

Original Article

Effect of Music and Aromatherapy Applied in Palliative Care on Symptom Management: A Systematic Review

Duygu Akbas Uysal

Lecturer, Izmir Kavram Vocational College of Higher Education, Izmir Turkey

Fisun Senuzun Aykar

Professor Izmir Tinaztepe University, Izmir Turkey

Correspondence: Duygu Akbas Uysal, Lecturer, Izmir Kavram Vocational College of Higher Education, Izmir Turkey Email: duygu.uysal@kavram.edu.tr

Abstract

Introduction: Patients undergoing treatment in palliative care units often complain of symptoms such as nausea, anxiety, sleep disturbances, and pain. For individuals with life-threatening or limiting critical illnesses, effectively managing these symptoms is crucial to enhancing their quality of life, regardless of the remaining time. Due to the diversity of symptoms observed in palliative care patients, the treatment approach relies on multidisciplinary collaboration, incorporating traditional support and specialized palliative care, including complementary and integrative therapies. In this regard, aromatherapy and music therapy are utilized as potential complementary treatments for symptom management in palliative care. This study was conducted with the objective of systematically reviewing published studies related to the impact of aromatherapy and music applied to patients in palliative care on symptom management. The aim was to systematically examine the data obtained from the reviewed studies.

Material Method :One of the studies included in the scope of the research is retrospective, one is quasi-experimental (a single-group study without a control group), and five have an experimental design (randomized controlled trials). The data collection tools utilized in these studies include the "Pittsburgh Sleep Quality Index," "Hospital Anxiety and Depression Scale," "Edmonton Symptom Assessment Scale," "Baxter Nausea Face Scale," "Wong-Baker Faces Pain Rating Scale," "Children's Anxiety and Pain Scale," "Richards-Campbell Sleep Questionnaire," and "Brief Fatigue Inventory."

In general, the findings of the study indicate significant changes in scale scores, demonstrating the effectiveness of music and aromatherapy on commonly encountered symptoms in palliative care, such as pain, anxiety, and nausea-vomiting.

The study was conducted by searching national and international studies on Google Scholar, PubMed, EBSCOhost, and Google Scholar databases, with a time range limited between 2018 and 2023. The search utilized keywords such as "palliative care," "aromatherapy," "music therapy," and various combinations thereof. Six studies have been included in the analysis.

Conclusion :Based on these results, it can be concluded that these therapies are employed and can be utilized in the management of symptoms in patients receiving palliative care.

Key Words: palliative care, aromatherapy, music therapy

Introduction

The primary objective of palliative care is to establish a care strategy centered on the patient and family, addressing both physical and spiritual needs, with the ultimate goal of ensuring a peaceful and high-quality end-of-life experience (Willam and Schreier 2005). This care strategy operates based on several principles, including addressing the

informational needs of the patient and family, conducting individual assessments, managing the patient's physical symptoms, acknowledging emotional and behavioral needs, and providing care throughout the dying and grieving process (Barnard and Hollingum 2006). The World Health Organization underscores four fundamental pillars of palliative care, placing a particular

emphasis on symptom management(WHO 2017).

Given that patients in palliative care frequently contend with symptoms like nausea, anxiety, sleep disturbances, and pain, the effective management of these symptoms is paramount for nurses involved in palliative care(Schroeder and Lorenz 2018). Due to the diverse array of symptoms encountered in palliative care patients, treatment approaches hinge on multidisciplinary collaboration, encompassing both traditional support and specialized palliative care, including complementary and integrative therapies. In this context, aromatherapy and music therapy emerge as potential complementary modalities for symptom management in palliative care (Gallagher et al.2018).

Complementary and supportive therapies, exemplified by music and aromatherapy, constitute healthcare practices utilized to alleviate symptoms in various disease processes, enhance the efficacy of medical treatments, or improve individuals' overall quality of life and well-being.

