




NURSING CARE FOR PATIENTS WITH LOW BACK PAIN: A SCOPE REVIEW^[1]

ASSISTÊNCIA DE ENFERMAGEM A PACIENTES COM DOR LOMBAR: REVISÃO DE ESCOPO^[1]

CUIDADOS DE ENFERMERÍA PARA PACIENTES CON LUMBALGIA: UNA REVISIÓN DE ALCANCE^[1]

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ABSTRACT

Objective: to identify in the literature and describe the assistance provided by nurses to patients with low back pain. **Method:** scope review, according to the Joanna Briggs Institute (JBI) method and Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR) recommendations. The research strategy Population-Concept-Context was used to compose the research question. Articles from six indexed databases were included, with no time limit, in Portuguese, English and Spanish. **Results:** 1,025 articles were obtained after searching the databases, with 23 publications selected for analysis after applying the exclusion criteria. Information was categorized into patient history and assessment, invasive and non-invasive interventions, and health education. **Conclusions:** there is a prevalence of non-pharmacological interventions and educational practices in nurses' monitoring of patients with low back pain. Success in care is reinforced by the professional's ability to systematize the assistance provided.

Keywords: Patient Care; Nursing Care; Pain; Low Back Pain; Nurses.

RESUMO

Objetivo: identificar na literatura e descrever a assistência prestada por enfermeiros a pacientes com dor lombar. **Método:** revisão de escopo, segundo método Joanna Briggs Institute (JBI) e recomendações Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR). Foi utilizada a estratégia de pesquisa População-Concepto-Contexto para compor a questão de pesquisa. Foram incluídos artigos de seis bases de dados indexadas, sem limite de tempo, nos idiomas português, inglês e espanhol. **Resultados:** obtiveram-se 1.025 artigos com a busca nas bases de dados, sendo selecionadas 23 publicações para análise após a aplicação dos critérios de exclusão. As informações foram categorizadas em histórico e avaliação do paciente, intervenções invasivas e não invasivas e educação em saúde. **Conclusões:** há prevalência de intervenções não farmacológicas e práticas educativas no acompanhamento do enfermeiro ao paciente com dor lombar. O sucesso no cuidado é reforçado pela capacidade do profissional em sistematizar a assistência prestada.

Palavras-chave: Assistência ao Paciente; Cuidados de Enfermagem; Dor; Dor Lombar; Enfermeiros.

RESUMEN

Objetivo: identificar en la bibliografía y describir la asistencia prestada por enfermeras a pacientes con lumbalgia. **Método:** revisión del alcance, según el método del Instituto Joanna Briggs (JBI) y las recomendaciones Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR). Se utilizó la estrategia Población-Concepto-Contexto para componer la pregunta de investigación. Se incluyeron artículos de seis bases de datos indexadas, sin límite de tiempo, en los idiomas portugués, inglés y español. **Resultados:** se obtuvieron 1025 artículos con la búsqueda en las bases de datos y 23 publicaciones para análisis después de aplicar los criterios de exclusión. La información fue categorizada en historia y evaluación del paciente, intervenciones invasivas y no invasivas y educación para la salud. **Conclusiones:** Existe una prevalencia de intervenciones no farmacológicas y prácticas educativas en los cuidados de enfermería a pacientes con lumbalgia. El éxito en la atención se ve reforzado por la capacidad del profesional para sistematizar la asistencia prestada.

Palabras clave: Atención al Paciente; Atención de Enfermería; Dolor; Lumbalgia; Enfermeros.

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INTRODUCTION

Low back pain is a very common symptom. It occurs in high-, middle- and low-income countries and in all age groups, from children to the elderly. Globally, the years lived with limitations caused by low back pain increased by 54% between 1990 and 2015, mainly due to population aging, with higher increases in low- and middle-income countries⁽¹⁾. Currently, chronic low back pain is considered the number 1 cause of disability in the world (increases with age) and of absences from work^(1,2).

In Brazil, data from the *Pesquisa Nacional de Saúde* [National Health Survey] - PNS, from the *Instituto Brasileiro de Geografia e Estatística* [Brazilian Institute of Geography and Statistics] - IBGE, in 2013, revealed a prevalence of 18.5% of complaints related to chronic back problems. According to data from the research by states, Rio Grande do Sul was the one that, proportionally, presented more cases of chronic pain in the spine, with an average of 22% of the population. Among the respondents who had a chronic back problem, 17.1% reported an intense or very intense degree of limitation in their usual activities due to this complaint⁽³⁾.

