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Music therapy interventions for adults with depression in oncology inpatient care: scoping review protocol

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ABSTRACT

Introduction: Cancer was responsible for almost 10 million deaths in 2020, making it one of the leading causes of mortality worldwide. In addition to the physical impacts, chronic illnesses such as cancer can trigger psychological symptoms such as anxiety and depression, the latter being more prevalent in people with chronic illnesses than in the healthy population.

Objective: To map music therapy interventions for adults with depression in oncology inpatient care. **Methodology**: This scoping review follows the guidelines of the Joanna Briggs Institute and is based on the question: What are the music therapy interventions for adults with depression in oncology inpatient care? The search will be carried out using the Nursing & Allied Health Collection: Comprehensive, CINAHL, MedicLatina, APA PsycInfo and the Cochrane Central Register of Controlled Trials, all accessed via the EBSCOhost, as well as in PubMed (National Library of Medicine) and Scopus. Gray literature search will also be conducted through MedNar. There will be no time restrictions. The selection of articles will follow the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta Analyses Extension for Scoping Reviews (PRISMA-ScR statement).

Conclusion: The proposed scoping review will provide a comprehensive overview of existing music therapy interventions, highlight the contexts in which they are applied, and identify gaps in the current research, thereby contributing to a clearer understanding of how these interventions are currently implemented in oncology inpatient care for patients living with cancer and depression symptoms.

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INFORMAÇÃO DO ARTIGO

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RESUMO

Introdução: O cancro foi responsável por quase 10 milhões de mortes em 2020, sendo uma das principais causas de mortalidade a nível mundial. Para além dos impactos físicos, as doenças crónicas, como o cancro, podem desencadear sintomas psicológicos, como ansiedade e depressão, sendo esta última mais prevalente em pessoas com doenças crónicas do que na população saudável. **Objetivo**: Mapear as intervenções de musicoterapia para adultos com depressão internados no ser-

Objetivo: Mapear as intervenções de musicoterapia para adultos com depressão internados no serviço de oncologia.

Metodologia: Revisão de escopo que segue as orientações do Joanna Briggs Institute e que parte da questão: Quais a intervenções de musicoterapia para adultos com depressão internados no serviço de oncologia? A pesquisa será efetuada a partir das bases de dados, Nursing & Allied Health Collection: Comprehensive, CINAHL, MedicLatina, APA PsycInfo e Cochrane Central Register of Controlled Trials, todas através do motor de busca EBSCOhost, bem como no PubMed (National Library of Medicine) e Scopus. A pesquisa da literatura cinzenta também será realizada através da MedNar. Não serão estabelecidas limitações temporais. A seleção dos artigos seguirá as recomendações do Preferred Reporting Items for Systematic Reviews and Meta Analyses Extension for Scoping Reviews (PRISMA-ScR statement).

Conclusão: A revisão de escopo proposta irá fornecer uma visão abrangente das intervenções existentes de musicoterapia, examinar os contextos em que são aplicadas e identificar lacunas na investigação atual, contribuindo assim para uma compreensão mais clara da sua implementação nos cuidados oncológicos em regime de internamento para doentes com cancro e sintomas de depressão.

Introduction

According to the World Health Organization (WHO), cancer is one of the leading causes of global mortality, accounting for approximately 10 million deaths in 2020.¹

That same year, the most prevalent types of cancer were breast cancer (2.26 million cases), lung cancer (2.21 million), colorectal cancer (1.93 million), prostate cancer (1.41 million), skin cancer (1.20 million), and stomach cancer (1.09 million), totaling 10.1 million new cases worldwide.¹

In Portugal, according to the National Cancer Registry, 52.723 cancer cases were diagnosed in 2020. Compared to data from 2019, this represents a decrease of 8.9% in the number of new cases.²

Based on the data presented, it is evident that patients with cancer tend to experience greater physical and psychological stress resulting from their condition, when compared to individuals with non-oncological chronic diseases, even those with severe prognoses, such as diabetes, chronic obstructive pulmonary disease (COPD), and cystic fibrosis.³

Stress is understood as a psychological and emotional response to challenging or adverse life events, such as divorce, socio-economic problems, bereavement, or exposure to potentially traumatic experiences (e.g. critical illness).4 What differentiates stress-related disorders is the pattern, intensity, and persistence of symptoms, as well as the degree of functional impairment they cause.⁴ When stress becomes chronic or prolonged, it can present through a range of emotional, physical, cognitive, and behavioral symptoms, and may contribute to the onset of clinically recognized conditions, including adjustment disorder, posttraumatic stress disorder (PTSD), and other stress-related mental health disorders.⁴

