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# Effectiveness of music therapy, aromatherapy, and massage therapy on people in palliative care with end-of-life needs: A systematic review

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### **ADMINISTRATIVE INFORMATION**

Support - No external funding.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

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**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 November 2023 and was last updated on 22 November 2023.

#### INTRODUCTION

Review question / Objective The aim of this study was to evaluate the available evidence on the use of music therapy, aromatherapy and massage therapy in palliative and hospice care and summarize findings.

Condition being studied Palliative care aims to support patients with incurable illnesses and their relatives on a physical and psychosocial level (Warth et al., 2015). Many patients with advanced diseases suffer from, pain, nausea, vomiting and psychological distress thus one of the main aims is improve the quality of life (QoL) by relieving symptom burden (Teoli et al., 2023). In addition to evidenced-based treatments, patients with advanced diseases often seek complementary and integrative medicine (CIM) (Kreye et al., 2022), previously referred to as Complementary and Alternative Medicine (CAM) in the literature. The

term CAM is considered outdated and the name has changed to Complementary and Integrative Medicine (CIM) (Farhoudi et al., 2019). CIM therapies have been used in the palliative care and hospice settings for many years, as patients commonly report a high symptom burden and benefit from additional complementary therapies that offer different experiences than that of conventional medicine (Zeng et al., 2018).

# **METHODS**

**Search strategy** The literature search was performed in the databases PubMed and Embase. The search was made for each intervention type separately and the term palliative care.

**Participant or population** People in palliative care with end-of-lifeneeds.

**Intervention** Music therapy, aromatherapy, massage therapy.

**Comparator** No intervention, different intervention, sham intervention, same persons over time.

**Study designs to be included** All study designs were accepted, the publication had to be a peer-reviewed primary study and a full paper.

Eligibility criteria (1) Patients in end-of-life palliative care or hospice setting. (2) At least one of the following therapies had to be applied: Music therapy, aromatherapy, massage therapy 3) Primary studies that had investigated any kind of clinical outcome. (4) Publication had to be a peerreviewed, full paper (5) Study had to be in either English or German.

**Information sources** The literature search was performed in the databases PubMed and Embase, Additionally, reference lists of relevant articles were screened and the PubMed function "cited in" was consulted for those. One google scholar internet search for all interventions was conducted at the end of the literature search, to check for the newest articles. Three authors were contacted for more information.

**Main outcome(s)** Pain, anxiety, quality of life, agitation, sleep quality, well-being.

**Additional outcome(s)** Other health related/wellbeing clinical outcomes. Physiological markers.

Quality assessment / Risk of bias analysis Randomized controlled trials (RCT) and controlled pre-post studies were rated using Jadad Score (Jadad et al., 1996). Non-controlled pre-post studies were rated using the "Quality Assessment Tool for Before-After (Pre-Post) Studies with No Control Group". Qualitative studies were assessed using the guidelines from the GRADE-CERQual ('Confidence in the Evidence from Reviews of Qualitative research') (Lewin et al., 2018) following the guidelines set out in Cochrane.

Study quality was assessed by two authors independently, discrepancies were clarified.

Strategy of data synthesis Systematic review.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable.

Language restriction English, german.

Country(ies) involved Switzerland.

**Keywords** Music therapy, aromatherapy, massage therapy, palliative care, end-of-life, hospice.

#### Contributions of each author

Author 1 - Jodie Freeman - Acquisition of the data, data extraction, analysis of data, drafting the manuscript, will read and approve the final manuscript.

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Author 2 - Anna Klingele - Development of the selection criteria, acquisition of the data, data extraction, data analysis.

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Author 3 - Ursula Wolf - Conceptualization of the review, development of the selection criteria, critical revision of the intellectual content, review & editing of the writing, will read and approve the final manuscript.

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