





## ARTÍCULO ORIGINAL



**Educational strategies for optimal and safe learning in patients with rheumatic conditions: a scoping review****Estrategias educativas para un aprendizaje óptimo y seguro en pacientes reumatológicos: una revisión de alcance****Estratégias educacionais para uma aprendizagem ideal e segura em pacientes reumatológicos: uma revisão de escopo****Katharine Sperger Fernández<sup>1a</sup> , Ruby Bustamante Muñoz<sup>1</sup> **<sup>1</sup> Universidad de Chile, Santiago, Chile. <sup>a</sup> **Corresponding Author:** [katharine.sperger@ug.uchile.cl](mailto:katharine.sperger@ug.uchile.cl) 

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**ABSTRACT**

**Introduction:** In Chile, rheumatic pathologies affect between 15% and 40% of the population, displaying a unique epidemiological profile in which nursing education plays a cross-cutting role. However, limited learning outcomes have been observed among rheumatology patients. **Objective:** To explore the educational strategies implemented in nursing to achieve optimal and safe learning outcomes tailored to the needs of individuals with rheumatic diseases. **Methods:** A literature search was conducted across SciELO, LILACS, the Latin American Repository Network, and PubMed for the 2012-2014 period. Keywords included "Rheumatology," "Nursing," and "Nursing Education." Articles were screened using these inclusion criteria: published within the past 12 years; available in Spanish, English, or Portuguese with full-text access; relevant to rheumatology care in inpatient or outpatient settings; and free access for Universidad de Chile students. Exclusion criteria included articles on pediatric rheumatology, non-open-access content, or paid articles. Studies were appraised using the CASPe tool and narratively synthesized, with results presented in tables and a synthesis matrix. **Results:** Eight educational strategies were identified from nine selected articles: a holistic



approach grounded in popular knowledge, fostering introspective dialogue, pain assessment, pharmacologic and non-pharmacologic treatment, role empowerment, interdisciplinary work, and introspective analysis. These strategies were grouped into three categories: those centered on the patient's context and being, those related to treatment with and without medication, and those involving complementarity and interdisciplinarity. **Conclusions:** This review identified educational strategies that support effective learning among patients with rheumatic diseases. Future research should expand database sources to include humanistic literature and materials without full-text access.

**Keywords:** Rheumatology; Nursing; Education, Nursing; Learning; Culture.

## RESUMEN

**Introducción:** En Chile las patologías reumatológicas afectan un 15% a 40% de la población general, cumpliendo un perfil epidemiológico único en que la educación de enfermería es transversal, observando escasos aprendizajes en pacientes de servicios reumatológicos. **Objetivo:** Explorar cuáles son las estrategias educativas de enfermería implementadas para el logro de un aprendizaje óptimo y seguro relacionado con las necesidades de las patologías reumatológicas. **Metodología:** La búsqueda se realizó en SciELO, LILACS, Red de repositorios Latinoamericano y PubMed entre los años 2012-2024, las palabras claves fueron Reumatología, Enfermería, Educación de Enfermería. Los artículos fueron tamizados por criterios de inclusión: fecha de publicación menor a 12 años; idioma español, inglés o portugués con texto completo; relación reumatológica en contexto intrahospitalario o extrahospitalario y acceso gratuito para estudiantes de la Universidad de Chile. Y de exclusión: artículos reumatológicos pediátricos, sin libre acceso o con costo asociado. Fueron validados mediante CASPe y sintetizados narrativamente mediante tablas y una matriz de síntesis. **Resultados:** Fueron seleccionados 9 artículos. Se establecieron ocho estrategias educativas: visión holística basada en la sabiduría popular, establecer un diálogo introspectivo, valoración del dolor, tratamiento farmacológico y no farmacológico, empoderamiento del rol, interdisciplinariedad y análisis introspectivo. Estas fueron agrupadas en tres categorías: centradas en el contexto y ser del paciente, relacionada al tratamiento con y sin fármacos; y complementariedad e interdisciplinariedad. **Conclusiones:** Esta revisión permitió describir estrategias educativas para un aprendizaje en pacientes reumáticos. Considerar en próximos estudios expandir las bases de datos contemplando literatura humanista y sin acceso completo al texto.

**Palabras claves:** Reumatología; Enfermería; Educación de Enfermería; Aprendizaje; Cultura.

## RESUMO

**Introdução:** No Chile, as doenças reumatológicas afetam de 15% a 40% da população em geral, preenchendo um perfil epidemiológico único no qual a educação em enfermagem é transversal, observando-se aprendizagem limitada em pacientes de serviços de reumatologia. **Objetivo:** Explorar quais são as estratégias educacionais de enfermagem implementadas para alcançar uma aprendizagem ótima e segura relacionada às necessidades das doenças reumatológicas. **Metodologia:** A busca foi realizada em SciELO, LILACS, Rede Latino-Americana de Repositórios e PubMed entre 2012 e 2024, as palavras-chave foram Reumatologia, Enfermagem, Educação em Enfermagem. Os artigos foram selecionados por os critérios de inclusão: data de publicação inferior a 12 anos; idioma espanhol, inglês ou português com texto completo; relacionamento reumatológico em contexto hospitalar ou extra-hospitalar e acesso gratuito para estudantes da Universidade do Chile. Y exclusão: artigos de reumatologia pediátrica, sem acesso gratuito ou com custo associado. Eles foram validados usando CASPe e sintetizados narrativamente usando tabelas e uma matriz de síntese. **Resultados:** Nove artigos foram selecionados. Oito estratégias educacionais foram estabelecidas: visão holística baseada na sabedoria popular, estabelecimento de diálogo introspectivo, avaliação da dor, tratamento farmacológico e não farmacológico, empoderamento de papéis, interdisciplinaridade e análise

