Relationship between anxiety and rehabilitation nursing interventions: scoping review protocol

Daniel Nunes Mota Ferreira [1]   0009-0004-9849-8763
Delfina da Conceição Castro Borges [2]   0009-0005-0738-9850
Cátia Sofia Lima Azevedo [3]   0009-0005-5201-7298

[1] Santo António Local Health Unit, Magalhães Lemos Hospital Clinic, Porto, Portugal
[2] Gaia and Espinho Local Health Unit, Tempus Community Care Unit, Vila Nova de Gaia, Portugal
[3] Matosinhos Local Health Unit, Medicine F., Matosinhos, Portugal

ARTICLE INFO

ABSTRACT

Introduction: Anxiety has a high global prevalence and negatively impacts autonomy and quality of life. Rehabilitation nurses are uniquely positioned to support functional recovery and manage anxiety during rehabilitation, although evidence on this relationship remains dispersed.

Objectives: To map the available scientific evidence on the relationship between anxiety and interventions delivered by rehabilitation nurses.

Methodology: This scoping review protocol follows the JBI methodology and the PRISMA-ScR recommendations. A preliminary search in PROSPERO, OSF Registries, PubMed and Epistemonikos found no published or ongoing scoping or systematic reviews addressing this topic. A three-stage search strategy will be conducted in MEDLINE® Complete, CINAHL® Complete, Nursing & Allied Health Collection: Comprehensive®, Cochrane Central Register of Controlled Trials®, Cochrane Database of Systematic Reviews®, and MedicLatina® (via EBSCOhost®). Controlled vocabularies and keywords will be combined to ensure sensitivity and specificity. No restrictions will be applied regarding publication date, language or access status. Screening will be performed independently by two reviewers following the PCC framework. Data will be extracted using an instrument developed by the authors and synthesised descriptively and narratively.

Conclusion: This review aims to identify how anxiety influences the rehabilitation process and the interventions implemented by rehabilitation nurses to manage it. The findings are expected to strengthen clinical decision-making, support the development of rehabilitation nursing care protocols, and highlight evidence gaps to guide future research.

Autor correspondente:
Daniel Nunes Mota Ferreira;
Unidade Local de Saúde de Santo
António, Clínica Hospital
Magalhães Lemos, Porto, Portugal;
u62311@chporto.min-saude.pt

RESUMO

Introdução: A ansiedade apresenta elevada prevalência global e impacta negativamente a autonomia e qualidade de vida. Os enfermeiros especialistas em enfermagem de reabilitação encontram-se numa posição privilegiada para apoiar a recuperação funcional e gerir a ansiedade durante o processo de reabilitação, embora a evidência existente sobre esta relação se encontre dispersa.

Objetivos: Mapear a evidência científica disponível sobre a relação entre ansiedade e as intervenções realizadas pelos enfermeiros de reabilitação.

Metodologia: Protocolo de scoping review, segue a metodologia do JBI e as recomendações do PRISMA-ScR. Uma pesquisa preliminar no PROSPERO, OSF Registries, PubMed e Epistemonikos não identificou revisões sistemáticas ou de escopo publicadas ou em curso sobre este tema. A estratégia de pesquisa será realizada em três etapas nas bases de dados MEDLINE® Complete; CINAHL® Complete, Nursing & Allied Health Collection: Comprehensive®, Cochrane Central Register of Controlled Trials®, Cochrane Database of Systematic Reviews® e MedicLatina® (via EBSCOhost®). Serão combinados vocabulários controlados e palavras-chave para garantir sensibilidade e especificidade. Não serão aplicadas restrições quanto à data de publicação, idioma ou acesso ao texto integral. A triagem será realizada independentemente por dois revisores, considerando o acrónimo PCC. Os dados serão extraídos com um instrumento desenvolvido pelos autores e sintetizados de forma descritiva e narrativa.