This condition is associated with a high prevalence of anxiety symptoms and mood disorders such as depression, particularly in patients diagnosed with cancer.⁵

According to the WHO, approximately 280 million people worldwide live with depression.⁶

Furthermore, the Global Burden of Disease Study reported that depressive disorders were the second leading cause of years lived with disability (YLDs) in 2021, representing a 36.5% increase since 2010.⁷

This mental disorder is characterized by mood changes, loss of interest, and anhedonia, which negatively affect the patient's quality of life, both personally and socially, as well as their overall functioning.^{4,6,8}

The main causes of depression include family, social and economic problems, but physical illnesses can also trigger psychological symptoms such as anxiety and depression.⁹

The observational correlational study by Gan et al.¹⁰ reveals that depression is more common among individuals with chronic illnesses, such as cancer, than in the healthy population. By 2044, the global prevalence of symptoms of depression and anxiety is expected to continue rising.¹¹

Patients with chronic diseases, particularly those with cancer, are projected to face a significantly higher risk of developing these mental disorders.^{10,11}

Studies show that the prevalence of depressive symptoms in patients with cancer can be up to three times higher than in the general population, ranging from 2.0% to 43.5% in palliative care units.^{12,13} In some cases, the recorded rates of depressive symptoms can reach as high as 49.0%.¹³

Regardless of age, gender, educational level, or socio-economic status, cancer requires patients to undergo a process of transition and adaptation to a new reality.^{13,14} These changes, such as being separated from family, disruptions to daily routines, and bodily changes that impact self-image and self-esteem, negatively affect the lives of patients with cancer.¹⁴

Additionally, physical and psychological limitations may arise, including fear of leaving familiar environments, confronting the unknown (such as the disease, the hospital, and the healthcare team), fear of invasive procedures, diagnostic tests, and even the threat to life itself.¹⁴

On the other hand, the distance often imposed by hospitalization can lead to significant changes in family dynamics, affecting communication, coping mechanisms, relationship patterns, and conflict management.^{14,15} This situation often leads to shifts in family roles and responsibilities, and in some cases, may result in withdrawal from the patient due to fear, emotional exhaustion, or difficulty coping.¹⁴

A cancer diagnosis represents a particularly challenging period for both patients and their families and may trigger depressive symptoms or disorders, thereby requiring targeted interventions to support both groups.^{16,17}

Inpatients with cancer, with moderate or severe associated symptoms of depression, pharmacological intervention is the first line of treatment, supported by various complementary therapies, such as psychoeducation, cognitive-behavioral therapy, supportive-expressive therapies, mindfulness, relaxation training and music therapy.^{18,19,20}

Music therapy has been shown to be effective in alleviating symptoms such as chronic pain²¹ and may offer protective benefits against anxiety and depression in various populations, including patients with chronic illnesses such as HIV/AIDS and chronic obstructive pulmonary disease.^{22,23}

Depression in patients with cancer is common and often underdiagnosed, manifesting through a range of emotional (e.g., persistent sadness, hopelessness), cognitive (e.g., difficulty concentrating, negative thoughts), and somatic symptoms (e.g., fatigue, sleep disturbances, appetite changes, and pain) that may overlap with the effects of cancer or its treatment.²⁴ It is associated with poorer treatment adherence, reduced quality of life, and increased mortality risk.²⁵ In oncology, specifically, music therapy may help patients cope with hospitalization, pain, and existential distress, offering a non-pharmacological approach to supporting mental health alongside medical care.²⁶

Music therapy is the use of music and its elements, such as sound, rhythm, melody and harmony, as a therapeutic tool to treat, rehabilitate, promote health and prevent disease.^{27,28}

These non-pharmacological interventions refer to the evidence-based clinical use of musical interventions to achieve individualized goals within a therapeutic relationship and implemented by a credentialed professional who has completed an approved music therapy program.^{28,29}

Music therapy interventions can address a variety of educational and health goals such as promoting well-being, managing stress, preventing and treating depressive and anxiety symptoms, relieving pain, expressing feelings, improving memory, improving communication, promoting physical rehabilitation, among many others.²⁹

This practice can be divided into two main types of approach, active and receptive, widely used worldwide.²⁹ Active music therapy involves the direct participation of the patient in the creation of music and can include activities such as playing instruments, singing or composing, leading to the promotion of emotional expression and social interaction; receptive music therapy focuses on listening to and experiencing music without active creation.^{28,29}

However, there is a lack of synthesized evidence regarding its application specifically for depression in oncology inpatient care.

