

Comparison of music therapy and listening to the holy Quran in the management of breast cancer patients: A scoping review

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Abstract

Pain is one of the complaints that is often experienced by cancer patients due to treatment, cancer cell metastasis, or both. One of pain managements is using non-pharmacological therapy such as music therapy and murottal therapy or listening to the recitation of the holy Quran. This scoping review aims to compare music therapy and murottal therapy in pain management in breast cancer patients. The review methodology was used to map relevant evidence, synthesize findings, define keywords, and search for relevant articles from the EBSCO, Google Scholar, ProQuest, and PubMed databases. The next stage is selecting articles using PRISMA diagrams, data mapping, collecting, and summarizing findings. The results of the analysis revealed that music therapy provides a comfortable and relaxing effect. It is able to calm the soul, structured, and also universal, resulting in a decrease in pain intensity, while murottal therapy causes feelings of resignation and can cause respondents to think about the greatness of God making the respondents feel calmer, relaxed, and respond well. Music therapy can reduce 2 to 3 pain scales, while murottal therapy can reduce 4 pain scales. This proves that murottal therapy is more effective than music therapy.

Keywords: Breast Cancer; Holy Quran; Music Therapy

1. Introduction

Cancer is a body cell that undergoes changes due to rapid or uncontrolled cell growth (The Indonesian Ministry of Health, 2019). The incidence of breast cancer in the world in 2018 reached 2.09 million cases and increased in 2020 to 2.3 million cases (11.7%) with a mortality rate of 6.9% (2,3). According to the World Health Organization (WHO), the prevalence of cancer in Indonesia has increased from 2013 to 2018, from 1.4 per 100,000 population to 1.79 per 100,000 population. The most cancer cases in 2018 were breast cancer, accounting for 58,256 of all cancer cases (348,809) with an average death rate of 17 people per 100,000 population (4,5).

Pain is the main complaint most often experienced by cancer patients (6). Pain is caused by cancer cell metastases (64%), due to treatment (33%), or caused by both (7,8). Treatments that can trigger pain include chemotherapy, surgery, hormone therapy, and radiation therapy (7). Cancer pain can affect the quality of life of cancer patients by interfering with physical function, maintenance of relationships work, adherence to treatment, and ultimately endangering patient survival (9).

One of the non-pharmacological therapies that can be used to reduce pain in breast cancer patients is music therapy and murottal therapy (10). Previous research showed that music therapy and murottal therapy can reduce the pain felt by patients (11). The purpose of this scoping review is to find relevant evidence regarding the comparison of music therapy and murottal therapy in the pain management of breast cancer patients.

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2. Methods

The stages of this scoping review are identifying research questions, determining keywords, determining inclusion and exclusion criteria, searching for articles from several databases, selecting studies, mapping data, collecting, and summarizing the findings. The research question was developed using PICO "How do music therapy and murottal therapy compare in pain management in breast cancer patients?"

Table 1 PICO framework

PICO	Content	Question
P	Cancer patient	How do music therapy and listening to holy quran compare in pain management in breast cancer patients?
I	Music therapy	
C	Listening to holy quran	
O	Reduce pain	

The keywords used are Boolean ("AND", "OR"): "music therapy", "listening to the Qur'an", "murottal", "pain", and "breast cancer". The inclusion criteria for the collected articles are full text, 2017 and 2022, research articles, and available in pdf, while the exclusion criteria are reports, dissertations and inaccessible thesis, manuscripts, and articles that have been reviewed. The articles were collected from the database of EBSCO, Google Scholar, Pubmed, and Proquest using the predefined keywords. The search found 3 articles on EBSCO, 5 on Google Scholar, 1 on Proquest, and 1 on Pubmed. The search for articles used the Boolean "AND" and "OR" to facilitate the search and focus the search according to the research question.

