

Evaluation of physiotherapy and rehabilitation awareness of physicians working with rheumatological patients: The example of Türkiye

Romatolojik hastalarla çalışan hekimlerin fizyoterapi ve rehabilitasyon farkındalığının değerlendirilmesi: Türkiye örneği

© Sena Gizem Arslan¹, © Birgül Dingirdan Gültekinler¹, © Emre Bilgin²

¹Sakarya University of Applied Sciences, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Sakarya, Türkiye

²Sakarya University Faculty of Medicine, Department of Internal Medicine, Division of Rheumatology, Sakarya, Türkiye

Abstract

Objective: Physiotherapy, rehabilitation and exercise have an important place in the treatment of rheumatoid arthritis. The aim of our study is to examine physicians' awareness of physiotherapy and rehabilitation for patients with rheumatological conditions.

Methods: This is a descriptive cross-sectional study. Data were obtained using the Demographic and Data Collection Form and the Questionnaire, and were analyzed using descriptive statistics (mean, standard deviation, frequency, and percentage).

Results: A total of 60 rheumatologists participated in the study (response rate, 23.07%). Of the participants, 61.7% were female and 38.3% were male; 91.7% completed subspecialty training in internal medicine and 8.3% completed subspecialty training in physical medicine and rehabilitation. The majority (93.3%) reported recommending physiotherapy and rehabilitation to their patients, and 86.7% considered it necessary for treatment. Most physicians believed physiotherapy and rehabilitation improved joint mobility (91.7%), and fatigue (70%), and enhanced muscle strength (98.3%), activities of daily living (95%), and functional independence (90%). While 65% agreed that exercise therapy is a significant component of rehabilitation for rheumatoid arthritis, 75% reported recommending exercise to their patients. Additionally, 91.7% expressed a willingness to receive further information about physiotherapy and rehabilitation.

Conclusion: These results suggest that while rheumatology physicians demonstrate considerable interest in physiotherapy, there remains a need to further enhance awareness through structured educational content and multidisciplinary strategies.

Keywords: Rheumatology, awareness, rehabilitation

Özet

Amaç: Fizyoterapi, rehabilitasyon ve egzersiz, romatoid artrit tedavisinde önemli bir yere sahiptir. Çalışmamızın amacı, romatolojik hastalarla çalışan hekimlerin fizyoterapi ve rehabilitasyon farkındalıklarını incelemektir.

Yöntem: Bu çalışma tanımlayıcı kesitsel bir çalışmadır. Çalışmaya toplam 60 hekim katılmıştır. Veriler Demografik Bilgi Formu ve Anket Formu aracılığıyla toplanmış; ortalama, standart sapma, frekans ve yüzde gibi tanımlayıcı istatistiklerle analiz edilmiştir.

Bulgular: Çalışmaya toplam 60 romatoloji hekimi katılmıştır (yanıt oranı: %23,07). Katılımcıların %61,7'si kadın, %38,3'ü erkektir; %91,7'si iç hastalıkları, %8,3'ü fiziksel tıp ve rehabilitasyon alanında yandal uzmanlık eğitimi tamamlamıştır. Katılımcıların büyük çoğunluğu (%93,3) hastalarına fizyoterapi ve rehabilitasyon önermekte, %86,7'si bunu tedavide gerekli görmektedir. Hekimlerin çoğu, fizyoterapi ve rehabilitasyonun eklem hareketliliğini artırdığını (%91,7), ağrıyı (%81,7) ve yorgunluğu (%70) azalttığını, kas gücünü (%98,3), günlük yaşam aktivitelerini (%95) ve fonksiyonel bağımsızlığı (%90) artırdığını belirtmiştir. Katılımcıların %65'i egzersiz tedavisinin romatoid artrit rehabilitasyonun önemli bir bileşeni olduğunu kabul ederken, %75'i hastalarına egzersiz önerdiğini bildirmiştir. Ayrıca %91,7'si fizyoterapi ve rehabilitasyon konusunda daha fazla bilgi edinmek istediğini ifade etmiştir.

Sonuç: Bu sonuçlar, romatoloji hekimlerinin fizyoterapiye büyük ilgi gösterdiğini, ancak farkındalığın yapılandırılmış eğitim içerikleri ve multidisipliner stratejilerle daha da artırılmasına ihtiyaç duyulduğunu göstermektedir.