Thus, a preliminary analysis of PubMed (National Library of Medicine), PROSPERO, JBI Evidence Synthesis, Cochrane Database of Systematic Reviews and Open Science Framework (OSF), revealed that there are no literature reviews or ongoing reviews that provide a comprehensive overview of music therapy interventions for adult patients with depression in oncology inpatient care. Therefore, the aim of this scoping review is to map music therapy interventions for adults with depression in oncology inpatient care.

Methodology

This scoping review protocol was developed in accordance with JBI guidelines³⁰, the Preferred Items for Systematic Reviews and Meta Analyses Extension for scoping reviews (PRISMA-ScR statement),³¹ and is prospectively registered in the OSF (doi:10.17605/OSF.IO/63USC).³²

Review question

This review aims to answer the question: What are the music therapy interventions for adults with depression in oncology inpatient care? The aim is to map music therapy interventions for adults with depression in oncology inpatient care.

Inclusion Criteria

The mnemonic Participants, Concept and Context (PCC) represents the criteria by which reviewers will consider studies for inclusion in the scoping review.³³

Participants

Studies conducted with adult patients aged 18 or over, with any type of cancer and symptoms of depression, will be included. Symptoms of depression will be considered present if the study reports either a clinical diagnosis of depression based on recognized diagnostic criteria, such as the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition, Text Revision (DSM-5-TR),⁸ or the *International Classification of Diseases*, 11th Revision (ICD-11),⁴ or depressive symptoms measured using validated scales, such as the Hospital Anxiety and Depression Scale (HADS),³⁴ or similar tools. Studies will be included as long as depression outcomes are reported using standardized measures. No limitations will be applied based on gender, ethnicity, or other individual characteristics.

Concept

Studies that refer to active, receptive, or combined music therapy interventions will be included. Both music therapy (provided by a credentialed music therapist) and music medicine (provided by other healthcare professionals) interventions are widely used in healthcare settings, such as the intensive care units.³⁵

For the purposes of this scoping review, music therapy interventions will be defined as the structured use of musical elements, such as listening, singing, playing, or composing music, within a therapeutic context, guided by a credentialed music therapist or a healthcare professional, to achieve individualized health-related outcomes. Both active (e.g., singing, playing instruments) and receptive (e.g., listening to live or recorded music) modalities will be eligible for inclusion.

Studies in which patients listen passively to music on their own, without therapeutic facilitation, guidance, or integration into a care plan, will be excluded.

Context

Hospitalized oncology patients experience a context that differs from outpatient or community settings, characterized by more severe clinical conditions, greater symptom burden, and complex care needs, all of which can affect the nature, timing, and delivery of psychosocial interventions.^{36,37} These patients are also more likely to face advanced disease progression or treatment-related complications.³⁷

Cancer-related hospitalizations remain a significant burden, highlighting the need for tailored strategies within inpatient oncology environments.³⁶ Moreover, commonly prioritized clinical endpoints in these settings, such as overall survival, progression-free survival, and objective or overall response rate, are often associated with emotional and psychological symptoms.³⁷ These factors underscore the importance of investigating depression interventions specifically in inpatient oncology units, where both the clinical intensity and the severity of psychological symptoms differ substantially from those in other care contexts.^{36,37}

This scoping review will include studies conducted in all types of oncology inpatient services, including both medical and surgical wards.

Types of Sources

The types of sources to be included are: primary studies (quantitative, qualitative, and mixed-methods), secondary studies (all types of reviews), opinion articles, editorials, theses, and reports. Only studies published in English, Portuguese, or Spanish will be considered for inclusion. This language restriction is justified by the language proficiency of the review team, which is essential to ensure accurate interpretation, and synthesis of data. No time restrictions will be applied.