introspectiva. Estas foram agrupadas em três categorias: centrada no contexto e na identidade do paciente; relacionada ao tratamento medicamentoso e não medicamentoso; e complementaridade e interdisciplinaridade. **Conclusões:** Esta revisão permitiu descrever estratégias educacionais para a aprendizagem em pacientes reumatológicos. Considere expandir os bancos de dados para incluir literatura humanística sem acesso ao texto completo em estudos futuros.

**Palavras-Chave:** Reumatologia; Enfermagem; Educação em Enfermagem; Aprendizagem; Cultura.

## INTRODUCTION

In Chile, rheumatic conditions affect between 15% and 40% of the general population across demographic groups.<sup>1-2</sup> These diseases are characterized by a distinctive symptomatic profile, commonly involving chronic pain, immobility, depression, social isolation, and, in some cases, suicide.<sup>3-4</sup> Management is primarily based on specific pharmacological treatment,<sup>5-6</sup> in which nursing professionals play a vital role, fulfilling both clinical and educational functions.<sup>6</sup> Their responsibilities include the administration of intravenous and subcutaneous biological therapies as outlined by the Ricarte Soto Law (Law No. 20,850), implemented in 2015,<sup>7</sup> and delivering person-centered care tailored to each patient's unique needs.<sup>3-4,6</sup> Within this context, the concept of "educational strategies" refers to a set of ideas, techniques, or learning processes that enable nursing staff to carry out their clinical-educational role in alignment with the expressed needs of patients with rheumatic diseases.

At both global, national, and local levels, there is limited literature detailing concrete nursing educational strategies for implementing and planning patient education in rheumatology. This fact contradicts the 2015 Chilean initiative, which mandated that the Ricarte Soto Law would fully cover intravenous and subcutaneous pharmacological treatments for rheumatic conditions such as rheumatoid arthritis, Crohn's disease, multiple sclerosis, ulcerative colitis, systemic lupus erythematosus (SLE), and psoriatic arthritis. In the case of subcutaneous therapies, the law stipulates the delivery of three free educational sessions at the medication distribution centers. These sessions must address the transportation, administration, and storage of biological drugs and are to be repeated if a change in pharmacological therapy occurs.<sup>7</sup>

Despite these regulatory provisions, clinical experience has shown that many patients with rheumatic diseases exhibit limited knowledge about their condition's management, resulting in a notable heterogeneity in patient understanding, likely due to the specific epidemiological profile of these diseases.<sup>3-4</sup> Given this reality, and in light of the educational interventions promoted by Law No. 20,850, which aim to foster autonomy and self-care in the context of rare or infrequent diseases in Chile, there is a pressing need to identify and implement effective educational approaches that fulfill these objectives.

This scoping review aims to explore the educational strategies employed by nursing professionals to promote optimal and safe learning tailored to the needs of patients with rheumatic diseases. This inquiry is guided by the research question: "What educational strategies are implemented to achieve optimal and safe learning outcomes aligned with the needs of adult patients with rheumatic conditions?" The purpose of this article is to contribute to the development of nursing educational strategies that support optimal and safe learning in the context of rheumatic pathologies.

## METHODOLOGY

**Study Design:** This systematic review is based on a comprehensive literature search conducted in accordance with the PRISMA 2020 guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses).<sup>8</sup> The review was guided by a research question structured using the PICo format:

*Population* – adult patients with rheumatic diseases; *Intervention* – educational strategies implemented to achieve optimal and safe learning; *Context* – learning related to the needs associated with rheumatic conditions.<sup>9</sup> See Figure 1.

**Eligibility Criteria:** Inclusion criteria consisted of articles with a specific focus on rheumatology, targeting adult and older adult populations, nursing practices, and educational strategies within both inpatient and outpatient settings. Only studies published within the last 12 years in Spanish, English, or Portuguese, with full-text availability, were included. Exclusion criteria were pediatric rheumatology studies and articles that were not freely accessible or required a fee.

**Information Sources:** The literature search was conducted across the following databases: SciELO, LILACS, the Latin American Repository Network, and PubMed, covering the period from 2012 to 2024.

**Search Strategy:** The search strategy incorporated Descriptors in Health Sciences (DeCS) and Medical Subject Headings (MeSH) terms, including Rheumatology (*Reumatología; Reumatologia*), Nursing (*Enfermería; Enfermagem*), and Education, Nursing (*Educación en Enfermería; Educação em Enfermagem*).<sup>10</sup> Boolean operators AND and OR were used, along with the following filters: publication date within the past 12 years, full-text availability, and studies in Spanish, English, or Portuguese. Data collection was conducted between June 8 and June 18, 2024.