Conclusões: Esta revisão pretende identificar de que forma a ansiedade influencia o processo de reabilitação e as intervenções implementadas pelos enfermeiros de reabilitação para a gerir. Prevê-se que os resultados reforcem a tomada de decisão clínica, apoiem o desenvolvimento de protocolos e evidenciem lacunas que orientem futuras investigações.

Introduction

Anxiety is a complex mental health condition with a high global prevalence and significant repercussions for individuals' well-being and quality of life. It is characterised by persistent feelings of fear, worry, and apprehension that compromise daily functioning and personal autonomy.[1]

Its aetiology is multifactorial, resulting from the interaction between genetic, environmental, and personal factors. Clinically, it manifests through physical symptoms (tachycardia, muscle tension, headaches, gastrointestinal disturbances), cognitive symptoms (excessive worry, racing thoughts, concentration difficulties), and emotional symptoms (irritability, restlessness, and a constant sense of apprehension). The diagnosis is established based on the criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).[1]

Studies indicate that anxiety is associated with poorer health outcomes, including greater cognitive impairment, reduced physical activity, diminished functional autonomy, and increased caregiver burden.[2] This impact highlights the need for intervention strategies that promote functionality, self-care, and quality of life among people with anxiety.

Within this framework, rehabilitation nurses play a key role by acting in the prevention of disability, the promotion of autonomy, and the optimisation of functional potential. The rehabilitation nurse intervenes early and preventively, ensuring the maintenance of functional capacities and the reduction of disability across respiratory, cardiac, orthopaedic, and neurological domains. These nurses employ specific interventions that include specialised techniques, functional and educational training programmes, and caregiver empowerment strategies, thereby contributing to family and community reintegration.[3] Such interventions may play a fundamental role in the management of anxiety, although the evidence regarding their effectiveness remains scattered.

This scoping review aims to map the available scientific evidence on the relationship between anxiety and rehabilitation nursing interventions. It seeks to understand, within the range of implemented interventions, which are most effective and achieve the best outcomes in anxiety management. Although previous research has addressed both anxiety and rehabilitation nursing interventions, the literature does not yet provide a clear or systematised view of this relationship. Additionally, this review intends to map underexplored strategies and practices, contributing to the improvement of care and patients' quality of life.

A preliminary scoping search was conducted in PROSPERO, OSF Registries, PubMed and Epistemonikos to identify existing scoping or systematic reviews on this topic. No registered or published reviews addressing specifically the relationship between anxiety and rehabilitation nursing interventions were found. Therefore, this review

addresses an existing gap and aims to provide a novel contribution to the field.

This review is conceptually grounded in the biopsychosocial model, supporting the understanding that anxiety affects both physical and functional recovery. Rehabilitation nursing, guided by specialist competency frameworks (e.g., Portuguese Nursing Association), focuses on enhancing autonomy and functional capacity, making these professionals uniquely positioned to integrate anxiety-management strategies into rehabilitation programmes.

Accordingly, the following research question was formulated: What is the relationship between anxiety and rehabilitation nursing interventions?

Methodology

This scoping review will follow the methodological framework of the Joanna Briggs Institute (JBI) for scoping reviews[4] and will be written in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines.[5]

The protocol is registered on the OSF platform and can be accessed via the following link: https://doi.org/10.17605/OSF.IO/Z6RCB

Eligibility criteria

The inclusion criteria were established based on the PCC framework (Population, Concept, and Context), as recommended for this type of review.[4] Specifically, the population consisted of individuals undergoing physical rehabilitation under the supervision of rehabilitation nurses; the concept addressed anxiety; and the context encompassed rehabilitation nursing care across diverse settings, including hospitals and home-based rehabilitation programmes.

All available sources of evidence will be included, irrespective of access status, publication date, or language. When full texts are not readily accessible through the authors' institutions, interlibrary services or direct contact with the original authors will be used, wherever possible, to obtain the required documents. Studies of any methodological design will be considered, including quantitative, qualitative, mixed-methods, exploratory, analytical, review-based, and grey literature sources.

All studies that do not meet the PCC framework or the objective of this review will be excluded.