Low back pain is classified as acute, subacute and chronic, when the duration of the episode is, respectively, less than 6 weeks, between 6 and 12 weeks and more than 3 months⁽⁴⁾. It is also classified as specific and non-specific, being that the former presents symptoms caused by diagnosed pathophysiological mechanisms, such as disc herniation with involvement of the nerve root, inflammatory disorder, infection, osteoporosis, rheumatoid arthritis, fracture or tumor. Nonspecific low back pain has symptoms without a clearly defined cause, affecting 90% of all individuals with low back pain. The diagnosis is made by excluding a specific pathology^(4,5).

Pain assessment and relief are processes that require competence and teamwork to promote effective and individualized care for patients and families⁽⁶⁾. Nurses are constantly faced with multiple disease conditions in which pain is a frequent answer. Inadequate control of this symptom may influence the success of the treatment and the transition of the state of health/disease due to the suffering caused, having a negative impact on the person's life. Within the scope of competence, in the field of professional, ethical, and legal practice and in the development of the profession, nurses focus on people in pain, contributing to their satisfaction, well-being and self-care. As a professional privileged by proximity and contact time with the patient, the nurse is in a relevant position to promote and intervene in pain control⁽⁷⁾. In this context, the following research question arises: What are the findings

in the literature regarding this matter? of the assistance provided by nurses to patients with low back pain?

METHODS

This is a scoping review (scope review or scope study), conducted in accordance with the proposal of the Joanna Briggs Institute (JBI)⁽⁸⁾. It consists of a literature survey methodology in a given area of interest, with the purpose of identifying the evidence developed⁽⁸⁾.

The knowledge synthesis method accomplished the following phases: (i) definition and alignment of the objectives and the research question; (ii) development of inclusion and exclusion criteria; (iii) elaboration and planning of the search strategy and selection of articles; (iv) identification and selection of relevant manuscripts; (v) data extraction and mapping; (vi) and summarization of results. The writing of the article followed the recommendations of the Preferred Reporting Items for Systematic Review and Meta-Analyses extension for Scoping Review (PRISMA-ScR)⁽⁸⁾ for the reliability of this type of review, as it is a roadmap to support the scoping review.

The investigation was guided by the research question "What are the findings in the literature regarding the assistance provided by nurses to patients with low back pain?", which was obtained through the P-C-C strategy, in which P is population, C is concept and C is context⁽⁸⁾. The search strategy consisted of three steps: (i) initial search in the PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Virtual Health Library (VHL) databases, using the descriptors found in the Medical Subject Headings (MeSH) and Health Sciences Descriptors (DeCS), Nursing care and low back pain, followed by an analysis of the keywords contained in the title, abstract and descriptors of the articles, identifying uncontrolled descriptors; (ii) search using all descriptors identified in the included databases, PubMed, CINAHL, Latin American and Caribbean Literature in Health Sciences (LILACS), Web of Science, Scopus and Scielo, using the Boolean AND operator: Low Back Pain AND Nursing Care; (iii) search the references of the included articles in order to track additional studies not identified by the search strategies. The study selection process and the last search took place in February 2023.

Two researchers worked independently to select articles by title, abstract and full text. The reviewers advanced in each phase of the screening, considering the inclusion and exclusion criteria, resulting in the final research sample. Any divergence was resolved through discussion, reaching consensus. From the selected texts, data were extracted using a spreadsheet prepared in Microsoft

Excel, referring to: author(s), title, journal, country, year, volume, number, objective(s), population, sample size, method, results, main findings, and study category.

The inclusion criteria for the screening were studies of national and international scientific production published in indexed and peer-reviewed journals, in Portuguese, Spanish and English, available in full text online, with no time limitation and that described and/or analyzed the assistance provided by nurses to patients with low back pain. Duplicate articles, articles that did not respond to the research question or that specifically involved care for pregnant women were excluded. EndNoteX9 was used to manage the references. Pregnant women were excluded because this is a specific period in a woman's life that involves physiological changes caused by functional and anatomical needs of pregnancy that affect the musculoskeletal system and can cause low back pain. Because it does not involve research directly with human beings, the study protocol was not submitted to the evaluation of the research ethics committee (REC).

The construction of the flowchart with the article selection process was based on the instructions of the PRISMA guideline⁽⁹⁾.

RESULTS

The database search identified 1,025 potentially eligible articles for the study. With the application of the exclusion criteria, a total of 23 articles were selected to compose the final sample of this scope review (Figure 1).

To answer the research question and conduct the analysis and comparison of the data obtained from the review and the rest of the literature, it was decided to classify the selected articles into three thematic categories: (i) patient history and evaluation; (ii) non-invasive and invasive interventions; and (iii) health education, as can be seen in Table 1. This categorization was chosen because the contents of the analyzed texts were based on assessment, management and care strategies and guidelines given by nurses to patients with pain low back. This strategy allowed a better organization of the main recommendations and scientific evidence that supported Nursing care.