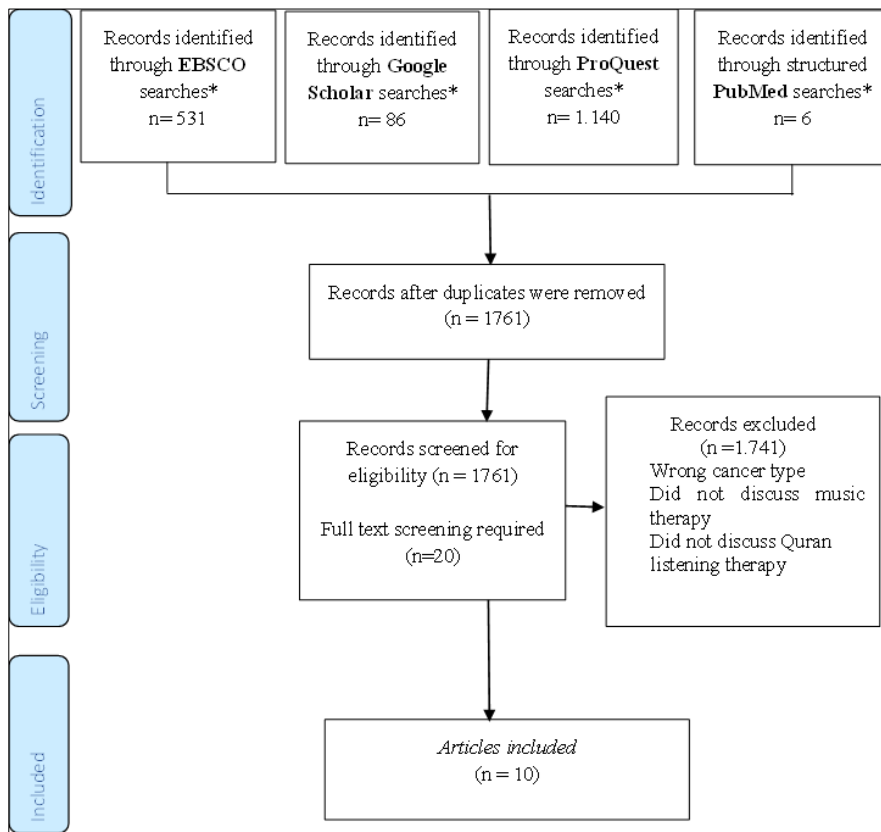


Figure 1 PRISMA Diagram

Table 2 Characteristics of articles

Writer	Sample and Context	Country	Research Design	Research Instruments	Main Findings
Suhanda et al (2021)	Patient (Mrs. N) after mastectomy surgery in Rancapetir village, Ciamis district.	Indonesia	Case study	<i>Numeric Rating Scale (NRS)</i>	Surah Ar-Rahman murottal therapy is given to post-mastectomy patients for six consecutive days with a duration of 15 minutes. Therapy is given in a semi-Fowler's position on the bed and using earphones. The results of the study showed a significant decrease in pain from a scale of 4 to a scale of 1 (10)
Karadag dan Yuksel (2021)	110 patients undergoing chemotherapy treatment in the outpatient unit of the Dokuz Eylul University hospital	Turki	Descriptive and cross-sectional	Patient information form consisting of 13 questions regarding sociodemographic characteristics, disease, and full practice.	The study found that listening to music (38.2%) which is done by 42 respondents including breast cancer patients reported relax, reduce anxiety, pain, overcome chemotherapy symptoms, increase comfort and quality of life (12)
Duzgun dan Karadakovan (2021)	60 cancer patients hospitalized in palliative care	Turki	<i>A Randomized Controlled Study</i>	<i>Short Form McGill Pain Questionnaire (SF-MPQ)</i>	The results of this study indicate that Turkish music and medicine are effective on pain, anxiety, comfort, and functional capacity in patients with cancer in palliative care services (13)
Kada et al (2020)	34 breast cancer patients at RSUP Dr. Wahidin Sudirohusodo Makassar	Indonesia	<i>Quasi experiment</i>	<i>Numeric Rating Scale (NRS)</i>	The results of this study showed that the combination of music therapy and art therapy is more effective than standard analgesic therapy in reducing pain levels in breast cancer patients. This is seen in the presence of significant differences in pain scales in the two groups (14)
Mulyani et al (2019)	30 cancer patients in the IRNA II inpatient ward Prof. RSUD. Dr. Margono Soekarjo Purwokerto	Indonesia	<i>Quasi experimental</i>	<i>Numeric Rating Scale (NRS).</i>	The results showed that the the duration of murottal therapy had an effect on reducing pain. The mean reduction in pain was greater in group B (25 minutes) than group A (15 minutes). However statistically there is no difference between the two (15)
Suwardi dan Rahayu (2019)	75 cancer patients who experience pain at the Sultan Agung	Indonesia	<i>Quasy Eksperimental</i>	<i>Numeric Rating Scale (NRS).</i>	The results showed that music therapy was able to reduce pain from moderate to mild, while murottal therapy reduce severe pain to mild. Murottal therapy has shown its effectiveness in drastically reducing pain levels (11)