Anahtar Kelimeler: Romatoloji, farkındalık, rehabilitasyon

Correspondence / İletişim: Birgül Dingirdan Gültekinler MD,

Sakarya University of Applied Sciences, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Sakarya, Türkiye

E-mail: birguldindirdan@gmail.com **ORCID ID:** orcid.org/0000-0001-9615-2348

Received / Geliş Tarihi: 08.10.2025 **Accepted / Kabul Tarihi:** 26.01.2026 **Epub:** 02.03.2026 **Publication Date / Yayın Tarihi:** 27.03.2026

Cite this article as / Atf: Arslan SG, Dingirdan Gültekinler B, Bilgin E. Evaluation of physiotherapy and rehabilitation awareness of physicians working with rheumatological patients: the example of Türkiye. J Turk Soc Rheumatol. 2026;18(1):50-55



Introduction

Rheumatoid arthritis (RA) is a chronic autoimmune inflammatory disease characterized primarily by symmetrical involvement of multiple joints. The basic clinical picture of RA is joint damage, manifested by deformities and cartilage and bone erosions, resulting from displacement of tendons and ligaments and loss of structural support due to inflammatory processes.^[1] When disease management in RA is inadequate or appropriate responses to applied treatments are not achieved, inflammation, joint damage, and deformities can lead to loss of physical function and limitations in activities of daily living.^[2]

Low physical activity is a characteristic but modifiable feature of rheumatoid arthritis. Research suggests that individuals with RA engage in less physical activity than healthy individuals. While some countries report that over 80% of RA patients are physically inactive, this figure is approximately 68% in the United Kingdom.^[3] Physical inactivity negatively impacts both overall health and disease progression in RA patients, creating a vicious cycle. Therefore, encouraging regular physical activity and exercise is considered an integral and primary component of RA treatment.^[4]

Physiotherapy, rehabilitation, and exercise play an important role in the treatment of RA.^[2] However, no studies in the literature have examined the awareness of physiotherapy and rehabilitation among physicians who treat patients with rheumatic diseases. It is not known to what extent physicians working with rheumatological patients refer their patients to physiotherapy and rehabilitation, and to what extent they are aware of these services.

The aim of our study is to examine the physiotherapy and rehabilitation awareness of physicians working with rheumatological patients.

Materials and Methods

Study Design

This study is a descriptive cross-sectional study. This study was approved by the Ethics Committee at Sakarya University of Applied Sciences (approval date: 12.05.2025, approval number: 56/23) and was conducted in accordance with the principles of the Declaration of Helsinki. Eligible participants received written information and provided informed consent before participation.

Study Population

The study included 60 physicians who worked with rheumatological patients in both private and public hospitals in Türkiye. The study was conducted between May 2025 and August 2025. Inclusion criteria for the study were: being a

physician in any medical specialty; having at least three years of theoretical and practical experience in the treatment, surgery, or rehabilitation of rheumatological diseases; and being a native Turkish speaker.

A demographic and data-collection form was used to assess demographic information and general knowledge about the profession, and a questionnaire was used to assess physicians' awareness of physiotherapy and rehabilitation.

Demographic and data collection form: Demographic information, such as gender, date of birth, weight, height, and body mass index, and descriptive information, such as major specialization, years working with rheumatology patients, and whether the team included a physiotherapist, were recorded.

Questionnaire form: The authors developed the questionnaire based on a review of the relevant literature. To ensure face validity and content relevance, the items were reviewed by two rheumatologists and two physiotherapists with clinical experience in the field. However, no formal psychometric validation procedures were conducted prior to data collection. It consisted of questions designed to evaluate physicians' awareness of physiotherapy and rehabilitation when working with rheumatology patients. Survey questions were answered using a 5-point Likert scale: 1. Not sufficient at all; 2. Partially sufficient; 3. Sufficient; 4. Completely sufficient; 5. Question not appropriate. It aimed to evaluate the awareness of exercise one of the basic components of physiotherapy and rehabilitation, the practices applied in patient management, and the joint-protection techniques taught to patients.

Statistical Analysis

Evaluations of the obtained data were performed using SPSS 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to describe the demographic characteristics of the participants and their awareness of physiotherapy and rehabilitation. Mean, standard deviation, minimum, and maximum values were calculated for continuous variables, and frequency (n) and percentages (%) were calculated for categorical variables.