Assistance to patients with low back pain proved to be complex, involving factors related to the patient, such as information about life history and health/disease, perception of pain and assessment of impairment of biopsychosocial and work aspects, to factors related to healthcare

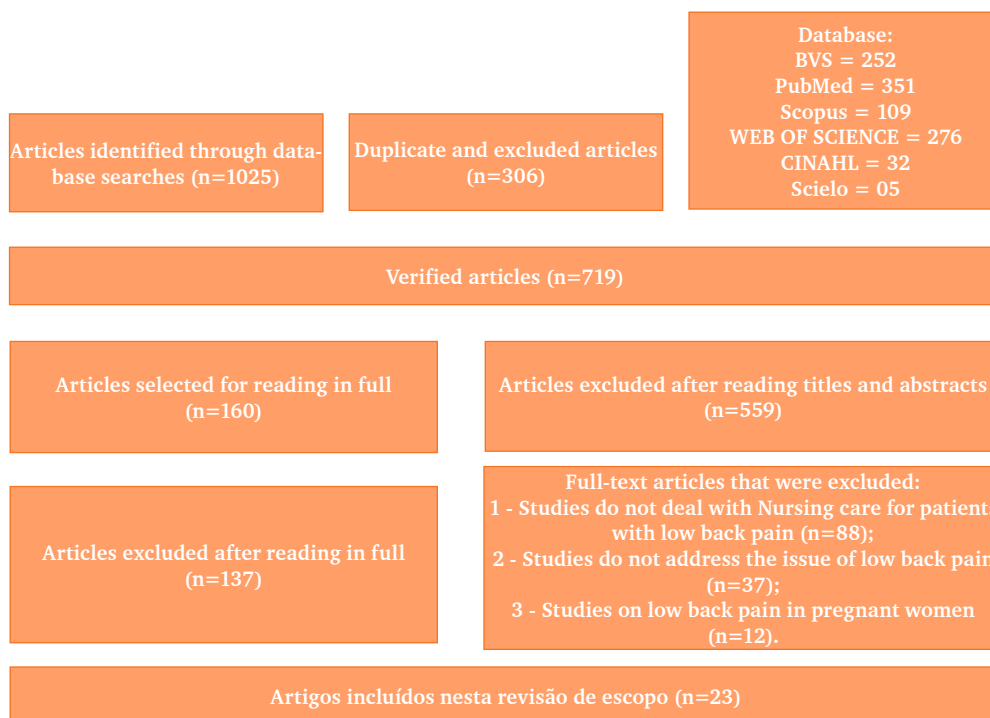


Figure 1 - Flowchart of the study selection process.

Adapted from Preferred Reporting Items for Systematic reviews and Meta-Analyses; (PRISMA-ScR)13. *Brasília*. Federal District. Brazil, 2023.

professionals, such as systemic and careful assessment of the individual, pain measurement and understanding of its characteristics, biopsychosocial assessment, interventions in pain management, education and guidance with

the aim of alleviating pain; when this is not entirely possible, manage it, improving the quality of life and social and labor relations.

Table 1 - Description of the studies selected for this scoping review. *Brasília*, DF, Brazil, 2023