Search strategy

The search strategy is divided into three phases. In the first phase Medical Subject Headings (MeSH) descriptors and key terms relevant to the topic under study were identified. The second phase consisted of constructing the Boolean phrase. The third phase will involve searching various databases using the Boolean phrase previously created, which will be adapted to the characteristics of each database. The third phase will also involve analyzing the reference lists of the studies selected for inclusion in the scoping review.^{30,33}

Table 1 presents the PCC inclusion criteria (Participants, Concept, and Context) in the first column, along with the corresponding MeSH terms and the most frequently used keywords identified in the titles and abstracts of relevant articles. **Table 1.** PCC elements and correspondingMeSH terms and keywords

PCC Element	MeSH Terms	Keywords
Participants	"Adults" "Patients" "Depression" "Depressive disorder"	
Concept	"Music therapy" "Music" "Singing"	"song" "Intervention" "Practice" "Program" "Protocol" "Strategy" "Therapy"
Context	"Oncology service, hospital" "Hospitalization" "Neoplasms"	"cancer" "tumor"

The Boolean phrase was constructed from the MeSH descriptors and key terms using the Boolean operators AND and OR, combined with the truncation brackets, asterisks, and quotation marks. These operators make it possible to define relationships between MeSH descriptors precisely. The search will be conducted in the Nursing & Allied Health Collection: Comprehensive, Cumulative Index to Nursing and Allied Health Literature (CINAHL), MedicLatina, APA PsycInfo and the Cochrane Central Register of Controlled Trials, all accessed via the EBSCOhost search engine, as well as in PubMed (National Library of Medicine) and Scopus. Given the interdisciplinary nature of the topic, a targeted gray literature search will also be conducted through MedNar. The specific characteristics of each database to be used in the scoping review will be considered and are described in Appendix 1. The selected databases and gray literature sources are expected to identify a broad and relevant range of studies within the health sciences and complementary therapy literature for the purposes of this review. Table 2 shows the process of constructing the Boolean phrase in PubMed (National Library of Medicine).

Table 2. PubMe	d (National Lib	rary of Medicine)	search strategy
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Database	Strategy: Porto, June 9, 2025	Results
	#1("adult"[MeSH Terms] OR "patients"[MeSH Terms] OR "adult*"[Title/Abstract] OR "patient*"[Title/Abstract])	13,791,466
PubMed	#2("depressive disorder"[MeSH Terms] OR "depression"[MeSH Terms] OR "depress*"[Title/Abstract])	678,926
	#3("music therapy"[MeSH Terms] OR "music"[MeSH Terms] OR "Singing"[MeSH Terms] OR "music*"[Title/Abstract] OR "Singing"[Title/Abstract] OR "song*"[Title/Abstract])	52,580
	#4("intervention*"[Title/Abstract] OR "practice*"[Title/Abstract] OR	8,464,371

"program*"[Title/Abstract] OR "protocol*"[Title/Abstract] OR "strateg*"[Title/Abstract] OR "therap*"[Title/Abstract])	
#5("oncology service, hospital"[MeSH Terms] OR "hospitalization"[MeSH Terms] OR "neoplasms"[MeSH Terms] OR "oncolog*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "neoplasm*"[Title/Abstract] OR "tumor*"[Title/Abstract] OR "cancer"[Title/Abstract])	6,977,898
#6((((#1) AND (#2)) AND (#3)) AND (#4)) AND (#5))) ("adult"[MeSH Terms] OR "patients"[MeSH Terms] OR "adult*"[Title/Abstract] OR "patient*"[Title/Abstract]) AND ("depressive disorder"[MeSH Terms] OR "depressive disorder"[MeSH Terms] OR "music"[MeSH Terms] OR "music"[MeSH Terms] OR "music"[MeSH Terms] OR "singing"[Title/Abstract] OR "singing"[Title/Abstract] OR "song*"[Title/Abstract] OR "practice*"[Title/Abstract] OR "protocol*"[Title/Abstract] OR "strateg*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "therap*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "hospital*"[Title/Abstract] OR "tumor*"[Title/Abstract] OR "tumor*"[Title/Abstract] OR	318

Study selection

The article selection process will be carried out systematically, covering the identification, selection and inclusion stages set out in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) flow diagram.³⁸

After completing the search process, all retrieved records will be compiled and uploaded to the Rayyan Intelligent Systematic Review platform (Qatar Computing Research Institute, Doha, Qatar). This tool will facilitate the removal of duplicate entries and assist in the efficient screening and selection of studies for inclusion in the scoping review. All the articles selected will be organized in the digital tool ZOTERO[®].

The analysis will be carried out by reading the title, abstract and full text, with the aim of eliminating those that do not meet the inclusion criteria established for the review.

The articles that meet all the inclusion criteria will move on to the data extraction phase, which will consist of gathering the relevant information. In addition, an analysis of the references of each selected study will be carried out to identify possible additional articles that may be pertinent to the review.

This procedure will be conducted by two independent reviewers who, in the event of ambiguity or uncertainty, will discuss and decide whether the study will be included in the next phase of the review.