Research strategy

The database search will be conducted in three stages to comprehensively identify sources of evidence relevant to the aim of this review. First, a preliminary search was carried out in September 2025 in the databases MEDLINE® Complete, CINAHL® Complete, Nursing & Allied Health Collection: Comprehensive®, Cochrane Central Register of Controlled Trials®, Cochrane Database of Systematic Reviews®, and MedicLatina® (via EBSCOhost®). Keywords and index terms appearing in the titles and abstracts of relevant studies were analysed to develop a comprehensive search strategy using Boolean operators "AND" and "OR", as illustrated in Table 1.

Controlled vocabularies were expanded through the inclusion of MeSH terms, CINAHL Headings, synonyms, spelling variations, and related concepts to ensure a comprehensive search.

In the second stage, the refined search strategy will be adapted to each information source, considering their specific indexing systems and functionalities (Table 1). In the third stage, the reference lists of all included articles will be screened to identify additional eligible studies.

To ensure broader coverage of both psychological and clinical literature, APA PsycINFO and EMBASE were planned to be included. However, institutional access to these databases was not available to the research team. To mitigate this limitation, psychological and rehabilitation-related concepts were broadened within the search strategies used in MEDLINE and CINAHL through the inclusion of additional synonyms already indexed in these databases. Boolean logic will be optimised for sensitivity and specificity in each information source. Additionally, citation tracking, manual searching of key journals in rehabilitation nursing and mental health, and screening of reference lists will be undertaken to identify any further relevant studies, thereby minimising the risk of missing eligible evidence.

Table 1. Records of the searches conducted across all information sources.

Database	Strategy	Results
MEDLINE® Complete	("Rehabilitation Nursing" OR "Nursing, Rehabilitation" OR "Rehabilitative Nursing" OR "Nursing Interventions")AND("Anxiety" OR "Anxiety Disorders" OR "Psychological Distress" OR "Mental Health Rehabilitation")AND("Treatment Outcome" OR "Recovery of Function" OR "Quality of Life" OR "Activities of Daily Living" OR "Self Care" OR "Coping Skills")	296
Nursing & Allied Health Collection: Comprehensive®		56
Cochrane Central Register of Controlled Trials®		222
Cochrane Database of Systematic Reviews®		1
MedicLatina®		7
CINAHL® Complete	(MH "Rehabilitation Nursing" OR "Rehabilitative Nursing" OR "Nursing Interventions") AND (MH "Anxiety Disorders+" OR "Psychological Distress") AND (MH "Treatment Outcomes+" OR "Quality of Life" OR "Recovery of Function" OR "Activities of Daily Living+" OR "Self Care+")	418

Study selection

The sources of evidence identified in the databases will be exported to the Intelligent Systematic Review platform (Rayyan®),[6] where the selection process will be carried out. The process will begin with the identification and removal of duplicates, followed by the screening of titles and abstracts. The remaining studies from this stage will then undergo full-text reading. The reasons for exclusion will be based on non-compliance with the inclusion criteria and will be duly recorded and described in the scoping review. The selection process will be conducted by two independent reviewers, with a third reviewer consulted in cases of disagreement. The entire process will be detailed and presented using a PRISMA flow diagram[5].

Data extraction

Data extraction will be conducted in accordance with the JBI recommendations.[4] Data will be extracted from the selected sources of evidence using an instrument developed by the authors, designed to address the guiding question of this scoping review. This instrument includes the following information: authors, title, year of publication, geographical location, study design, anxiety assessment instrument, score, intervention carried out by the specialist nurse, and main findings (Table 2).

Table 2. Tool proposed by the authors for extracting generic data.