## Reproducibility and Methodological Quality

**Study Selection Process:** This review ensured reproducibility in the search, selection, inclusion, and data extraction processes, which were conducted independently by both authors of this article. The whole search strategy was applied in each database using the following query: (Rheumatology [Title/Abstract]) AND (nursing[Title/Abstract]) Filters: Free full text, from 2012 - 2024 ("Rheumatology"[Title/Abstract] AND "nursing"[Title/Abstract]) AND ((ffrft[Filter]) AND (2012:2024[pdat])). Articles were initially screened to assess whether they met the pre-established inclusion and exclusion criteria. Subsequently, titles and abstracts were reviewed for relevance to the research topic. As a final filter, the authors critically analyzed the full text of all selected articles. The authors replicated the screening and selection process for each database, retaining nine articles for the final review.

**Data Analysis Strategy and Document Validation:** Data extraction was conducted using the Spanish version of the Critical Appraisal Skills Programme (CASP) checklist,<sup>11</sup> which allowed for an appraisal of methodological quality. Articles meeting at least 70% of the criteria were approved for inclusion. The researchers resolved any discrepancies during the assessment process through consensus and assessed the risk of bias by evaluating the blinding strategies employed in each study.

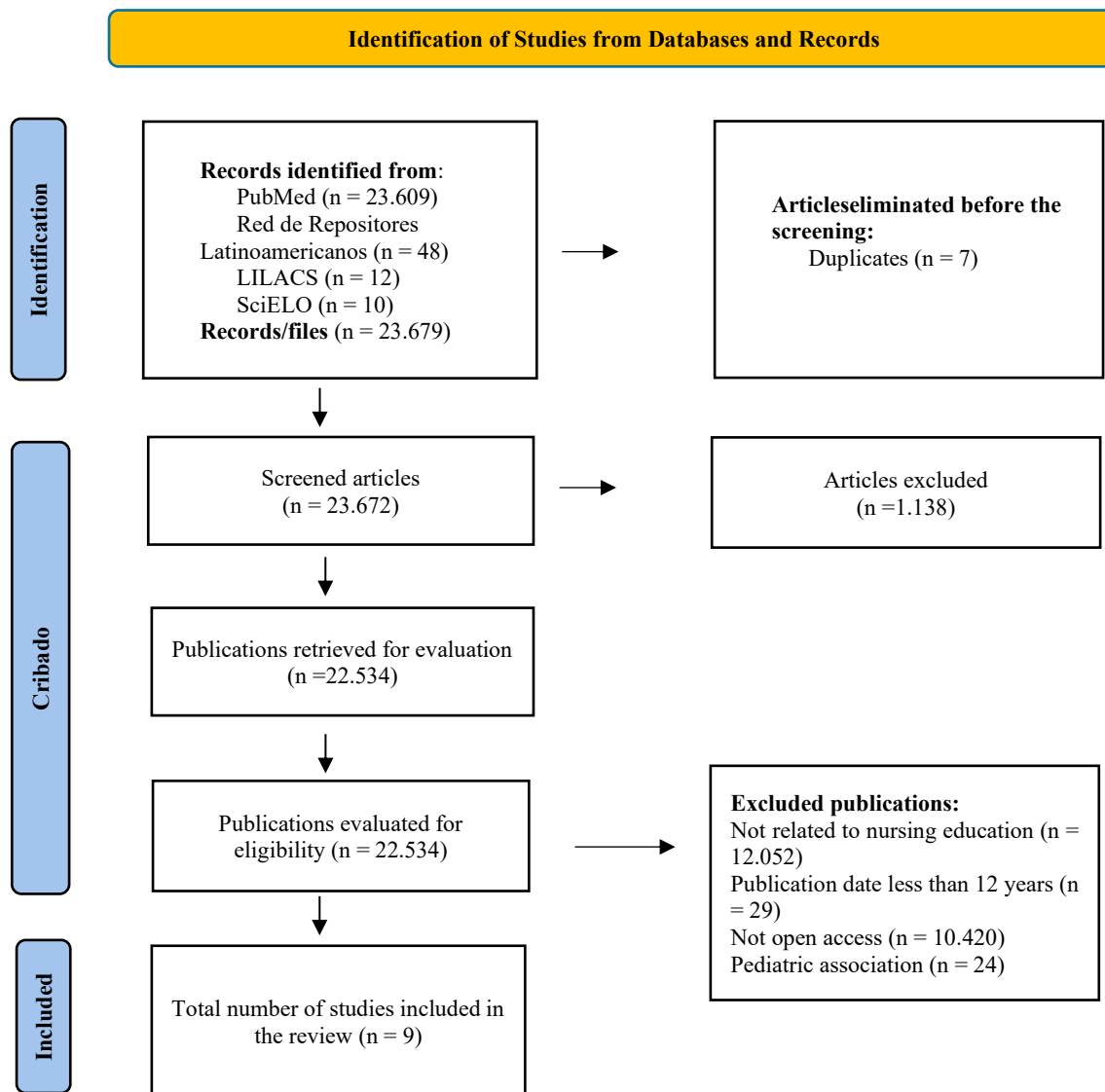
**Data Extraction, Synthesis, and Analysis:** A narrative synthesis of the nine selected articles was conducted. These articles were compiled into a synthesis matrix that included key information such as title, author(s), year of publication, country of origin, language, study design, population, primary issue addressed, key findings relevant to the research question, identified educational strategies, and validation instrument with respective scoring. Additionally, a thematic matrix was developed comprising three central categories, constructed based on the synthesized findings. The research team defined these categories through the development of eight educational strategies that encapsulated the collected results. These strategies were then categorized based on their thematic focus. See Tables 1 and 2.