If there are discrepancies between the two reviewers during the first three stages of the selection process, these will be resolved through a discussion between them or with the help of a third reviewer, ensuring consensus and rigor in the selection process. The reasons for excluding articles will be clearly presented in a flowchart.^{31,33,38}

Data extraction

Data extraction from the articles included in the scoping review will be carried out using a Microsoft Word[®] tool built for this purpose by the authors, which can be consulted in Table 3. The construction of this data extraction tool followed the guidelines proposed in the JBI manual.³⁰

Throughout the data extraction process for each study included, the reviewers will implement the necessary modifications and revisions to the preliminary data extraction tool. All changes will be duly detailed in the final review report. Any disagreements between the reviewers will be resolved through discussion or with a third reviewer. The authors of the articles will be contacted by email to request missing or additional data, whenever necessary.

Last name of the first author **First author** of the study Year Year of publication Title Title of study Country Country of study Study design/ JBI levels of evidence hierarchy Level of evidence³⁹ Target participants of the study (e.g. Participants gender, age, other sociodemographic characteristics) Music therapy interventions (e.g. Concept active, receptive or both) Characteristics of oncology Context admissions (e.g. gastrointestinal, head-neck, breast)

Table 3. Data extraction tool.

Analysis of evidence and presentation

The extracted data will be organized and presented in tables or visual diagrams, ensuring alignment with the objectives and research questions of this scoping review.

If, after data analysis, other formats are found to more effectively convey the findings, they may also be considered.

Additionally, a narrative summary will accompany the tabulated and/or visualized data, providing context and

explaining how the results relate to the review's aims and guiding questions.

Conclusion

This scoping review protocol emphasizes the importance of music therapy as a complementary intervention for adults experiencing symptoms of depression in oncology settings, with the goal of promoting holistic, person-centered care. Depression is highly prevalent among individuals with cancer, who are significantly more likely to experience psychological distress than the general population. In response to this burden, the proposed scoping review will map existing music therapy interventions targeting this population, describe their key characteristics and contexts of application, and identify gaps in the current literature that warrant further investigation.

By employing a structured and transparent methodological approach, the proposed scoping review will provide a comprehensive overview of music therapy interventions and contribute to a clearer understanding of how these interventions are currently implemented in oncology inpatient care for patients living with cancer and depression symptoms.

Conflict of interest

The authors declare no conflicts of interest.

References

- World Health Organization. *Cancer* [Internet]. Geneva: WHO; [cited 2025 Jun 9]. Available from: https://www.who.int/newsroom/fact-sheets/detail/cancer
- Ministério da Saúde. Relatório de atividade do Registo Oncológico Nacional 2020 [Internet]. Lisboa: Direção-Geral da Saúde; 2022 [cited 2025 Jun 9]. Available from: https://ron.minsaude.pt/media/2223/ron-2020.pdf
- Akif A, Qusar MMAS, Islam MR. The impact of chronic diseases on mental health: an overview and recommendations for care programs. *Curr Psychiatry Rep.* 2024;26(7):394–404. doi:10.1007/S11920-024-01510-7
- World Health Organization. International classification of diseases 11th revision (ICD-11) [Internet]. Geneva: WHO; [cited 2025 Jun 9]. Available from: https://icd.who.int/browse/2024-01/mms/en#1630407678
- Ritti-Dias RM, Cucato GG, de Matos LDNJ, et al. Depression and cancer were independently associated with quality of life in Brazilian older people. *Australas J Ageing*. 2019;38(1):E7-E11. doi:10.1111/ajag.12581
- World Health Organization. Depressive disorder (depression) [Internet]. Geneva: WHO; [cited 2025 Jun 13]. Available from: https://www.who.int/news-room/fact-sheets/detail/depression
- The Lancet Psychiatry. Global burden of disease 2021: mental health messages. *Lancet Psychiatry*. 2024 Aug;11(8):573. doi:10.1016/S2215-0366(24)00222-0.