Journal and Year	Title	Objetctive	Categorization	Main Findings
<i>Rev. Gaúcha Enferm.</i> 2021 ⁽¹⁰⁾	Self-efficacy and fear of pain on movement in chronic low back pain: an intervention developed by nurses	Test the effect of interventions for chronic low back pain developed by nurses in the Program to Increase Self-Efficacy and Decrease Fear of Pain and Movement Avoidance	Health education	Educational program and exposure to feared movements through Self-Efficacy Beliefs and Fear of Pain and Movement Avoidance
Comput Inform Nurs. 2021 ⁽¹¹⁾	Comparative Analysis of Pain, Muscle Strength, Disability, and Quality of Life in Middle-Aged and Older Adults After Web Video Lower Back Exercise	Analyze the effect of lumbar exercise using the web for each age group to use it as a Nursing intervention	Non-invasive interventions Health education	Practice of lumbar exercises performed through web videos. Before starting the exercise intervention, all participants learned the exercises and were informed about the importance of exercise. We provide information on low back pain management and exercise methods prior to starting the exercise intervention to guide participants to perform the exercises appropriately, as well as help them recognize the need to exercise and be motivated to perform them in a timely manner. consistently
Comput Inform Nurs. 2020 ⁽¹²⁾	Development of a Web Exercise Video for Nursing Intervention in Outpatients With Low Back Pain	Develop a video of exercises on the web for Nursing intervention in outpatients with low back pain, applying the analysis-design-development-implementation-evaluation model to promote continuous exercises	Non-invasive interventions Health education	Develop a video of stretching and flexing exercises for the lower back. Video to guide patients with low back pain to practice lumbar exercises, performed through web videos
Nursing 2020 ⁽¹³⁾	How to care for adults with low back pain in the primary care setting	Discuss the assessment and management of patients with low back pain including non-pharmacological and pharmacological approaches	Patient history and assessment Invasive and non-invasive interventions Health education	Investigates pain history, previous treatments and effects, measures pain - onset, location, duration and associated factors - and estimates impact on quality of life; Physical therapy, exercise, acupuncture, massage, spinal manipulation and transcutaneous electrical nerve stimulation (TENS); Guidance on physiological posture and positioning as measures to alleviate pain
<i>Acta Paulista de Enfermagem</i> 2019 ⁽¹⁴⁾	<i>Nursing and advanced acupuncture for relief of low back pain during pregnancy</i>	Evaluate the effects of acupuncture performed on pain relief	Invasive and non-invasive interventions	Acupuncture (traditional Chinese therapeutic method) and auriculotherapy (Chinese school techniques - shemen, lumbar and sciatica)
BMC Family Practice 2019 ⁽¹⁵⁾	The influence of an educational internet-based intervention in the beliefs and attitudes of primary care professionals on non-specific chronic low back pain: study protocol of a mixed methods approach	Identify beliefs and attitudes of primary care physicians and nurses about non-specific chronic low back pain to develop a web-based educational tool, using different educational formats and gamification techniques	Health education	Proposes an educational tool on the web with guidance on the origin and meaning of pain
BMJ Open 2018 ⁽¹⁶⁾	Implementation of an evidence-based model of care for low back pain in emergency departments: protocol for the Sydney Health Partners Emergency Department (SHaPED) trial	Implement and evaluate the Agency for Clinical Innovation (ACI) treatment model for acute low back pain	Health education	Print and electronic educational materials, educational seminars and educational outreach, website support, posters, and an audit and feedback approach

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Journal and Year	Title	Objetctive	Categorization	Main Findings
Medicine (Baltimore) 2018 ⁽¹⁷⁾	Randomized study of the impact of a therapeutic education program on patients suffering from chronic low-back pain who are treated with transcutaneous electrical nerve stimulation	Determine the effectiveness of TENS in the treatment of low back pain when associated with a therapeutic education program (TEP)	Non-invasive intervention Health education	Transcutaneous electrical nerve stimulation (TENS); Therapeutic education program - TEP (TENS-TEP group)
J Innov Health Inform 2017 ⁽¹⁸⁾	An informatics approach to inter-professional management of low back pain: a feasibility study using the Omaha System	Demonstrate the feasibility of evidence-based practice (EBP) mapping for conservative low back pain management in the Omaha system and promote interprofessional communication and collaboration among diverse professionals and patients	Patient history and assessment Non-invasive intervention Health education	Investigates pain history, previous treatments and effects, measures pain - onset, location, duration and associated factors - and estimates impact on quality of life; Guides physical exercise; Pain and activity management instructions
Physiother Can 2017 ⁽¹⁹⁾	Case report: using a remote presence robot to improve access to physical therapy for people with chronic back disorders in an underserved community	Evaluate the application of an interprofessional approach to managing spinal screening for chronic back disorders using robotic remote presence technology as an innovative form of telerehabilitation in a North Saskatchewan community	Health education	Assessment, initial recommendations, education, and exercises to be performed at home using remote presence robot technology
J Multidiscip Healthc 2016 ⁽²⁰⁾	Scope of practice review: providers for triage and assessment of spine-related disorders	Explore which healthcare professionals could be involved in centralized intake for patients with non-specific low back pain to improve access, continuity, and adequacy of care	Patient history and assessment	Performs musculoskeletal assessment, health history, comorbidities, biopsychosocial issues, and lifestyle factors
Index Enferm 2016 ⁽²¹⁾	Casuistry, pharmacology, and clinical judgment of the home emergency nurse	Explore urgent care and home pharmacology practice provided by a nurse without a physician	Patient history and assessment	Assessment, physical examination, responses to treatments, and referrals to specialists when needed
Central European Journal of Nursing and Midwifery 2015 ⁽²²⁾	Nursing intervention protocol for adult patients experiencing chronic low back pain	Evaluate the effectiveness of a Nursing intervention protocol aimed at the knowledge and practice of adult patients with low back pain	Non-invasive interventions	Guides physical exercise, hot compresses, proper positioning, weight maintenance, repositioning, use of pillows and pads, proper elevation
BMC Sports Sci Med Rehabil 2015 ⁽²³⁾	The effect of the stay active advice on physical activity and on the course of acute severe low back pain	Evaluate the effect on physical activity and course of acute low back pain of two different treatment advice provided in routine care	Patient history and assessment Non-invasive intervention	Investigates pain history, previous treatments and effects, measures pain - onset, location, duration, and associated factors - and estimates impact on quality of life. And uses Visual Analogue Scale (VAS) to measure pain. Indicates physical activity
Medisan 2014 ⁽²⁴⁾	Acciones de enfermería para la aplicación de la medicina natural y tradicional en adultos mayores	Evaluate the impact of dependent actions and independent nurses for the application of natural and traditional medicine in patients with osteoarthritis, low back pain, muscle contraction, obesity, and anxiety	Invasive and non-invasive interventions	Use of natural and traditional medicine - acupuncture, cupping, moxibustion and auriculotherapy