Music serves as a therapeutic touch across the spectrum of human life, fostering healthy bonds between newborns and their parents and providing sensitive and compassionate palliative care toward life's conclusion. Administered by a specialized therapist, music therapy can be both active and passive in its application(Berger 2023).

On the other hand, aromatherapy, rooted in the use of medicinal plants dating back to ancient Egyptian civilization, is a form of treatment applied to patients through various methods, including inhalation, massage, compress, bath, and mouth rinsing. Ensuring the evidence-based efficacy of aromatherapy requires precise application, considering the specific patient, the correct dosage, and the appropriate administration route(Farrar and Farrar 2020).

A review of the literature reveals that Gallagher et al.'s (2018) retrospective study demonstrated a reduction in pain levels among patients undergoing music therapy sessions in palliative care(Gallagher et al.2018). Nadjafi et al. (2003) evaluated the effectiveness of aromatherapy on pain and fatigue in palliative care patients and observed

a decrease in perceived pain intensity with massage therapy (Nadjafi et al.2003)

Considering studies in the literature on this subject, this systematic review aims to address the following questions through a meticulous examination of the collected data:

Are aromatherapy and music therapy utilized for symptom control in palliative care?

Does aromatherapy and music therapy have a discernible impact on symptom control in palliative care?

Objective

This study was conducted for a systematic review of published studies on the impact of aromatherapy and music applied to patients in palliative care on symptom management, and for a systematic examination of the data obtained from these studies.

Method

The study involved searching national and international studies accessed through Google Scholar, PubMed, EBSCOhost, and Google Academic databases, with a time range limited to 2018-2023. The search used keywords such as "palliative care," "aromatherapy," "music therapy," and various combinations. Randomized controlled trials published in international journals with accessible full texts were included in the evaluation, while abstracts and review studies were excluded. Studies not utilizing music and aromatherapy for symptom management in palliative care were set as exclusion criteria. The "Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)" checklist was employed for the study's control. The article review process is illustrated in Figure 1. Six publications meeting the inclusion criteria were evaluated within the scope of the research.

Results

Among the studies included in the research, one was a retrospective study, and five had an experimental (randomized controlled) study design. These studies utilized data collection tools such as the "Pittsburgh Sleep Quality Index," "Hospital Anxiety and Depression Scale," "Edmonton Symptom Assessment Scale," "Baxter Nausea Faces Scale," "Wong-Baker FACES Scale," "Children's Anxiety

and Pain Scale," "Richards-Campbell Sleep Questionnaire," and "Brief Fatigue Inventory." The findings of the studies included in the research are presented in Table 1.

Table 1. Findings of the Research

Working Who By carried out	Sample Number	Research type	Intervention	Conclusion
Yildirim et al. 2020	N=68	Randomized controlled trial	Lavender oil application to those in the intervention group (n = 34)No intervention was applied to the control group (n = 34)(Richards-Campbell Sleep Questionnaire was administered.)	Lavender oil had no effect on vital signs, but it did improve sleep quality.
Kawabata et al., 2020	N=74	Randomized controlled trial	30-minute aromatic massage application with mixed oils to the intervention group (Richards-Campbell Sleep questionnaire and fatigue inventory)	Massage had no effect on improving sleep quality, but it did improve fatigue.
Weaver et al.,2020	N=180	Randomize controlled trial (Pilot study)	Aromatherapy was administered inhalation to the intervention groups. n=30. Baxter Gagging Faces scale, Wong-Baker FACES scale for pain, and Children's Anxiety and Pain Scale (CAPS) for anxious mood.	It was beneficial for pain and nausea.
Kreye et al.,2022	N=66	Single-center retrospective analysis study	Lemon oil pad inhasalyou was applied to the intervention groups.	Application of lemon oil pads has been found to be effective in reducing nausea and vomiting.
Duzgun et al,2021	N=60	Randomized controlled trial	The intervention group received music therapy for 10 minutes six times. No application was made to the control group. State Anxiety Scale, General Comfort Scale, and Karnofsky Performance Scale	Music played to the intervention group reduced the pain level.
Porter et al.,(2018)	N=51	Randomized controlled trial	An individual music therapy session was administered to the intervention group with a 45-minute McGill Quality of Life Questionnaire.	Demonstrated the feasibility of conducting a Phase III Randomized controlled trial