- American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: DSM-5-TR*. 5th ed. Washington (DC): American Psychiatric Association; 2022.
- Monroe SM, Cummins LF. Stress: Psychological Perspectives. In: Wright JD, editor. International Encyclopedia of the Social & Behavioral Sciences. 2nd ed. Oxford: Elsevier; 2015. p. 583-7. doi:10.1016/B978-0-08-097086-8.25038-1
- Gan GG, Ng DLC, Leong YC, et al. Anxiety and depression in patients with haematological neoplasms in Malaysia. *Med J Malaysia*. 2019;74(3):191-7. Available from: https://www.emjm.org/2019/v74n3/anxiety-and-depression.pdf
- Liu J, Ning W, Zhang N, et al. Estimation of the Global Disease Burden of Depression and Anxiety between 1990 and 2044: An Analysis of the Global Burden of Disease Study 2019. *Healthcare* (Basel). 2024;12(17):1721. doi:10.3390/healthcare12171721
- Krebber AMH, Buffart LM, Kleijn G, et al. Prevalence of depression in cancer patients: a meta-analysis of diagnostic interviews and self-report instruments. *Psychooncology*. 2014;23(2):121-30. doi:10.1002/pon.3409
- Smith HR. Depression in cancer patients: Pathogenesis, implications and treatment (Review). *Oncol Lett.* 2015;9(4):1509-14. doi:10.3892/ol.2015.2944
- Bucher-Maluschke JSNF, Fialho RBM, Pedroso JS, et al. Dinâmica familiar no contexto do paciente oncológico. *Rev NUFEN*. 2014;6(1):87-108. Available from: https://pepsic.bvsalud.org/pdf/rnufen/v6n1/a05.pdf
- Ferreira LMC. Avaliação da implementação do Modelo Dinâmico de Avaliação e Intervenção Familiar num Agrupamento de Centros de Saúde da região Norte [dissertação]. Porto: Universidade do Porto; 2017. Available from: http://hdl.handle.net/10400.26/20905
- Hadas S, Huhn M, Rentrop M, et al. The role of psycho-oncologic screenings in the detection and evaluation of depression in head and neck cancer aftercare patients. *Eur Arch Otorhinolaryngol.* 2022;279(4):2143-56. doi:10.1007/s00405-021-07017-8
- Aalbers S, Fusar-Poli L, Freeman RE, et al. Music therapy for depression. *Cochrane Database Syst Rev.* 2017;11(11):CD004517. doi:10.1002/14651858.CD004517.pub3
- Faller H, Schuler M, Richard M, et al. Effects of Psycho-Oncologic Interventions on Emotional Distress and Quality of Life in Adult Patients With Cancer: Systematic Review and Meta-Analysis. J Clin Oncol. 2013;31(6):782-93. doi:10.1200/JCO.2011.40.8922
- Grassi L, Caruso R, Riba MB, et al. Anxiety and depression in adult cancer patients: ESMO Clinical Practice Guideline. ESMO Open. 2023;8(2):101155. doi:10.1016/j.esmoop.2023.101155
- 20. Wang M, Wu J, Yan H. Effect of music therapy on older adults with depression: A systematic review and meta-analysis. *Complement Ther Clin Pract*. 2023;53:101809. doi:10.1016/j.ctcp.2023.101809
- Chen S, Yuan Q, Wang C, et al. The effect of music therapy for patients with chronic pain: systematic review and meta-analysis. *BMC Psychol.* 2025;13(1):455. doi:10.1186/s40359-025-02643-x
- Rezaei S, Ahmadi S, Rahmati J, et al. Global prevalence of depression in HIV/AIDS: a systematic review and meta-analysis. *BMJ* Support Palliat Care. 2019;9(4):404-12. doi:10.1136/bmjspcare-2019-001952
- 23. Feng X, Gao Y, Hu H, et al. The effects of music therapy on patients with chronic obstructive pulmonary disease: a systematic review and meta-analysis. *Physiother Theory Pract.* 2024. Epub ahead of print. doi:10.1080/09593985.2024.2420010