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Table 1 - Description of the studies selected for this scoping review. Brasília, DF, Brazil, 2023

Journal and Year	Title	Objetctive	Categorization	Main Findings
<i>BMC Musculoskeletal Disord</i> 2014 ⁽²⁵⁾	Rationale, design and methods of the Study of Work and Pain (SWAP): a cluster randomised controlled trial testing the addition of a vocational advice service to best current primary care for patients with musculoskeletal pain	Provide a vocational case management service in primary care to support patients with musculoskeletal problems to stay in or return to work	Patient history and assessment	Assessment of pain intensity and factors that interfere with quality of life and work tasks
<i>BMJ Open</i> 2012 ⁽²⁶⁾	Acupuncture in practice: mapping the providers, the patients and the settings in a national cross-sectional survey	Characterize treated conditions, examine treatment characteristics, and explore trends	Invasive intervention	Acupuncture (traditional Chinese therapeutic method)
<i>BMJ</i> 2008 ⁽²⁷⁾	Randomised controlled trial of Alexander technique lessons, exercise, and massage (ATEAM) for chronic and recurrent back pain	Determine the effectiveness of Alexander technique lessons, therapeutic massage, and advice from a medical doctor and nurse to perform exercises and behavioral advice for patients with back pain	Patient history and assessment Non-invasive interventions Health education	Physical examination, disease history and treatments, lifestyle characteristics, factors that interfere with quality of life and generate disability; Massage and exercise sessions; Behavioral counseling and Alexander technique lessons
<i>BMJ</i> 2008 ⁽²⁸⁾	Randomised controlled trial of Alexander technique lessons, exercise, and massage (ATEAM) for chronic and recurrent back pain: economic evaluation	Evaluate massage therapy, exercises, and lessons in the Alexander technique for treating persistent back pain	Patient history and assessment Non-invasive interventions Health education	The Alexander technique performed better than the exercise across the range of results. A combination of six Alexander Technique classes followed by exercises was the most effective and cost-effective option
<i>The Clinical Journal of Pain</i> 2007 ⁽²⁹⁾	Acupuncture for chronic low back pain in routine care: a multicenter observational study	Investigate patient characteristics and outcomes after acupuncture treatment for chronic low back pain in Germany and to analyze chronification, pain classification, and depression as predictors of treatment outcomes	Invasive intervention	Acupuncture
<i>Ann Fam Med</i> 2006 ⁽³⁰⁾	A controlled trial of methods for managing pain in primary care patients with or without co-occurring psychosocial problems	Determine the effectiveness of appropriate pain management interventions for primary care physicians	Patient history and assessment Non-invasive interventions Health education	Method of assessing pain and psychosocial problems that provides rapid feedback to the primary care physician on interventions initiated and identification of symptoms or psychosocial problems; Guides relaxation exercise techniques; Teaches problem-solving strategies and basic low back pain management skills
<i>Revista Cubana de Enfermería</i> 2000 ⁽³¹⁾	Analgesia acupuntural y bloques terapéuticos en pacientes con lumbociatalgia: Labor de enfermeira	Specify the response to treatment, compare its effectiveness and show Nursing's work in the application of both techniques	Invasive intervention	Acupuncture (traditional Chinese therapeutic method) and local anesthesia
<i>The Western Journal of Medicine</i> 1975 ⁽³²⁾	Nurse - protocol management of low back pain: Outcomes, patient satisfaction and efficiency of primary care	Test the validity of a nurse-administered protocol for low back pain	Patient history and assessment	Collects relevant data (history and physical examination) and guidelines for diagnosis and therapy

*Alexander Technique: Individualized approach designed to develop self-care skills that help people recognize and avoid bad habits that affect postural tone and neuromuscular coordination.

Patient History and Assessment

Regarding the first thematic category, history and patient assessment, anamnesis and physical examination should seek to deeply understand the pain and its characteristics: intensity, location, whether it is continuous or intermittent, quality and severity at different times, as well as the degree of functional and psychosocial disability generated. They should also cover factors that trigger or aggravate pain, such as fatigue, sleep disturbances and mood swings, and elements that ease pain, such as music and exercise. In addition, it should contain information about anxiety and depression, so that the different dimensions of the patient's life are included in the assessment^(14,18,20,21,23,25,27,28,30,32).