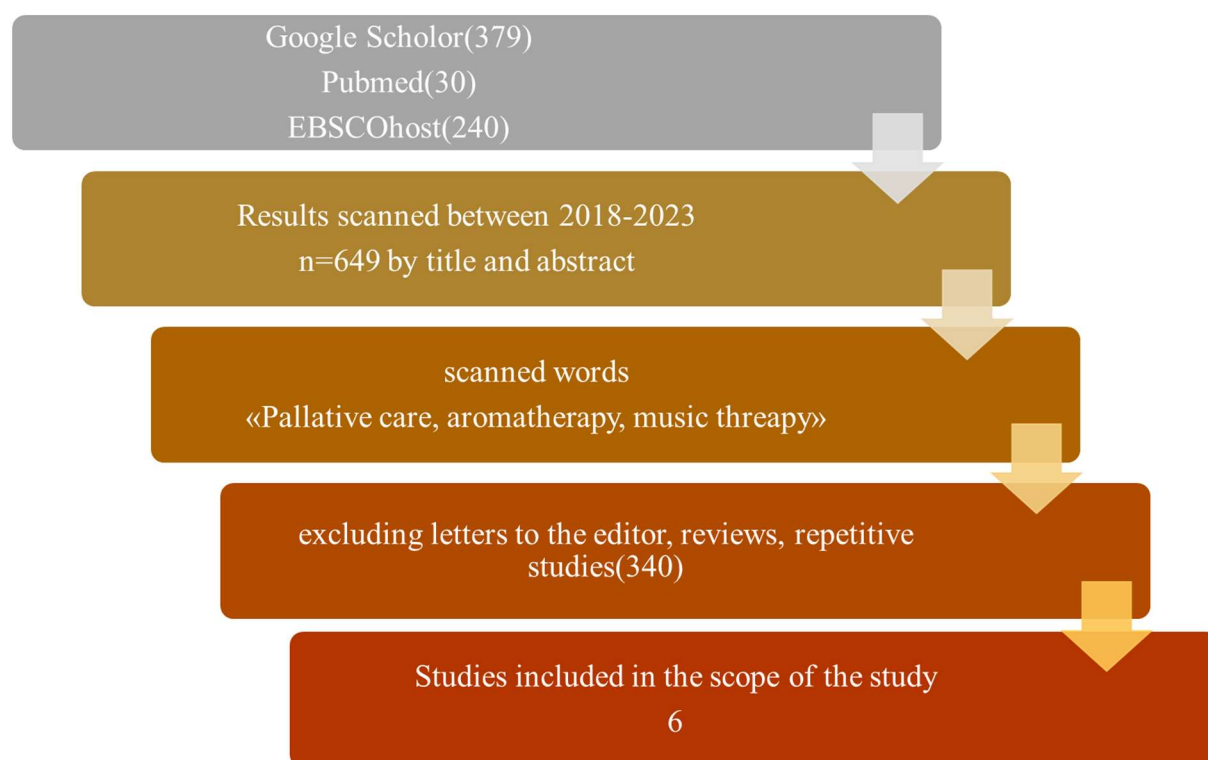


Figure 1: Prism Diagram

Discussion

This study focuses on aromatherapy and music therapy interventions used in symptom management in palliative care. In the majority of the studies included in the research, aromatherapy was observed to be particularly applied for the symptom of pain, with lavender oil being the most commonly used aromatic oil for this purpose. The use of aromatic oils for healing purposes dates back to as early as 4500 BCE. The symptom burden in palliative care and the excessive side effects of pharmacological agents have brought the use of aromatic oils back into consideration (Farrar and Farrar 2020).