## RESULTS

### Descriptive Findings

The database and repository search initially yielded 23,679 articles. After applying inclusion and exclusion criteria, 15 articles were retained for critical appraisal using the CASPe validation tool. Of these, nine articles were included in the review. See Figure 1.

Figure 1. Flowchart of review, search and selection of studies for establishing educational strategies in rheumatology patients.



Source: Developed by the authors from the PRISMA flowchart.<sup>9</sup>

Table 1. Matrix of results synthesis according to individual analysis by article and bibliographic review by validation instrument.

Title	Authors/ Year of Publication /country /Language	Design	Population	Main Problem	Main Results	Educational Strategy	Validation and Scoring Instrument
Creating knowledge and actions by promoting health in aged women with Osteoporosis	De Oliveira, et al., 2023, Brasil, inglés.	Descriptive Study	25 women over 60 years of age with osteoporosis treated in a specialized rheumatology hospital unit	Limited literature regarding how to contribute to self-care awareness in aging with rheumatic diseases according to the approach of educator Paulo Freire	Learning centered on a biopsychosocial context based on the popular wisdom of each patient Establishment of a self-critical reflective dialogue	Holistic approach based on popular wisdom ( <b>Strategy 1</b> ) Establishment of an introspective dialogue by the patient ( <b>Strategy 2</b> ) Fluctuating painful symptoms and the repetitive fluctuating feeling of frustration ( <b>Strategy 3</b> ) Attitudinal change and adoption of a role-based approach from an interdisciplinary team ( <b>Strategy 7</b> )	CASPe for a qualitative study  Score: 8/10
Duality of living with systemic Lupus Erythematosus: Fluctuating between “good days” and “bad days” Promoção da saúde de idosas com osteoporose: uma abordagem a partir do modelo de promoção da saúde de Nola Pender	De Souza et al., 2021, Brasil, inglés.  De Oliveira S., 2012, Brasil, portugués.	Exploratory Descriptive Study  Qualitative content analysis study	21 women and 5 men between 18 and 65 years of age undergoing inpatient rheumatology treatment  25 women aged around 74 diagnosed with osteoporosis at age 17	The human reaction to chronic diseases is unique to each person, although some common behaviors are frequently identified that hinder the adoption of new habits and, therefore, learning.  Older women's lack of understanding about osteoporosis and its main consequences in relation to their contextual factors	Learning centered on a biopsychosocial context  Learning centered on a biopsychosocial context. Educational approach focused on the patient's emotions, feelings, and life experiences. Role of the healthcare professional in contextual care.	Educational approach focused on the patient's emotions and feelings. Holistic approach based on popular wisdom ( <b>Strategy 1</b> ) Establishment of an introspective dialogue with the patient ( <b>Strategy 2</b> ) Care focused on the pharmacological treatment of a rheumatic disease ( <b>Strategy 4</b> )  Establishment of an introspective dialogue by the patient ( <b>Strategy 2</b> ) Fluctuating painful symptoms and the repetitive fluctuating feeling of frustration ( <b>Strategy 3</b> ) Introspective analysis by the healthcare team ( <b>Strategy 8</b> )	CASPe for a qualitative study  Score: 9/10  CASPe for a qualitative study  Score: 9/10
Avaliação dos sintomas de ansiedade e depressão em fibromiálgicos	Barros dos Santos et al., 2012, Brasil, portugués.	Exploratory qualitative study with a quantitative approach	53 women and 7 men between 18 and 82 years of age diagnosed with fibromyalgia in outpatient rheumatology units.	Anxiety and depression are common symptoms in patients with fibromyalgia, compromising their habits and care.	The educational approach focused on the patient's pain and its physical and psychological implications.	Establishment of an introspective dialogue with the patient ( <b>Strategy 2</b> ). Oscillating painful symptoms and the repetitive fluctuating feeling of frustration ( <b>Strategy 3</b> ).	CASPe for a qualitative study  Score: 8/10