- 24. Mitchell AJ, Chan M, Bhatti H, et al. Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: a meta-analysis of 94 interview-based studies. *Lancet Oncol.* 2011;12(2):160–74. doi:10.1016/S1470-2045(11)70002-X
- Linden W, Vodermaier A, Mackenzie R, et al. Anxiety and depression after cancer diagnosis: prevalence rates by cancer type, gender, and age. *J Affect Disord*. 2012;141(2-3):343–51. doi:10.1016/j.jad.2012.03.025
- Potvin N, Bradt J, Kesslick A. Expanding perspective on music therapy for symptom management in cancer care. *J Music Ther*. 2015;52(1):135–67. doi:10.1093/jmt/thu056
- 27. Ponta GA, Archondo MEL. A musicoterapia no ambiente hospitalar: uma revisão integrativa. *Rev Bras Prát Integr Complement Saúde*. 2021;1(1):16-32. Available from: https://www.revistasuninter.com/revistasaude/index.php/revista-praticas-interativas/article/view/1208
- 28. National Center for Complementary and Integrative Health. Music and health: What you need to know [Internet]. Bethesda (MD): NIH; 2025 Apr 12 [cited 2025 Jun 9]. Available from: https://www.nccih.nih.gov/health/music-and-health-what-you-need-to-know
- 29. Atkinson TM, Liou KT, Borten MA, et al. Association Between Music Therapy Techniques and Patient-Reported Moderate to Severe Fatigue in Hospitalized Adults With Cancer. JCO Oncol Pract. 2020;16(12):e1553-7. doi:10.1200/OP.20.00096
- 30. Aromataris E, Lockwood C, Porritt K, Pilla B, Jordan Z, editors. JBI Manual for Evidence Synthesis. Adelaide: JBI. 2024. doi:10.46658/JBIMES-24-01
- Tricco AC, Lillie E, Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Ann Intern Med.* 2018;169(7):467-73. doi:10.7326/M18-0850
- 32. Silva BRT, Lírio C, Silva DRO, et al. Music therapy interventions for adults with depression admitted in oncology services: Scoping review protocol [preprint]. 2024 Dec 26. doi:10.17605/OSF.IO/63USC
- Peters MDJ, Godfrey C, McInerney P, et al. Scoping reviews. In: Aromataris E, Lockwood C, Porritt K, Pilla B, Jordan Z, editors. JBI Manual for Evidence Synthesis. Adelaide: *JBI*. 2020. doi:10.46658/JBIMES-24-09
- Zigmond AS, Snaith RP. The hospital anxiety and depression scale. *Acta Psychiatr Scand.* 1983;67(6):361–70. doi:10.1111/j.1600-0447.1983.tb09716.x
- Monsalve-Duarte S, Betancourt-Zapata W, Suarez-Cañon N, et al. Music therapy and music medicine interventions with adult burn patients: a systematic review and meta-analysis. *Burns*. 2022;48(3):510–21. doi:10.1016/j.burns.2021.11.002
- Rubens M, Appunni S, Saxena A, et al. Trend and burden of adult cancer-related hospitalizations in the United States. *Sci Rep.* 2025;15(1):13388. doi:10.1038/s41598-025-97310-x
- Sullivan HW, O'Donoghue AC, Ferriola-Bruckenstein K, et al. Patients' understanding of oncology clinical endpoints: environmental scan and focus groups. *Oncologist*. 2020;25(12):1060–6. doi:10.1634/theoncologist.2020-0402
- Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*. 2021;71:1-9.
- Joanna Briggs Institute. New JBI Levels of Evidence [Internet]. Adelaide: JBI. [cited 2025 Jun 9]. Available from: https://jbi.global/sites/default/files/2019-05/JBI-Levels-ofevidence_2014_0.pdf

Appendix 1. Characteristics of each database to be used in the scoping review.