Results

This study was conducted with the participation of 60 rheumatology physicians. The response rate for the survey distributed to the Rheumatology Physicians' WhatsApp group, which had 260 members, was 23.07%. Among the rheumatology physicians, 6 (10%) had 3-5 years, 18 (30%) had 6-10 years, 24 (40%) had 11-15 years, and 12 (20%) had 16-20 years of professional experience. Among the rheumatologists, 91.7% completed their rheumatology subspecialty training through the Department of Internal Medicine, while 8.3% completed it through the Department of Physical Medicine

and Rehabilitation. Among the rheumatology physicians who participated in the study, 61.7% were female and 38.3% were male. The demographic characteristics of the rheumatology physicians are presented in Table 1. 93.3% of rheumatology physicians reported recommending physiotherapy and rehabilitation to their patients (Figure 1). 86.7% of rheumatology physicians consider physiotherapy and rehabilitation necessary in treating their patients. While 1.7% did not consider it necessary, 11.7% responded with “I don’t know” (Table 2). Of the rheumatology physicians, 65% reported they believe that exercise therapy constituted a significant component of physiotherapy and rehabilitation in rheumatoid arthritis; 15% do not share this view, and 20% responded “I don’t know” (Table 3). Of the rheumatology physicians, 91.7% believe that physiotherapy and rehabilitation improve joint range of motion in rheumatoid arthritis; 1.7% do not share this view, and 6.7% responded “I don’t know”. Among rheumatology physicians, 81.7% reported that they believe that physiotherapy and rehabilitation reduce pain in rheumatoid arthritis, 8.3% did not believe they are effective, and 10% responded “I don’t know”. Seventy percent of rheumatology physicians reported that physiotherapy and

rehabilitation are effective in reducing fatigue in rheumatoid arthritis; 3.3% did not hold this view, and 26.7% responded “I don’t know”. Of the rheumatology physicians, 98.3% believe that physiotherapy and rehabilitation effectively improve muscle strength and power in patients with rheumatoid arthritis; 1.7% responded “I don’t know”. Ninety-five percent of rheumatology physicians reported that physiotherapy and rehabilitation are effective in facilitating activities of daily living in patients with rheumatoid arthritis, while 5% responded “I don’t know”. Of the rheumatology physicians, 65% reported they believe that exercise therapy constituted a significant component of physiotherapy and rehabilitation in rheumatoid arthritis; 15% do not share this view, and 20% responded “I don’t know” (Table 3). Seventy-five percent of the rheumatology physicians recommended exercise for patients with rheumatoid arthritis, 13.3% did not recommend it, and 11.7% were not familiar with the exercises (Figure 2). The types of exercises

Table 1. Demographic characteristics of the rheumatology physicians

Descriptives	Minimum	Maximum	Mean ± standard deviation
Age (yrs)	30	45	36.21±3.68
Years of professional experience (yrs)	3	20	10.78±4.59
Height (cm)	150	186	168.91±8.01
Weight (kg)	45	99	70.48±14.08

cm: Centimeter, kg: Kilogram, yrs: Years

Table 2. The percentage of physicians who consider physiotherapy and rehabilitation necessary in the treatment of their patients

Consideration status	Percentage (%)	n
Considering	86.7	52
Not considering	1.7	1
Undecided	11.7	7

Table 3. Exercise therapy constitutes a significant component of physiotherapy and rehabilitation in the management of rheumatoid arthritis

Response	Percentage (%)	n
Yes	65	39
No	15	9
Undecided	20	12

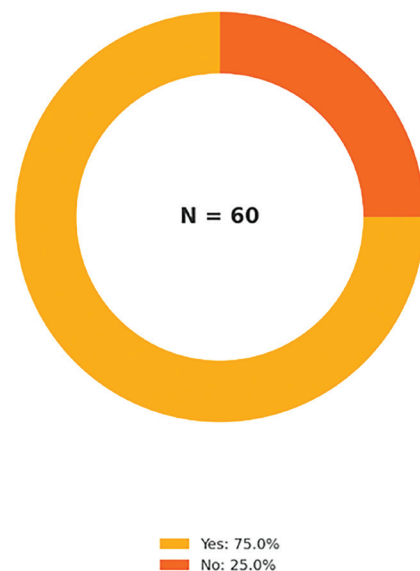
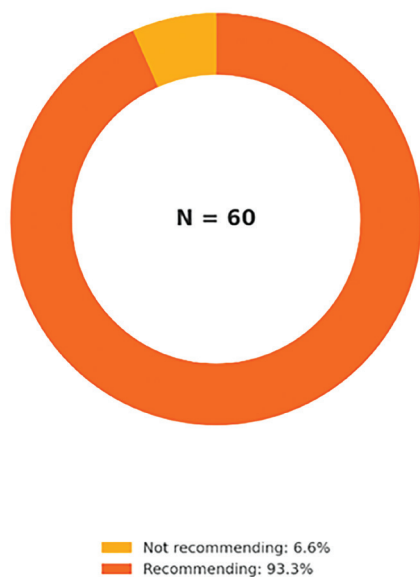