	Islamic Hospital, Semarang				
Lopez et al (2019)	96 cancer patients receiving inpatient care at a cancer center	Jerman	Retrospective study	<i>Edmonton Symptom Assessment Scale (ESAS)</i>	Music therapy has been proven to be able to manage pain so that it becomes the basis for reference to be used as an intervention. Music therapy can improve symptom control of cancer patients (16)
Gencer et al (2019)	240 cancer patients in the outpatient department of the University Hospital Mannheim Tumor Center, University of Heidelberg	Jerman	<i>Prospective</i>	Questionnaires designed using understandable language	The music intervention had a moderate to large effect on anxiety, a moderate effect on depression, and a large effect on pain and a mild to moderate effect on fatigue. Music intervention is reported to improve vital parameters and lead to improved quality of life of cancer patients (17)
Sitinjak dkk (2018)	2 breast cancer patients who experience pain in Koja Hospital	Indonesia	Case study	Structured interviews, document studies, and observations using predefined instruments.	One way to reduce pain is to provide music therapy. The results showed that giving music therapy for 15-30 minutes can reduce the pain scale of breast cancer patients by 2 points (18)
Yangfan et al (2018)	100 breast cancer patients in comprehensive hospital in Hunan Province	China	-	<i>Numeric Rating Scale (NRS).</i>	The results of the study showed that the pain scale increased after surgery compared to that before surgery. The pain scale in the three groups decreased, but the lowest occurred in the combination group. There was no significant difference in the three groups (music, aromatherapy, and combination) (19)

The article searches four databases found many articles. Inclusion and exclusion criteria help to select and filter the articles found. The articles collected were articles that discuss music therapy and murottal therapy on pain management in breast cancer patients. The PRISMA chart helps in filtering the articles that have been identified in the search process. The results obtained were 1,763 articles, then filtered according to the inclusion criteria, and 20 articles were obtained so that 1,743 articles were excluded. Furthermore, the 20 articles were re-screened and 10 articles were obtained that were duplicate and inappropriate so that the total articles included in the review were 10 articles.

At this stage, data extraction was carried out according to the selected articles. The aim is to gather important information and insights to answer the research questions. Correct data extraction can help in identifying relevant variables to answer research questions, reduce bias, increase the reliability as well as the validity of the overall review. Article information consists of research characteristics, such as author, sample and place, country of research, research design, research instrument, and main findings.

3. Results

The search results display study characteristics, the main results, and emerging themes from the ten articles. The research designs used in this article are case study (2), descriptive and cross-sectional (1), a randomized controlled study (1), quasi-experimental (3), retrospective study (1), prospective (1), and others (1). The sample consisted of cancer patients, including breast cancer patients who came from different geographical locations including Indonesia, Turkey, Germany, and China. The characteristics of the study can be seen in Table 2. Ten articles were selected, thematic analysis was carried out and several themes were found including murottal interventions in home care, music and murottal interventions in inpatients, and music interventions in outpatient care.