Article title

Authors/ Year/ Country	Name and surname of each author of the study/ Year of publication/ Country of origin of the main author
Design	Describe the study design reported by the author
Objectives	Check the relevance of the objectives
Anxiety assessment tool	Description of the instrument used
Score	Scale score
Intervention carried out by the specialist nurse	Type of intervention performed
Main results	Describe the main results obtained, of interest in answering the research question

Data presentation

The identified sources of evidence will be presented in a descriptive and narrative manner, based on the evidence frameworks developed by the authors, which may be adapted as the review progresses, if necessary, to optimise the interpretation of the findings. The presentation and analysis of the data will adhere to the JBI recommendations[4] for scoping reviews, thereby facilitating the mapping process undertaken in this evidence synthesis. Finally, using Table 3, the review aims to identify the most pertinent thematic categories derived from the selected sources of evidence.

Table 3. Prospective thematic categories.

Thematic categories	Main results
Impact of Anxiety on the Rehabilitation Process	Barriers to Recovery; Treatment Adherence; Physical and Psychological Consequences.
Nursing Interventions Targeted at Anxiety Management	Emotional Support Interventions; Educational Interventions; Relaxation and Coping Interventions.
Strategies to Promote Adherence to Rehabilitation	Motivational Interventions; Family/Caregiver Involvement; Personalised Care Planning.
Outcomes of Nursing Interventions	Reduction in Anxiety Levels; Improvement in Quality of Life; Functional Progress; Increased Treatment Adherence and Effectiveness.
Challenges and Gaps in Clinical Practice	Insufficient Recognition of Anxiety; Organisational Barriers; Need for Specific Protocols.

Conclusion

The aim of this scoping review is to map the available scientific evidence regarding the relationship between anxiety and nursing rehabilitation interventions. By identifying and synthesising the existing literature, it seeks to understand how anxiety influences the rehabilitation process, as well as to examine the nursing interventions implemented to manage it and their respective outcomes.

This protocol establishes a rigorous and transparent methodology, ensuring both the reproducibility of the process and the comprehensiveness of the research. The anticipated results may contribute to a better understanding of the role of the rehabilitation nurse in managing anxiety during the rehabilitation process, highlighting effective practices and identifying potential gaps that warrant further investigation.

The findings of this review are expected to strengthen clinical decision-making and support the development of rehabilitation nursing protocols that integrate strategies for anxiety management. By clarifying how anxiety influences the rehabilitation process and identifying effective interventions, this work aims to enhance the quality of nursing care — promoting not only functional recovery, but also the emotional well-being of individuals undergoing

rehabilitation. Additionally, the review will highlight evidence gaps, guiding future clinical trials and research to further advance specialist rehabilitation nursing practice.

Conflict of interest

No conflicts of interest were declared by the authors.

References

1. Robilotti, E. (2023). Understanding anxiety: A mini-review. Meyafarqin Medical Journal, 2(1), 8–10. https://doi.org/10.5281/zenodo.7976124

2. Oosterveer, D. M., Stokman-Meiland, D., de Rooij, A., Arwert, H., Meesters, J., & Vliet Vlieland, T. P. M. (2025). The course of anxiety symptoms in the 24 months after start of stroke rehabilitation and its relation with psychological care and unmet needs: An observational prospective cohort study. Topics in Stroke Rehabilitation. Advance online publication. https://doi.org/10.1080/10749357.2025.2524994

3. Ordem dos Enfermeiros. (2010). Regulamento das competências específicas do enfermeiro especialista em enfermagem de reabilitação. Aprovado em Assembleia Geral Extraordinária de 20 de novembro de 2010. Ordem dos Enfermeiros. Available at: https://www.ordemenfermeiros.pt/arquivo/legislacao/Documents/LegislacaoOE/RegulamentoCompetenciasReabilitacao_aprovadoAG20Nov2010.pdf

4. Peters MDJ, Marnie C, Tricco AC, Pollock D, Munn Z, Alexander L, et al. Updated methodological guidance for the conduct of scoping reviews. *JBI Evid Synth*. 2020;18(10):2119-2126. doi: 10.11124/JBIES-20-00167

5. Tricco A, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med*. 2018;169(7):467-473. doi: 10.7326/M18-0850

6. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan—a web and mobile app for systematic reviews. *Syst Rev*. 2016;5:210. doi: 10.1186/s13643-016-0384-4