Cochrane Central Register of Controlled Trials	Results Porto, June 9, 2025
((MH adult) OR (MH patients) OR (TI adult* OR AB adult*) OR (TI patient* OR AB patient*)) AND ((MH depressive disorder) OR (MH depression) OR (TI depress* OR AB depress*)) AND ((MH music therapy) OR (MH music) OR (MH singing) OR (TI music* OR AB music*) OR (TI singing OR AB singing) OR (TI song* OR AB song*)) AND ((TI intervention* OR AB intervention*) OR (TI practice* OR AB practice*) OR (TI program* OR AB program*) OR (TI protocol* OR AB protocol*) OR (TI strateg* OR AB strateg*) OR (TI therap* OR AB therap*)) AND ((MH oncology service, hospital) OR (MH hospitalization) OR (MH neoplasms) OR (TI oncolog* OR AB oncolog*) OR (TI hospital* OR AB hospital*) OR (TI neoplasm* OR AB neoplasm*) OR (TI tumor* OR AB tumor*) OR (TI cancer OR AB cancer))	358
Cumulative Index to Nursing and Allied Health Literature (CINAHL)	Results Porto, June 9, 2025
((TI adult* OR AB adult*) OR (TI patient* OR AB patient*)) AND (TI Depress* OR AB Depress*) AND ((TI music* OR AB music*) OR (TI singing OR AB singing) OR (TI song* OR AB song*)) AND ((TI intervention* OR AB intervention*) OR (TI practice* OR AB practice*) OR (TI program* OR AB program*) OR (TI protocol* OR AB protocol*) OR (TI strateg* OR AB strateg*) OR (TI therap* OR AB therap*)) AND ((TI oncolog* OR AB oncolog*) OR (TI hospital* OR AB hospital*) OR (TI neoplasm* OR AB neoplasm*) OR (TI tumor* OR AB tumor*) OR (TI cancer OR AB cancer))	154
MedicLatina	Results Porto, June 9, 2025
((TI adult* OR AB adult*) OR (TI patient* OR AB patient*)) AND (TI Depress* OR AB Depress*) AND ((TI music* OR AB music*) OR (TI singing OR AB singing) OR (TI song* OR AB song*)) AND ((TI intervention* OR AB intervention*) OR (TI practice* OR AB practice*) OR (TI program* OR AB program*) OR (TI protocol* OR AB protocol*) OR (TI strateg* OR AB strateg*) OR (TI therap* OR AB therap*)) AND ((TI oncolog* OR AB oncolog*) OR (TI hospital* OR AB hospital*) OR (TI neoplasm* OR AB neoplasm*) OR (TI tumor* OR AB tumor*) OR (TI cancer OR AB cancer))	4
Nursing & Allied Health Collection: Comprehensive	Results Porto, June 9, 2025
((TI adult* OR AB adult*) OR (TI patient* OR AB patient*)) AND (TI Depress* OR AB Depress*) AND ((TI music* OR AB music*) OR (TI singing OR AB singing) OR (TI song* OR AB song*)) AND ((TI intervention* OR AB intervention*) OR (TI practice* OR AB practice*) OR (TI program* OR AB program*) OR (TI protocol* OR AB protocol*) OR (TI strateg* OR AB strateg*) OR (TI therap* OR AB therap*)) AND ((TI oncolog* OR AB oncolog*) OR (TI hospital* OR AB hospital*) OR (TI neoplasm* OR AB neoplasm*) OR (TI tumor* OR AB tumor*) OR (TI cancer OR AB cancer))	24
APA PsycInfo	Results Porto, June 9, 2025
((MA adult) OR (MA patients) OR (TI adult* OR AB adult*) OR (TI patient* OR AB patient*)) AND ((MA depressive disorder) OR (MA depression) OR (TI depress* OR AB depress*)) AND ((MA music therapy) OR (MA music) OR (MA singing) OR (TI music* OR AB music*) OR (TI singing OR AB singing) OR (TI song* OR AB song*)) AND ((TI intervention* OR AB intervention*) OR (TI practice* OR AB practice*) OR (TI program* OR AB program*) OR (TI protocol* OR AB protocol*) OR (TI strateg* OR AB strateg*) OR (TI therap* OR AB therap*)) AND ((MA oncology service, hospital) OR (MA hospitalization) OR (MA neoplasms) OR (TI oncolog* OR AB oncolog*) OR (TI hospital* OR AB hospital*) OR (TI neoplasm* OR AB neoplasm*) OR (TI tumor* OR AB tumor*) OR (TI cancer OR AB cancer))	148
Scopus	Results Porto, June 9, 2025
(TITLE-ABS-KEY (adult*) OR TITLE-ABS-KEY (patient*) AND TITLE-ABS-KEY (depress*) AND TITLE-ABS-KEY (singing) OR TITLE-ABS-KEY (music*) OR TITLE-ABS-KEY (song*) AND TITLE- ABS-KEY (intervention*) OR TITLE-ABS-KEY (practice*) OR TITLE-ABS-KEY (program*) OR TITLE- ABS-KEY (protocol*) OR TITLE-ABS-KEY (strateg*) OR TITLE-ABS-KEY (therap*) AND TITLE- ABS-KEY (oncolog*) OR TITLE-ABS-KEY (hospital*) OR TITLE-ABS-KEY (neoplasm*) OR TITLE-ABS-KEY (tumor*) OR TITLE-ABS-KEY (cancer))	740
MedNar (clinicaltrials.gov; Natural Standard; American College of Physicians; Journal of the American Medical Association; National Cancer Institute; World Health Organization)	Results Porto, June 9, 2025
(adult OR patients OR adult* OR patient*) AND (depressive disorder OR depression OR depress*) AND (music therapy OR music OR singing OR music* OR song*) AND (intervention* OR practice* OR program* OR protocol* OR strateg* OR therap*) AND (oncology service, hospital OR hospitalization OR neoplasms OR oncolog* OR hospital* OR neoplasm* OR tumor* OR cancer)	50