Still in this category, studies suggest that, to be successful in the management of low back pain, healthcare professionals need to carry out a comprehensive assessment, considering physical, psychological, social and spiritual aspects. They must understand that pain involves a larger dimension that goes beyond the physical, encompassing various aspects of existence, such as the relationship with oneself, with the family, with work and with leisure^(10,14,18,20,21,23,25,27,28,30,32).

Faced with the physical, functional, psychological, and social impacts caused by low back pain, comprehensive and multidisciplinary care is required with a comprehensive assessment carried out by qualified and experienced professionals, enabling early diagnosis, survey of complaints and factors that interfere with pain. The approach should be patient-centered and based on the best scientific evidence, seeking adherence to treatment and better quality of life for the patient⁽²⁰⁾.

Nurses are considered essential in the initial assessment of the person with low back pain, being responsible for an expanded look at the individual and based on comprehensiveness. Holistic training facilitates communication and integration with the patient, listening to complaints, providing guidance on pain management and referring to specialized professionals when necessary⁽³²⁾.

Non-invasive and Invasive Interventions

The second thematic category dealt with invasive^(14,26,29,31) and non-invasive^(10-13,17,18,22-24,27,28,30) interventions recommended in the analyzed studies. Some examples can be mentioned, such as rest, massage, physiotherapy, thermotherapy, spinal manipulation, transcutaneous electrical nerve stimulation (TENS), lumbar supports and straps, exercise and relaxation techniques,

cognitive-behavioral therapy, acupuncture, and medication use.

There was a predominance of non-pharmacological measures in the management of low back pain;^(11-14,17,18,22-24,26,27-31) only one study brought pharmacological measures in therapy⁽³²⁾. Acupuncture was mentioned as effective measure in the treatment of low back pain, being performed by nurses. These professionals know the essence of holistic care, which is recommended by traditional Chinese medicine, promoting the patient's physical and emotional well-being^(13,14,24,27,29,31).

The objective of pain management is to minimize pain and restore normal function as much as possible so that the individual can return to work and social activities, encouraging him/her to remain active within the possibilities, working psychological issues to create coping skills with focus in recovery⁽²²⁾.

Health Education

The third thematic category, health education, demonstrated that educational strategies used by nurses and focused on raising awareness about self-care in the perception and management of pain help patients to deal with pain, even if they have to live with it^(10-13,15,16-19,27,28,30).

Research supports the use of educational interventions as promising strategies to conceptualize pain and help change attitudes toward treatment. Consequently, changing mistaken beliefs and behaviors regarding low back pain care and self-management^(10,13,15,16-19,27,28,30).

A new feature was the use of technology, educational websites, printed materials, and feedback^(12,13,15,16,29,30). Information technology is used as a basic tool for training patients with low back pain, improving their capacity resolution, efficiency and, consequently, quality of care. This tool can be used by professionals and patients in pain management and self-management⁽¹⁶⁾.

Table 2 brings a summary of Nursing care for patients with low back pain extracted from the articles selected in the review.

In interdisciplinary work, each professional can contribute with their specific experiences, skills, and knowledge. Thus, the nurse works together with the health team, sharing responsibilities, assisting in screening, implementing, guiding, and evaluating treatment and care, encouraging self-management, and contributing not only to demands related to pain, but also to psychosocial issues. related to work and family and social interaction^(10,15,16,19,29)

In isolated action, the nurse is responsible for the initial contact with the patient. He/She welcomes, listens to complaints, assesses, and defines needs and priorities, forwarding to other professionals when necessary, and carrying out the first guidelines for care. They are also responsible for some interventions, such as acupuncture, TENS, exercises, massages, and thermotherapy. Furthermore, they are important facilitators in education, guidance, treatment follow-up and evolution of patients with pain^(13,14,17,18,20-28,30-32).

Professionals, in addition to providing assistance, must provide an environment of welcome, integration, bonding and trust, seeking involvement between the patient, family members/caregivers and professionals for the benefit of the treatment, in order to ensure that the patient uses the tools and methods therapeutic options and adapt them to your daily life according to your reality. For this, it is necessary for the patient to seek a change in lifestyle, prioritizing health and quality of life^(10,18,27,28,30).