Figure 1. Referral to physiotherapy and rehabilitation

Figure 2. The percentage of rheumatology physicians who recommend exercise for patients with rheumatoid arthritis

recommended by the rheumatologists to their patients are presented in Table 4. Among the rheumatology physicians, 46.7% reported that they believe that physiotherapy and rehabilitation is as effective as pharmacological treatment in rheumatoid arthritis, 43.3% did not consider it equally effective, and 10% responded “I don’t know” (Figure 3). The percentage of rheumatology physicians who reported addressing the importance of energy conservation techniques in physiotherapy and rehabilitation of patients with RA was 26.7%, while 73.3% stated that they did not address this topic. Among rheumatology physicians, 91.7% expressed a desire to receive more information about physiotherapy and rehabilitation; 6.7% stated that they did not wish to receive further information, and 1.7% responded with “I don’t know”. The percentage of rheumatology physicians who believe that regular participation in physiotherapy and rehabilitation has a positive effect on walking in patients with RA is 83.3%, while 16.7% responded with “I don’t know”. Ninety percent of rheumatology physicians believe that regular participation in physiotherapy and rehabilitation facilitates stair climbing in patients with rheumatoid arthritis; 10% responded “I don’t know”. 86.7% of the rheumatology physicians reported that they believe that regular participation in physiotherapy and rehabilitation improves fine motor skills in patients with rheumatoid arthritis; 1.7% did not share this view, and 11.7% responded “I don’t know”. Among rheumatology physicians, 91.7% reported that they believe that regular participation in physiotherapy and rehabilitation enables patients with RA to perform household tasks more easily, while 8.3% responded “I don’t know”. Ninety percent of rheumatology physicians reported that they believe that regular participation

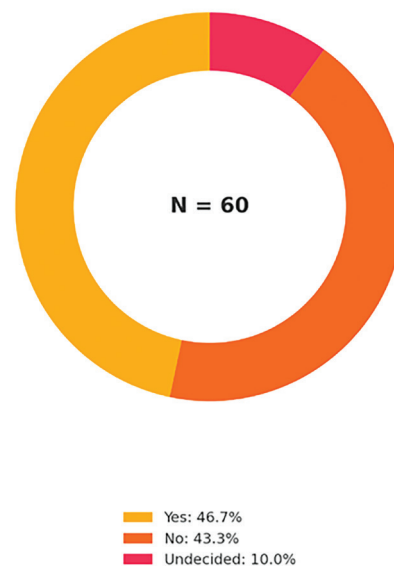


Figure 3. The percentage of rheumatology physicians who believe that physiotherapy and rehabilitation are as effective as pharmacological treatment in rheumatoid arthritis

in physiotherapy and rehabilitation enables patients with RA to perform activities of daily living more comfortably, while 10% responded, “I don’t know”.

Discussion

This study aimed to assess physicians’ awareness of and attitudes toward physiotherapy and rehabilitation for patients with rheumatological conditions. The findings indicate that physicians generally have a positive view of physiotherapy, but their levels of knowledge and practice remain limited in some areas.

Physiotherapy plays an indispensable role in managing pain in rheumatology. Mohapatra et al.^[5] reported that various methods, such as aerobic exercise, hydrotherapy, and manual therapy, are essential in alleviating pain, restoring functionality, and improving quality of life. England et al.^[6] also emphasized the positive effects of physiotherapy on pain, fatigue, and functional capacity in individuals with rheumatoid arthritis. In our study, 93.3% of physicians stated that they recommend physiotherapy and rehabilitation to their patients. This rate indicates a high level of awareness of the clinical value of physiotherapy. This finding is consistent with the literature.