3.1. Murottal Interventions in Homecare

Breast cancer is a disease that causes death. Someone diagnosed with breast cancer will seek treatment to treat the disease. One treatment that can be done is a mastectomy by removing all breast tissue. The effects felt after a mastectomy are numbness and pain. Pain occurs as a result of incisions and tissue damage. Non-pharmacological therapies that can be used to reduce pain are distraction techniques such as murottal therapy. Before applying murottal therapy to postoperative patients in Rancapetir Village, Ciamis Regency, the nurse asked permission from the family and patient. When giving murottal therapy, nurses and families left the patient alone. The results show that therapy given for six days was able to reduce the pain scale every day from a scale of 4 to a scale of 1. This proves that murottal therapy is effective in reducing pain in postoperative patients (10).

3.2. Music Intervention in Outpatient Care

One of cancer treatments is chemotherapy. Patients undergoing chemotherapy require emergency care, inpatient care, and outpatient care. One of the symptoms experienced by cancer patients during chemotherapy is pain. Music therapy helps cancer patients with outpatient chemotherapy become more relaxed, able to cope with chemotherapy symptoms, reduce pain and anxiety, and improve patient comfort and quality of life (12). Most music therapy is used in patients with advanced or terminal cancer. Music therapy reduces catecholamine levels and stimulates the reward center of the brain to release dopamine and produce positive feelings and happiness (17).

3.3. Musical and Murottal Interventions in the Inpatient Room

Cancer patients undergoing treatment will also experience symptoms not only from the physical aspect but also psychological aspect (16). Pain is the most common symptom experienced by cancer patients, where 30% of patients experience pain at diagnosis, 50-70% during treatment, and 60-80% during the terminal period (13). Non-pharmacological therapies that can be used to treat pain in cancer patients are distraction techniques; one of which is music therapy (18). The results showed that Turkish music and medicine were effective in reducing pain and anxiety, providing comfort, and improving functional capacity in patients with cancer in palliative care services (13). In addition, the provision of music interventions in integrative oncology inpatient consulting services also reduces the increase in global, physical, and psychosocial stress (16).

The results of other studies show that music therapy and murottal therapy can reduce the pain felt by patients. After being given music therapy, the pain level decreased from moderate to mild pain, while after being given murottal therapy there was a drastic reduction in pain, from severe pain to mild pain. This indicates that in terms of effectiveness, the two are different. The results obtained indicate that murottal therapy is more effective in reducing pain compared to music therapy (11).

4. Discussion

Breast cancer is caused by damage to genes that play a role in regulating cell growth and differentiation, resulting in abnormal cell growth (20). Pain is the main complaint most often experienced by cancer patients (6). Pain occurs as a result of cancer cell metastases (64%), treatment (33%), or caused by both (7,8). The American Cancer Society stated that pain experienced by cancer patients depends on the type of cancer, the stage of the cancer, and the pain threshold, it will have an impact on all dimensions of the quality of life of cancer patients (14). The occurrence of pain in advanced cancer patients indicates a more severe pain (21).

Non-pharmacological therapies that can be used are music therapy and murottal therapy (10). The World Federation of Music Therapy (WFMT) defines music therapy as the professional use of music and its elements as an intervention both in education, the medical environment, and in everyday life that function to optimize quality of life as well as reduce pain, anxiety, depression, and fatigue (22,23). Music consists of several genres and those that are often used in research are classical, popular, Chinese music, and instrumental (24,25). Music stimulates the body to release endorphins that can fight pain by affects the patients' feelings or mood so that the patients have their own way of dealing with illness (26).

The other non-pharmacological therapy that can be given is murottal therapy. Murottal therapy is given by playing the sound recording of the Quran recited by a qori. Al-Quran acts as a medicine to cure diseases suffered by humans such as cancer (27,28). Al-Qur'an sound therapy provides a relaxing effect both mentally and spiritually, and provides peace of mind, comfort, and safety (29). Verses that are often used in murottal therapy are Surah Al-Faatihah, Al-Falaq, Al Ikhlas, Qursy verse, Surah An-Naas, Surah Yasin, and Surah Al-An'am, and Surah Ar-Rahman. These surah of the Koran can provide peace and comfort, and are able to relieve pain and the disease suffered by the patient (30,31).