Lavender oil, historically and contemporarily, is the most commonly used therapeutic oil for various symptoms such as burns, wound healing, insect bites, eczema, anxiety relief, insomnia, and relaxation. Yildirim et al. assessed the sleep quality of palliative care patients using lavender oil. In their study, the experimental group received lavender oil application, and vital signs were monitored every 4 hours. They evaluated sleep quality

using the Richards-Campbell Sleep Questionnaire. No intervention was applied to the control group. The study concluded that lavender application did not alter patients' vital signs but significantly improved sleep quality on the 2nd day post-intervention, providing deeper and more easily attainable sleep ($p < 0.05$). (Yildirim 2020).

Similarly, Kawabata et al. (2020) evaluated the effectiveness of aromatherapy massage on sleep quality in palliative care. In their study involving 74 palliative care patients, the experimental group received a 30-minute aromatherapy massage with mixed aromatic oils between 8:00-9:00 PM for two consecutive nights. No intervention was applied to the control group. Sleep quality and fatigue were assessed using the Richards-Campbell Sleep Questionnaire and the Brief Fatigue Inventory. The study found that while sleep quality measurements did not change, many patients slept during the massage, and the fatigue scores of elderly patients improved more than their sleep quality (Kawabata 2020).

Other studies on aromatherapy within the scope of our research specifically addressed the management of nausea and vomiting symptoms in palliative care.

Weaver and colleagues (2020) developed a pilot application to test the feasibility of aromatherapy on nausea, pain, and anxiety in pediatric palliative care patients who could describe their own symptoms. A total of 180 palliative care patients were divided into three groups, each consisting of 60 individuals based on the symptom they carried. Among them, 30 individuals in each group received aromatherapy, while the other 30 underwent an imagery method. Positive effects of aromatherapy application were observed on nausea and pain symptoms (Weaver et al. 2020).

In a retrospective analysis study within the scope of our research, which evaluated the effectiveness of aromatherapy on nausea, it was similarly found that inhalation with lemon oil provided benefits against nausea and vomiting in 73% of patients (Kreye et al. 2022).

The literature suggests the effectiveness of music therapy in improving various psychological and physical problems associated with palliative care. Music therapists contribute to reducing stress and anxiety levels, enhancing overall well-being and attitude towards life, and alleviating pain levels. Music therapy interventions considered in our research focused on testing their benefits on the quality of life of palliative care patients. Porter et al. (2018) evaluated the effectiveness of music therapy on the quality of life of patients receiving palliative care in a pilot design application. Patients in the experimental group received individual music therapy sessions twice a week for 45 minutes over three weeks. No intervention was applied to the control group. However, the study identified significant retention issues related to patients dropping out, with 71% leaving by the 3rd week and 92% by the 5th week, suggesting the need for a phase 3 study (Porter 2018).

In the last study within the scope of our research, Düzgün (2021) conducted an experimental study evaluating the effectiveness of music therapy on pain, anxiety, and comfort. The study involved 60

palliative care patients divided into experimental and control groups. The control group received only analgesic treatment recommended by the physician, while the experimental group received music therapy with the accompaniment of a drum using Turkish music modes of Hicaz and Rast in addition to analgesic treatment. Music sessions were applied six times in total to the experimental group, each lasting 10 minutes. The patient's pain level and vital signs were assessed before and after the music session. The analyses concluded that music therapy applied to palliative care patients was effective in reducing pain, anxiety, improving comfort, functional capacity, and vital signs (Düzgün 2021).

Conclusion In light of the current literature and the systematic organization of studies, evidence has been gathered supporting the reduction in symptom severity in palliative care patients through the application of aromatherapy and music therapy. Based on these results, it is concluded that these therapies are used and can be used in the symptom management of patients in palliative care. Purpose of palliative care The purpose of palliative care is neither to hasten death nor to prolong life. Therefore, ensuring the best possible quality of life for both the patient and their family throughout the patient's life is crucial. As independent nursing interventions known as alternative therapeutic approaches, the inclusion of music application and aromatherapy in nursing practices is recommended, along with the organization of certification programs in this regard.

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