During comprehensive patient assessments, rheumatology physiotherapists determine the physical effects of the patient’s condition and the extent to which these effects impair their function, including posture and mobility.^[7] Hurkmans et al.^[8] stated that providing clear and personalized physical activity recommendations for individuals with inflammatory arthritis increases treatment adherence. In our study, 86.7% of physicians stated that physiotherapy is a necessary part of the treatment,

Category	Percentage (%)	n
No activity recommends	8.33	5
Aerobic exercises	6.67	4
Range of motion exercises	13.33	8
Walking	10	6
Stretching exercises	13.33	8
Isometric exercises	5	3
Swimming	11.67	7
Calisthenic exercises	1.67	1
Yoga	3.33	2
Pilates	6.67	4
Hydrotherapy	1.67	1
Expert recommendation	1.67	1
Strengthening exercises	10	6
Cycling	1.67	1
Does not know any exercise	1.67	1
Brochure based exercises	1.67	1
YouTube rheumatism TV	1.67	1

while 75% recommended exercise to their patients. However, 11.7% of the participants reported that they were not familiar with exercise, highlighting the need for educational support in clinical practice.

Physiotherapy and occupational therapy are non-pharmacological approaches that aim to restore and optimize patient function. While physiotherapy primarily focuses on improving joint mobility, flexibility, and muscle strength, occupational therapy emphasizes activity modification and improvement of daily functioning.^[9] Akinci et al.^[10] reported that exercise increased joint range of motion and functional capacity in individuals with rheumatoid arthritis. Similarly, Sieczkowska et al.^[11] reported that home-based physiotherapy provided significant improvements in patient function. In our study, 98.3% of physicians agreed that physiotherapy improved muscle strength, and 95% agreed that it contributed to activities of daily living. These findings are consistent with the literature.

On the other hand, Musumeci^[12] reported that physical activity can reduce tender points and fatigue, increase energy, and serve as an excellent stress reliever. Similarly, Li and Wang^[13] noted that physiotherapy are effective in reducing symptoms such as fatigue and functional disability. In our study, 70% of physicians considered physiotherapy effective for fatigue management, whereas 26.7% emphasized the importance of energy conservation techniques. These rates suggest that the multidisciplinary and holistic approaches emphasized in the literature are not fully reflected in physicians' practice and suggest that awareness of this issue is low.

Current evidence indicates that exercise and physical therapy, especially in the chronic phase, when combined with medications, have a positive impact on the course of the disease.^[14,15] Only 46.7% of physicians in our study believed that physiotherapy was as effective as pharmacological treatment. This finding suggests that treatment approaches for RA remain predominantly medical, and some clinicians consider physiotherapy a complementary option.

An important finding is that 91.7% of the participated physicians expressed a desire for more information about physiotherapy and rehabilitation. This result suggests that clinicians are highly interested in the topic, and their knowledge can be further enhanced through training. Integrating physiotherapy approaches into educational content can improve both physician-physiotherapist collaboration and patient outcomes.

A key strength of our study is that it collected data directly from physicians who care for rheumatology patients in clinical practice, unlike previous studies. Therefore, it is an original study in its field.

Study Limitations

Several limitations of this study should be acknowledged. The relatively limited sample size and the online distribution of the survey through a single WhatsApp group may have introduced sampling bias and restricted the generalizability of the findings. In addition, the low response rate (23%) raises the possibility of non-response bias, as individuals with greater interest in or awareness of the topic may have been more likely to participate, potentially leading to an overestimation of awareness levels.

Data were collected using a self-reported questionnaire, which may be subject to social desirability bias. Moreover, the cross-sectional design of the study precludes the establishment of causal relationships, and the findings should therefore be interpreted with caution.

The questionnaire used in this study was not subjected to formal psychometric validation. Quantitative measures such as the content validity index, internal consistency, and test–retest reliability were not assessed, which may affect the precision of the measurements. Future studies are encouraged to perform comprehensive validation.

Finally, the inclusion of physicians with formal training in physical medicine and rehabilitation may have influenced the reported awareness levels. Consequently, awareness among physicians with such training may be overestimated compared with that of physicians without such training. Future research may benefit from stratifying participants according to prior training or focusing on physicians with limited exposure to rehabilitation medicine.