Based on the previous research, music therapy is effective in reducing pain in cancer patients, where the music used is Veena's instrumental music and also a flute which is given for 20 minutes using headphones and MP3. The results indicates that music therapy is able to reduce pain in cancer patients, which is given along with standard care for cancer patients from moderate to severe pain levels (32). Murottal therapy was also found to be effective in reducing pain in breast cancer patients who had recently undergone mastectomy surgery (10).

Music can increase the production of endorphins. Endorphin is a type of hormone that provides a sense of relaxation and calm. Midbrain produces gamma amino butyric acid (GABA), which is responsible for blocking the conduction of electricity from one neuron to another. Midbrain will produce enke palin and also beta endorphins which can create analgesic or anti-pain effects (33). In addition, murottal therapy can also stimulate the brain to produce chemicals (neuropeptides). Neuropeptide will transport receptors in the body which then will provide a sense of comfort. The recitation of the verses of the Qur'an will have an effect on the listener in the form of a relaxation effect (34). Sound can affect hormones in the body. Sound is able to suppress the production of hormones that cause stress, activate endorphins, create a feeling of calm, reduce or even eliminate feelings of anxiety, pain, tension, fear, and stabilize vital signs (35).

Based on the explanation above, non-pharmacological therapies that can be given to treat pain in cancer patients are murottal therapy and music therapy. The results of the research show that music therapy was able to reduce moderate pain to mild pain, while murottal therapy from severe pain to mild pain. This indicates that murottal therapy is more effective for reducing pain (11). The research conducted by Purwati et al (2019) which found that music therapy was able to reduce 2 to 3 pain scales, while murottal therapy could reduce 4 pain scales. Music therapy intervention only provides a feeling of relaxation, while murottal therapy can provide spiritual value. This makes a person calmer and also feels the emergence of new energy within him. Murottal therapy is able to provide a very deep feeling of relaxation, giving peace of mind, so that there is a new energy boost and also motivation in dealing with problems experienced. (11). Murottal is able to make the soul calmer by being grateful and surrendering to the Creator, while music is only able to create inspiration, relaxation, and optimism (37).

Music therapy has sedative properties that can provide a calm, emotional, relaxation response, reduce pulse and systolic blood pressure so that individuals can control themselves when experiencing discomfort such as pain (38), while murottal therapy can develop individual coping to overcome the pain. Reading the Quran contains aspects of spirituality that influence individuals to remember God, to feel love or faith. Listening to murottal is considered more useful compared to listening to other sounds such as music (30). Murottal therapy has two important points, which are a very beautiful rhythm and psychologically capable of motivating and uplifting to deal with the problems experienced. Music therapy only has one important point, that is a beautiful tone, meaning that after listening to music, individuals will be confronted again with the problem experienced, that is the pain (39).

Based on the explanation above, murottal therapy was found to be more effective than music therapy. Murottal therapy provides relaxation benefits to form new coping and awareness of the greatness of God, while music therapy only provides a relaxing effect on patients. Music therapy was introduced by Kolcaba in his theory called the theory of comfort, to fulfill the need for comfort and murottal therapy was also found to be effective in providing a sense of security and comfort by reducing pain through an emphasis on Islamic values (41).

4.1. Limitation of The Study

There are various non-pharmacological therapies that can reduce pain in breast cancer patients. A limitation of this review article is that we did not evaluate other pharmacological therapies that affect breast cancer patient pain. In the future, other non-pharmacological therapies that affect the pain of breast cancer patients should be analyzed in depth.

5. Conclusion

Music therapy and murottal therapy have the effect of stimulating the body to release endorphins that can fight pain. Both therapies have been shown to be effective in reducing pain, but there are differences between the two. Music therapy only has a beautiful rhythm, while murottal therapy has a beautiful rhythm and is able to motivate patients in overcoming problems. In addition, murottal therapy is able to form new coping to overcome problems that will come, while music therapy only gives a feeling of relaxation. Murottal therapy can provide spiritual value so that it makes a person calmer and feel the emergence of a new energy within him so that the pain can be reduced.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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