuluhan Kesehatan. S*ELAPARANG: Jurnal Pengabdian Masyarakat Berkemajuan*, **6**(4), 1666. https://doi.org/10.31764/jpmb.v6i4.10948

Susanti, N., Astuti, Y. S., & Mashar, H. M. (2022). Literatur Review: Peran konseling gizi dan senam ergonomik dalam menurunkan kadar asam urat pada penderita gout. *AcTion: Aceh Nutrition Journal*, **7**(2), 240. https://doi.org/10.30867/action.v7i2.628

Wen, P., Luo, P., Zhang, B., & Zhang, Y. (2022). Mapping Knowledge Structure and Global Research Trends in Gout: A Bibliometric Analysis From 2001 to 2021. *Frontiers in Public Health*, **10**, 1–13. https://doi.org/10.3389/fpubh.2022.924676

Wijaya, A. S., & Putri, Y. M. (2013). (2013). KMB; Keperawatan Medikal Bedah (Keperawatan Dewasa). (1st ed.). Nuha Medika.

Yuniarti, E. (2022). Gout. ALO MEDIKA. https://www.alomedika.com/penyakit/reumatologi/gout

Zakiyah, A. (2015). Nyeri : Konsep dan Penatalaksanaan dalam Praktik Keperawatan Berbasis Bukti. Salemba Medika.