Experiencias de ancianos con enfermedad reumática inflamatoria sistémica sometidos a terapia biológica en consultas de enfermería	Barbosa & Gomes, 2022, Brasil, portugués.	Descriptive Qualitative Study	8 women and 2 men, aged 65 and 78, diagnosed with rheumatoid arthritis or ankylosing spondylitis and receiving treatment with biologic drugs.	The number of older adults with RID is increasing, and new, real health needs are anticipated for them, which are unknown to nursing staff.	Learning focused on the perceived needs of the patient. Educational approach centered around biologic therapy and understanding of rheumatic disease. Increased user satisfaction and pharmacologic adherence.	Care focused on pharmacologic treatment of rheumatic disease ( <b>Strategy 4</b> ). Establishing an effective dialogue with nursing staff that allows for consideration of non-pharmacologic treatments ( <b>Strategy 5</b> ).	CASPe for a Qualitative Study Score: 9/10
Efectividad de las consultas realizadas por enfermeras en personas con artritis reumatoide: revisión sistemática	De Sousa et al., 2017, Brasil, portugués.	Systematic Review Study	Adults $\geq$ 18 years with rheumatoid arthritis from 7 different studies	Traditionally, monitoring of patients with rheumatoid arthritis is performed by physicians, disregarding the effectiveness of nursing consultations	Indispensable importance of nursing in its educational role for safe and effective care	Adoption of an empowered attitude by nursing ( <b>Strategy 6</b> ) Attitudinal change and adoption of a role-based approach from an interdisciplinary team ( <b>Strategy 7</b> )	CASPe for a systematic review Score: 8/10
Effectiveness of interventions based on pain neuroscience education on pain and psychosocial variables for osteoarthritis: a systematic review	Ordoñez-Mora et al., 2022, EE.UU, inglés.	Systematic Review Study Learning centered on the common wisdom of each patient	Adults $\geq$ 18 years with osteoarthritis from 4 different studies	No systematic reviews or meta-analyses regarding the effectiveness of cognitive educational interventions as adjuvant therapy in the treatment of osteoarthritis	Interdisciplinary educational approach Implementation of pharmacological and non-pharmacological interventions in care.	Care focused on the pharmacological treatment of a rheumatic disease ( <b>Strategy 4</b> ) Establishing an effective dialogue with nursing staff that allows for the consideration of non-pharmacological treatments ( <b>Strategy 5</b> )	CASPe for a systematic review Score: 8/10
Rheumatology nurses' work-related empowerment	Juhola H., et al, 2007, Finlandia, inglés.	Qualitative Content Study	9 nurses, aged around 44, participating in vocational specialization studies in rheumatic patient care	The skills required by a nurse to provide optimal care to a rheumatic patient are unknown	Interdisciplinary educational approach Empowerment of nurses in their educational role and care management	Adoption of an empowered attitude by nurses ( <b>Strategy 6</b> ) Introspective analysis by the healthcare team ( <b>Strategy 8</b> )	CASPe for a qualitative study Score: 7/10

The Role of the Nurse in the Care and Management of Patients with Rheumatic Diseases Arising from the Current EULAR Recommendations: A Literature Review	Bednarek et al., 2023, Polonia, inglés.	Literature Review	Updated EULAR Recommendations	The scope of nursing services provided according to the updated EULAR recommendations is unknown.	Interdisciplinary educational approach Adoption of a family-centered nursing model	Adoption of an empowered attitude by nursing ( <b>Strategy 6</b> ) Attitudinal change and adoption of a role-based approach by an interdisciplinary team ( <b>Strategy 7</b> )	CASPe for a systematic review  Score: 8/10
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Source: Prepared by the authors.

Table 2. Thematic Matrix of selected articles.

Title of selected article	Category I: Educational Strategies Centered on the Patient's Context and Preferences	Category II: Educational strategies focused on pharmacological and non-pharmacological rheumatic treatment	Category III: Complementary and Interdisciplinary Educational Strategies
Creating knowledge and actions by promoting health in aged women with Osteoporosis	Educational Strategy 1, 2 and 3		Educational Strategy 7
Duality of living with systemic Lupus Erythematosus: Fluctuating between “good days” and “bad days”	Educational Strategy 1 and 2	Educational Strategy 4	
Promoção da saúde de idosas com osteoporose: uma abordagem a partir do modelo de promoção da saúde de Nola Pender	Educational Strategy 2 and 3		Educational Strategy 8
Avaliação dos sintomas de ansiedade e depressão em fibromiálgicos	Educational Strategy 2 and 3		
Experiencias de ancianos con enfermedad reumática inflamatoria sistémica sometidos a terapia biológica en consultas de enfermería		Educational Strategy 4 and 5	
Efectividad de las consultas realizadas por enfermeras en personas con artritis reumatoide: revisión sistemática			Educational Strategy 6 and 7
Effectiveness of interventions based on pain neuroscience education on pain and psychosocial variables for osteoarthritis: a systematic review		Educational Strategy 4 and 5	
Rheumatology nurses' work-related empowerment			Educational Strategy 6 and 8
The Role of the Nurse in the Care and Management of Patients with Rheumatic Diseases Arising from the Current EULAR Recommendations: A Literature Review			Educational Strategy 6 y and

Source: Prepared by the authors.