Table 2 – Summary of Nursing actions for patients with low back pain. *Brasília*, DF, Brazil, 2023

Categorias temáticas	Cuidados de Enfermagem na dor lombar
Patient history and assessment	<ul style="list-style-type: none"> - Triage the patient with low back pain; - Accommodate the patient with low back pain; - Obtain anamnesis, with data on pain (intensity, characteristics and factors that intensify or relief pain); - Raise biopsychosocial factors and complaints involving the painful sensation; - Perform physical examination with a focus on pain assessment; - Collect information to compose the individual's health/disease history; - Define needs and priorities for the care plan.
Non-invasive and invasive interventions	<ul style="list-style-type: none"> - Follow-up and evaluate responses to the implemented treatment: physiotherapy, massage, exercises and relaxation and spinal manipulation; - Perform acupuncture; - Perform transcutaneous electrical nerve stimulation (TENS); - Implement thermotherapy; - Stimulate leisure measures, music therapy for low back pain management.
Health education	<ul style="list-style-type: none"> - Educating to live with low back pain; - Provide guidance on the diagnosis and treatment and management modalities of pain; - Guide and motivate about the need to exercise and maintain a consistent active life; - Implement educational program and exposure to feared movements; - Raise awareness and encourage self-management of pain and biopsychosocial and work-related issues; - Produce and distribute printed and electronic educational materials that address the topic; - Participate, facilitate, and manage groups of patients and family members to exchange experiences and experiences.

Source: Research data, *Brasília*, 2023.

DISCUSSION

This study describes the assistance provided by nurses to patients with low back pain. The nursing history and patient assessment, invasive and non-invasive interventions and health education stand out, aspects brought up in the results of this review as important tools for the assessment and assistance to patients with low back pain. These are procedures that favor the effective management of each case, in addition to promoting the efficacy of treatment and patient education for self-care and pain management.

Pain assessment should be an interactive process and contemplate the patient, the family, the nurse, the medical doctor, and other professionals of the multidisciplinary team, which are essential to offer care focused on the individual. The patient's and family's report constitute the primary source of information collection for the evaluation⁽³³⁾.

Nurses need extensive knowledge about pain and how it affects patients to be able to help them. Health-care professionals should use communication techniques to establish an empathetic relationship, they should know how to put themselves in the other's shoes, know how to listen to them in order to make a quick and accurate diagnosis and use effective therapy for pain relief⁽³⁴⁾. In this context, some strategies must be identified, evaluated and documented, namely: history, characteristics and intensity of pain, aspects that improve or worsen the painful sensation, physical and emotional functioning, medication, non-medication, surgical, psychosocial evaluation, and of the physical environment and how all these factors interfere with life and quality of life⁽³⁵⁾.

There are a variety of interventions to manage low back pain. Some are considered efficient and have shown good response in most patients, such as exercises,

acupuncture, massage, spinal manipulation, TENS, physiotherapy, physical activity, etc.^(11-14,17-19,27-31)

Currently, pharmacological management is recommended for back pain relief. However, most drugs produce limited relief and several serious side effects. In this sense, the adoption of non-pharmacological approaches is necessary; they include multidisciplinary rehabilitation based on physiotherapy, therapeutic massage, cognitive-behavioral therapy, acupuncture, among others⁽³⁶⁾.

An investigation that sought to understand the perception and forms of pain management by nurses working in Oncology showed that the use of analgesics, especially opioids, requires care regarding indication and dosage, especially when used at home. It also identified that patients needed guidance on use, which were provided by the Nursing team⁽³⁷⁾. The same study corroborated other conducts for pain relief, such as heat application, changes in position, encouragement to walk, in addition to individualized measures of comfort, attention and affection⁽³⁷⁾. This care is also valid for people with low back pain.

Some studies reported that, despite the multidimensional aspects of pain, most participants used only drug treatment, and few performed pain management with other forms of relief, such as physical therapy, psychological care and gym classes. At the same time, some researchers observed that subjects who had low back pain, when submitted to multidisciplinary treatment with exercises and psychological and physiotherapy care, showed significant pain relief⁽³⁸⁻⁴²⁾.

Corroborating the findings of this review, a 2016 systemic review of guidelines on the management of low back pain established the following premises as high quality for the treatment and management of low back pain: (i) all patients with acute or chronic low back pain should receive education, pain self-management options; (ii) patients with acute low back pain should be encouraged to return to activities and may benefit from paracetamol, non-steroidal anti-inflammatory drugs (NSAIDs) and spinal manipulation; (iii) chronic low back pain management may include exercise, manual therapy, acupuncture and multimodal rehabilitation (combined physical and psychological treatment); and (iv) patients with lumbar disc herniation, with radiculopathy, may benefit from spinal cord manipulation⁽⁴³⁾.

The American Holistic Nurses Association (2017) advises nurses on a series of non-pharmacological approaches for implementation in people with low back pain, including relaxation with deep breathing, meditation and images, progressive muscle relaxation, distraction, heat

and cold, comforting massages, lavender essential oil and music⁽⁴⁴⁾.

The Nursing Interventions Classification (NIC) proposes that the nurse teaches the patient the use of techniques before, after, and, if possible, during painful activities. These techniques include biofeedback, transcutaneous electrical stimulation (TENS), hypnosis, relaxation, guided imagery, music therapy, distraction, therapeutic play, occupational therapy, acupressure, heat/cold application, and massage⁽⁴⁵⁾.