Conclusion

These results suggest that rheumatology physicians are highly interested in physiotherapy, and current awareness levels can be further improved through educational content and multidisciplinary approaches. Increasing physiotherapy awareness in medical education and continuing professional development programs could facilitate strengthening physician-physiotherapist collaboration and providing patients with a more holistic approach to care.

Ethics

Ethics Committee Approval: This study was approved by the Ethics Committee at Sakarya University of Applied Sciences (approval date: 12.05.2025, approval number: 56/23) and was conducted in accordance with the principles of the Declaration of Helsinki.

Informed Consent: Eligible participants received written information and provided informed consent before participation.

Footnotes

Authorship Contributions

Concept: S.G.A., B.D.G., E.B., Design: S.G.A., B.D.G., E.B., Data Collection and Processing: S.G.A., B.D.G., E.B., Analysis or Interpretation: S.G.A., B.D.G., E.B., Literature Search: S.G.A., B.D.G., E.B., Writing: S.G.A., B.D.G., E.B.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declare that they have no relevant financial disclosures.

References

1. Smolen JS, Aletaha D, Barton A, et al. Rheumatoid arthritis. *Nat Rev Dis Primers*. 2018;4:18001.
2. Peter WF, Swart NM, Meerhoff GA, Vliet Vlieland TPM. Clinical practice guideline for physical therapist management of people with rheumatoid arthritis. *Phys Ther*. 2021;101:pzab127.
3. Sokka T, Häkkinen A. Poor physical fitness and performance as predictors of mortality in normal populations and patients with rheumatic and other diseases. *Clin Exp Rheumatol*. 2008;26(Suppl 51):S14-20.
4. Cooney JK, Law RJ, Matschke V, et al. Benefits of exercise in rheumatoid arthritis. *J Aging Res*. 2011;2011:681640.
5. Mohapatra A, Patwari S, Pansari M, Padhan S. Navigating pain in rheumatology: a physiotherapy-centric review on non-pharmacological pain management strategies. *Cureus*. 2023;15:e51416.
6. England BR, Smith BJ, Baker NA, et al. 2022 American College of Rheumatology Guideline for exercise, rehabilitation, diet, and additional integrative interventions for rheumatoid arthritis. *Arthritis Care Res (Hoboken)*. 2023;75:1603-15.
7. Dziedzic, Krysia, and Alison Hammond, eds. *Rheumatology E-Book: Rheumatology E-Book*. Elsevier Health Sciences, 2010.
8. Hurkmans E, van der Giesen FJ, Vliet Vlieland TP, Schoones J, Van den Ende EC. Dynamic exercise programs (aerobic capacity and/or muscle strength training) in patients with rheumatoid arthritis. *Cochrane Database Syst Rev*. 2009;2009:CD006853.
9. Allameen NA, Lai YW, Lian G, et al. Physiotherapy and occupational therapy in rheumatoid arthritis: bridging functional and comorbidity gaps. *Best Pract Res Clin Rheumatol*. 2025;39:102032.
10. Akıncı M, Akıncı M, Çınar Fİ. Romatoid artrit ve egzersiz. *Gazi Sağlık Bilimleri Dergisi*. Ağustos 2025;10(Özel Sayı):13-14.
11. Siczowska SM, Smaira FI, Mazzolani BC, Gualano B, Roschel H, Peçanha T. Efficacy of home-based physical activity interventions in patients with autoimmune rheumatic diseases: a systematic review and meta-analysis. *Semin Arthritis Rheum*. 2021;51:576-87.
12. Musumeci G. Effects of exercise on physical limitations and fatigue in rheumatic diseases. *World J Orthop*. 2015;6:762-9.
13. Li Z, Wang XQ. Clinical effect and biological mechanism of exercise for rheumatoid arthritis: a mini review. *Front Immunol*. 2023;13:1089621.
14. Tanaka R, Ozawa J, Kito N, Moriyama H. Efficacy of strengthening or aerobic exercise on pain relief in people with knee osteoarthritis: a systematic review and meta-analysis of randomized controlled trials. *Clin Rehabil*. 2013;27:1059-71.
15. Gwinnutt JM, Wiecek M, Cavalli G, et al. Effects of physical exercise and body weight on disease-specific outcomes of people with rheumatic and musculoskeletal diseases (RMDs): systematic reviews and meta-analyses informing the 2021 EULAR recommendations for lifestyle improvements in people with RMDs. *RMD Open*. 2022;8:e002168.