**Description of Articles.** All selected articles address diverse perspectives and theoretical approaches to delivering knowledge to rheumatology patients, tailored to their specific clinical profiles. These articles, published between 2012 and 2024, share a common goal: to promote patient well-being through nursing care that focuses on education. The study designs included descriptive, exploratory-descriptive, exploratory qualitative with a quantitative component, descriptive qualitative, two systematic reviews, a qualitative content analysis, and a literature review. Most studies originated from Brazil, and their findings are applicable beyond ethnic contexts, focusing instead on the distinctive features of rheumatic conditions. Therefore, their extrapolation is not deemed to be limited. See Table 1.

## DISCUSSION

As shown in Tables 1 and 2, the analyzed articles provided valuable findings for identifying optimal and safe educational strategies, primarily due to the heterogeneity of the data and the adoption of approaches tailored to the epidemiological profile of rheumatic patients. A key highlight was the promotion of a learning process shaped by a biopsychosocial and interdisciplinary framework rooted in popular knowledge. These insights were synthesized into three core categories derived from the analysis of the most significant findings from each study. Each educational strategy identified in the reviewed articles was grouped according to thematic convergence. The categories were refined iteratively to encapsulate all relevant data, resulting in the definition of eight distinct educational strategies.

### Category I: Educational Strategies Centered on the Patient's Context and Preferences

According to De Oliveira, health education is a dynamic and constructive process of knowledge acquisition that fosters intellectual autonomy. This makes it a key tool in improving the quality of life and health outcomes for patients with rheumatic conditions. Drawing on Paulo Freire's model of popular education, the most suitable educational approach for achieving such autonomy is one that values popular knowledge as a catalyst for fostering horizontal relationships between healthcare professionals and the community, enabling patients to engage in self-reflection regarding current practices and fostering future critical awareness. Similarly, De Souza identifies several factors influencing popular knowledge, including socioeconomic status, educational attainment, lifestyle, culture, occupation, and family environment.<sup>12</sup>

There are additional aspects to consider within this topic, such as the fluctuating emotional states in patients with rheumatic symptoms in their daily lives. These emotional fluctuations can act either as barriers or facilitators within the educational process, depending on their implications in areas such as work, relationships, sexuality, parenthood, self-image, and spirituality. These dimensions have a psychological impact on the individual, often leading to feelings of anxiety, apathy, and distress concerning the course of their illness and their ability to manage it amidst the uncertainty of each new day.<sup>13</sup>

According to Barros dos Santos, another critical factor in the rheumatology field is chronic pain, which is characterized as fluctuating, progressive, diffuse, and both physically and mentally limiting. This kind of pain negatively affects patients' self-perception and their readiness to engage in effective learning.<sup>14</sup>

Given these findings, the first identified educational strategy is adopting a holistic perspective, with an educational approach grounded in popular knowledge specifically tailored to patients with rheumatic conditions. Elements such as persistent pain, educational level, cultural background, physical limitations, and sexual and/or parental conflicts directly influence the patient's ability to

absorb information provided by healthcare professionals. The aforementioned is closely linked to emotional oscillations stemming from frustration, fear, and uncertainty about facing a new day.

In this context, the second proposed educational strategy involves establishing an introspective dialogue with the patient. According to De Oliveira, this approach fosters self-reflection on the health-illness-care process, encouraging patients to adopt a critical and transformative attitude toward their reality. It promotes awareness and fosters a future commitment to self-care, prioritizing the individual's daily life and lived experience over the disease itself.<sup>12</sup> Furthermore, as De Oliveira also highlights, verbalizing personal experiences and concerns allows nursing professionals to identify problems from the patient's perspective, creating an optimal space for developing pedagogical strategies and establishing a therapeutic relationship.<sup>15</sup>

As a third strategy, particular attention must be paid to the oscillating pain symptoms and the recurrent feelings of frustration, which directly influence the implementation of the previously mentioned educational strategies. Therefore, early assessment of these aspects is essential when delivering tailored knowledge to rheumatology patients.

## **Category II: Educational strategies focused on pharmacological and non-pharmacological rheumatic treatment**

According to Barbosa & Gomes, rheumatology patients often report a progressive sense of improvement with treatment; however, they also express a lack of understanding regarding their baseline therapy, which generates distress and dissatisfaction with the healthcare received. This, in turn, negatively affects their self-care strategies and has physical, emotional, and social implications.<sup>1</sup>

Similarly, Ordoñez-Mora notes that an emerging body of research is investigating the relationship between pharmacological modulation and knowledge acquisition.<sup>16</sup> According to De Sousa, this leads to lifestyle changes in patients with rheumatic conditions, which in turn positively impact their predisposition to physical self-care and result in improved adherence to pharmacological treatment.<sup>13</sup> Furthermore, as Barbosa and Gomes observe, patients' dissatisfaction and lack of knowledge about the basic principles of biological therapies often lead to uncertainty and a need to find answers through familiar means.<sup>1</sup> In this context, as Ordoñez-Mora suggests, non-pharmacological therapy emerges as a viable and complementary option, ranging from voluntary participation in physiotherapy to the use of popular or traditional practices, such as local heat application or alternative oils, once again highlighting the role of popular knowledge, as previously discussed in Category I.<sup>16</sup>

Nursing professionals hold a fundamental responsibility in delivering pharmacological care and addressing the individual as a whole, contributing positively to treatment outcomes by implementing interventions related to pain management, functional capacity, quality of life, and self-efficacy. These actions reduce patients' perceived impact and increase satisfaction. Therefore, the fourth educational strategy involves promoting pharmacologically centered care, ensuring that patients acquire basic knowledge about their biological treatment and underlying condition, allowing them to recognize the effectiveness of the prescribed therapy. This ultimately improves treatment adherence and satisfaction.