Auricular and systemic acupuncture showed good results in reducing the intensity of low back pain⁽⁴⁶⁾. Some studies suggest acupuncture^(13,14,24,27,29,31) as a treatment performed by qualified nurses. The *Conselho Federal de Enfermagem* [Federal Council of Nursing] - COFEN, through resolution COFEN-585/2018, recognizes acupuncture as a specialty or qualification of professional nurses⁽⁴⁷⁾.

TENS and interferential current were considered safe, effective, cheap, painless techniques with good results, significantly reducing low back pain and medication use. In the studies evaluated^(13,17), it was observed that the use of TENS stands out over the use of interferential current because it promotes pain relief for a longer period of time and because it is a more pleasant resource for patients⁽⁴⁸⁾.

Regarding the legal support for the application of low-intensity electrotherapy, TENS, by the nurse, there is no COFEN norm on the subject. There is only reasoned guideline No. 032/2016 of the Regional Council of Nursing of São Paulo which states:

"The use of TENS requires the Nurse to have knowledge in physics, electricity, dosimetry, in addition to knowledge about the various causal factors of pain and the activation of peripheral receptors and other factors such as neurovegetative abnormalities, skeletal muscle, immobility and altered psychic behavior. For that, it should gather acquired knowledge, in recognized courses in regulated institutions"^(49:2).

A treatment modality that has shown good results in low back pain is the low power laser. Laserpuncture is an alternative to acupuncture⁽⁴⁷⁾, a non-invasive, painless and short-term method of application^(48,49), favoring the reduction of analgesic intake⁽⁵⁰⁾.

Similar to the findings of this review, in which education is one of the fundamental vectors in managing people with low back pain, educational activities must be provided in a clear and concise manner, adjusted to the patient's understanding and expectations. Special emphasis should be placed on the person's ability to act

independently in the event of pain exacerbations. The family also plays an important role, supporting the patient throughout the process⁽⁵⁰⁾,

It is important to highlight the importance of education and counseling on low back pain through coping strategies and basic pain management skills. Providing guidance on simple and effective measures such as physical activity, massage, music therapy and application of heat and cold is a function of healthcare professionals, including nurses^(11-13,18,19,22,23,27,28,30).

Among the studies that investigated effects associated with educational and self-care programs related to acute and chronic low back pain, significant results were demonstrated with regard to pain and disability control, such as increased physical activity, decreased fear, reduced anxiety and depression, increased quality of life and decreased recurrence and frequency of symptoms⁽⁵¹⁾.

Information technology emerged as a tool to assist professionals in caring for patients with low back pain. The use of the internet, websites and applications has a positive impact on the patient's behavior and attitudes in pain self-care^(10,15,16,19). The adoption of teaching strategies with audio and video support proved to be effective both for the acute and chronic pain⁽⁵¹⁾.

A limitation of the present study - which is a limitation of Nursing care for people with low back pain - is that nurses still do not have their own body of knowledge in this area. They appropriate and adapt the knowledge of other areas and professions, mainly medicine, sometimes confusing treatment with care. The nurses involved in the studies that made up this review demonstrated commitment to education and training regarding pain management and non-pharmacological control measures. In this sense, a continuous investment in continuing education is proposed.

CONCLUSION

This scoping review allowed identifying and describing the assistance provided by nurses to patients with low back pain based on studies included in this review. Scientific evidence was identified on how the history and assessment of health/disease should be, the interventions implemented by nurses and the care team, and health education related to low back pain. This knowledge favors the effective and individualized management of each case by corroborating the care and education of the patient for the management of low back pain.

Regarding the findings in the literature on the assistance provided by nurses, it was identified that the

Nursing professional acts alone or as a member of the healthcare team. As a member of the care team, he/she works together with other professionals in the diagnosis and management of pain, assisting with investigation, interventions and treatment follow-up through education and counseling through coping strategies and basic pain management skills.

Individually, the nurse is responsible for the initial contact with the patient, for welcoming, listening to complaints, for anamnesis and physical examination, for establishing needs and priorities, for implementing and monitoring care, for referrals and education for management and self-management of low back pain. He is also responsible for implementing non-pharmacological, invasive and non-invasive interventions, such as acupuncture, TENS, exercises, massage, thermotherapy, low-level laser, biopsychosocial approach and cognitive-behavioral therapy.

It was observed that the benefits of these care modalities are reinforced by the professional's ability to systematize care through assessment, intervention, and follow-up, producing adherence, supporting self-care, minimizing suffering, and improving the quality of life of people being monitored.

The present study may subsidize pain management through evidence-based therapeutic approaches, experiences described in the specialized literature and evaluated as effective for individuals who suffer from this condition.

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