The fifth educational strategy emphasizes the importance of aligning educational interventions with the patient's subjective experience and knowledge base. This entails fostering effective communication between the patient and nursing staff to encourage the incorporation of non-pharmacological therapies and collaboration with other healthcare professionals into daily life, provided that these approaches do not conflict with the primary pharmacological treatment. Both parties must agree upon these interventions.

### **Category III: Complementary and Interdisciplinary Educational Strategies**

Bednarek asserts that the role of the nursing professional is outlined within the recommendations developed by the European League Against Rheumatism (EULAR) for the management of chronic inflammatory diseases. According to De Sousa, this approach optimizes nurses' abilities as part of a comprehensive strategy for managing rheumatic diseases, emphasizing the importance of promoting patient education and empowerment in self-management. However, as Juhola H argues, achieving this requires nurses themselves to be empowered in their knowledge of rheumatic conditions and treatments, thereby enabling the development of skills in patient education, training, and counseling and ultimately delivering high-quality care grounded in both theoretical knowledge and practical competencies.<sup>17-19</sup>

According to De Oliveira, the foundational pillars in the life of a patient with rheumatic disease, regardless of age, include social, family, sexual, physical, and spiritual roles. These domains are significantly impacted by the symptomatology of rheumatic illnesses, which alter the patient's sense of responsibility, activity level, and self-perception within their immediate social environment. This leads to the adoption of new habits to cope with fatigue and mental-physical exhaustion, a near-total loss of libido and sexual identity, difficulty fulfilling work or family duties, and imminent and fluctuating physical changes.<sup>12</sup> Given this context, interventions led by specialized healthcare professionals represent a need expressed by this population, highlighting the urgency of an educational strategy that incorporates all these patient dimensions into a holistic approach.

Thus, the sixth educational strategy proposed is that nursing professionals adopt an empowered attitude, both in terms of theoretical knowledge and self-management, as well as in guiding patients from a holistic perspective, with benefits expected in the short-, medium-, and long-term regarding quality of life.

The seventh educational strategy involves the entire healthcare team—including rheumatologists, physiatrists, occupational therapists, psychologists, psychiatrists, physiotherapists, and midwives, among others—who, by implementing actions focused on rheumatology from each integrative dimension of the human being, may foster an attitude shift in the patient, igniting interest in self-care and, consequently, in the desire to explore, investigate, and learn for their own benefit.

The eighth and final educational strategy arises from a deductive analytical reflection of the research, highlighting the practical significance of nursing within its discipline and the potential impact of its decision-making process. It is recommended that professionals in this field engage in introspective analysis to recognize the potential benefits of adopting these strategies, always bearing in mind the ethical and legal framework of their profession and their responsibility to provide optimal care grounded in disciplinary training and to suggest referrals within the interdisciplinary health team.

A key limitation of this review is the scarcity of global literature on the topic, particularly regarding structured programs or strategies implemented at the ministerial or local level. To date, the only known standard is the Chilean regulation outlined in Law No. 20,850.

A second limitation is the presence of researcher bias at the outset of the review, due to a preconceived expectation of the desired outcome. Specifically, this review initially aimed to identify tangible and physical educational strategies, such as the distribution of educational materials (in-person or online), the use of inductive or deductive methods during instruction, or the implementation of group or individual educational sessions at specific frequencies and in designated physical spaces. Consequently, during the early stages, the studies screened were not explicitly aligned with the research question, prompting a shift in focus and a new literature search.

A third limitation is the exclusion criterion requiring full-text availability, which may have resulted in the loss of potentially valuable research that could have contributed meaningfully to the findings.

## CONCLUSIONS

The primary thematic axis identified for patient education in rheumatology is the adoption of a professional approach centered on the human being as a whole, considering the biopsychosocial factors that have influenced the individual's development (past, present, and future). This approach involves delivering an educational experience that balances the patient's pathology with their prior knowledge or popular wisdom, incorporating both pharmacological and non-pharmacological treatments that support the recovery process without compromising their current health status.

An interdisciplinary team is essential to achieve these outcomes, considering the epidemiological profile of this patient population. Addressing the physical, psychological, and social dimensions contributes positively to pharmacological treatment adherence, patient satisfaction, and overall quality of life.

In line with these findings, this review highlights the crucial role of nursing in delivering safe and effective care, underscoring the importance of empowering nursing professionals within their discipline and promoting their active participation in the clinical-educational process for patients with rheumatic conditions. In doing so, the initial objective of this review can be successfully achieved.

Finally, the authors suggest that future reviews use a broader range of information sources and include fields not directly related to health in the study analysis, as long as they maintain an educational focus. As a proposal to enrich future educational strategies, it is also recommended that literature with a humanistic perspective be incorporated, including texts that may not be fully accessible or that involve associated costs.

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KSF: Conceptualization, Formal Analysis, Investigation, Methodology, Project Administration, Resources, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing.

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## REFERENCES

1. Barbosa L, Gomes ID. Vivências das pessoas idosas com doença reumática inflamatória sistêmica a realizar terapêutica biológica na consulta de enfermagem. NTQR. 2022;13:e643. <https://doi.org/10.36367/ntqr.13.2022.e643>
2. Arias S, Fonsalía V, Asteggianti N, Bartesaghi V. Enfermedades autoinmunitarias sistémicas y trastornos depresivos. Reumatol. 2011;7,6:389–91. <https://doi.org/10.1016/j.reuma.2011.04.010>
3. Maldonado G, Ríos C, Paredes C, Ferro C, Intriago MJ, Aguirre C, et al. Depression in rheumatoid arthritis. Rev.Colomb.Reumatol. 2017;24, 2:84–91. <https://doi.org/10.1016/j.rcreu.2016.12.001>
4. Danza Á, Graña D, Goñi M, Vargas A, Ruiz-irastorza G. Hidroxicloroquina en el tratamiento de las enfermedades autoinmunes sistémicas. Rev Med Chile. 2016;144:200–12. <http://dx.doi.org/10.4067/S0034-98872016000200012>

5. Díaz C. Mecanismos de Acción de los Fármacos Inmunosupresores. *Rev Chil Reumatol.* 2008; 24(2):61–7.
6. Solares Sampedro S. Atención de enfermería en pacientes con artritis reumatoide. *RqR Enfermería Comunitaria.* 2019;7(1):26–41.
7. Ley 20850. Crea un sistema de protección financiera para diagnósticos y tratamientos de alto costo y rinde homenaje póstumo a don Luis Ricarte Soto Gallegos. Ministerio de Salud de Chile. 26 de enero de 2016. <https://bcn.cl/3ncer>
8. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA. 2020 statement: an updated guideline for reporting systematic reviews. *Syst. Rev.* 2021;10(1):89. <http://dx.doi.org/10.1186/s13643-021-01626-4>
9. Martínez Díaz JD, Ortega Chacón V, Muñoz Ronda FJ. El diseño de preguntas clínicas en la práctica basada en la evidencia: modelos de formulación. *Enfer.Glob.* 2016;15(43):431–438.
10. Descriptores en Ciencias de la Salud: DeCS. ed.2023. Sao Paulo (SP): BIREME / OPS/OMS. 2017. <http://decs.bvsalud.org/E/homepagee.htm>
11. Programa de Habilidades en Lectura Crítica Español. Critical Appraisal Skills Programme Español. Materiales – Redcaspe- [Redcaspe.org](https://redcaspe.org/materiales/). <https://redcaspe.org/materiales/>
12. Oliveira SG de, Caldas CP, Silva CSSL da, Cardoso RB. Creating knowledge and actions by promoting health in aged women with osteoporosis. *Texto Contexto Enferm.* 2023;32:e20220303. <https://doi.org/10.1590/1980-265X-TCE-2022-0303en>
13. De Souza RR, Barreto M da S, Teston EF, Dos Reis P, Cecilio HPM, Marcon SS. Duality of living with systemic lupus erythematosus: Fluctuating between “good days” and “bad days”. *Texto Contexto Enferm.* 2021;30:e20200210. <https://doi.org/10.1590/1980-265X-TCE-2020-0210>
14. Barros dos Santos E, Quintans Junior LJ, Bp F, Jc M, Lr B. An evaluation of anxiety and depression symptoms in fibromyalgia. *Rev Esc Enferm USP.* 2012;46(3):588-94. <https://doi.org/10.1590/S0080-62342012000300009>
15. De Oliveira SG de. Promoção da saúde de idosas com osteoporose: uma abordagem a partir do modelo de promoção da saúde de Nola Pender. [Tesis de magister]. Río de Janeiro: Universidade do Estado do Rio de Janeiro, 2021.
16. Ordoñez-Mora LT, Morales-Osorio MA, Rosero ID. Effectiveness of Interventions Based on Pain Neuroscience Education on Pain and Psychosocial Variables for Osteoarthritis: A Systematic Review. *Int J Environ Res Public Health.* 2022;19(5):2945. <https://doi.org/10.3390/ijerph19052559>
17. Bednarek A, Klepacz R, Bodys-Cupak IE. The Role of the Nurse in the Care and Management of Patients with Rheumatic Diseases Arising from the Current EULAR Recommendations: A Literature Review. *Int J Environ Res Public Health.* 2023;11(17):2546. <https://doi.org/10.3390/healthcare11172434>
18. De Sousa FIM, Dos Santos EJF, Cunha M, Ferreira RJO, Marques AA. Effectiveness of nursing consultations in people with rheumatoid arthritis: systematic review. *Rev Enferm Ref.* 2017;4(13):147–56. <https://doi.org/10.12707/RIV17013>
19. Juhola H, Kukkurainen ML, Suominen T. Rheumatology nurses' work-related empowerment. *Musculoskelet Care.* 2007;5(2):91-7. <https://doi.org/10.1002/msc.102>