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The Effect of Music Therapy on the Quality of Life of Cancer Children Undergoing Chemotherapy: A Literature Review

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ABSTRACT

Background: The quality of life of children with cancer often decreases along with the physical, emotional, and social challenges they face during chemotherapy. Music therapy is being introduced as one of the nonpharmacological interventions that can improve the quality of life of children with cancer. Objective: This article aims to evaluate the impact of music therapy, both active and passive, on improving the quality of life of children with cancer undergoing chemotherapy, focusing on emotional, physical, and social aspects. Method: This literature review was conducted by analyzing related research articles retrieved from three electronic databases, namely Google Scholar, PubMed, and Science Direct. The articles selected had a publication year of 2017-2024, were in English, and discussed the effects of music therapy on children with cancer. The selected articles were quantitative research articles available in full text. Results: Results showed that active music therapy helped improve emotional expression and social interaction, while passive therapy was effective in reducing anxiety during medical procedures. Both approaches showed significant benefits in improving overall quality of life. Conclusions: Music therapy can be used as one of the interventions to improve the quality of life of children with cancer undergoing chemotherapy.

Keywords: Chemotherapy, music therapy, pediatric cancer, quality of life

INTRODUCTION

Pediatric cancer is one of the leading causes of death in the 0-19 years age group, with more than 280,000 new children diagnosed each year worldwide, and about 90,000 of them ending in death (PAHO, 2023). Pediatric cancer is a chronic condition that requires long-term treatment, with radiotherapy, surgery and chemotherapy as the main modalities (Hockenberry, Marilyn et al., 2017). Although chemotherapy is effective in killing cancer cells, its often unavoidable side effects, such as fatigue, anxiety, depression, nausea, vomiting and loss of appetite, can severely impair children's quality of life (Cao et al., 2023 ; da Silva Santa et al., 2021 ; Tamura, 2021). These effects can slow down the healing process, affect clinical outcomes, and decrease overall quality of life (Jiang et al., 2020 ; Pratiwi & Indriasari, 2023).

The reduced quality of life experienced by children with cancer can have a serious impact on their physical, emotional, social and psychological well-being. A study by Hidayati, (2018) showed that children who experience poor quality of life tend to experience mood swings (85%) and fatigue (80%), as well as difficulty socializing, which ultimately increases morbidity and mortality rates (Duran et al., 2020). This highlights the importance of holistic and comprehensive nonpharmacological interventions to support the

well-being of children with cancer. One widely researched nonpharmacological intervention is music therapy, which has shown potential in improving the psychological well-being and quality of life of children with cancer. Music therapy not only provides physiological benefits but also fulfills the psychological and spiritual needs of patients. Its use has expanded in various medical fields, as reported by (Astuti et al., 2021 ; Gustavson et al., 2021 ; Lima et al., 2020). Music therapy is reported to reduce anxiety levels, improve mood, and strengthen social interactions (Lima et al., 2020 ; Astuti et al., 2021 ; da Silva Santa et al., 2021 ; Bradt, J et al., 2021 ; Nguyen et al., 2022 ; Fedhila et al., 2023). In addition, the results of Uggla et al., (2018) showed that music therapy can improve mood and reduce distress levels in children with serious illnesses, including cancer. van der Heijden et al., (2018) reported that music therapy helped reduce symptoms of depression and isolation, while Coppola et al., (2018) showed a decrease in emotional sensitivity such as anger and an increase in happiness that contributed to improvements in children's quality of life.

Although music therapy has been shown to be effective, specific studies evaluating its impact on children undergoing chemotherapy in Indonesia are limited. Therefore, the novelty of this study is the focus on the implementation of music therapy adapted to the cultural context and health infrastructure in Indonesia. This study aims to provide a new foundation for the use of music therapy, both active (involving children directly) and passive (listening to music), as one of the complementary interventions that can be implemented in halfway houses and hospitals. With a comprehensive and evidence-based approach, this research is expected to enrich effective and locally relevant nonpharmacological treatment strategies, and improve the well-being and quality of life of pediatric patients in Indonesia.

Objective

This study aims to evaluate the impact of music therapy, both active and passive, on improving the quality of life of children with cancer undergoing chemotherapy, focusing on emotional, physical and social aspects.

Method

Search strategy

A literature search for articles relevant to this research topic was conducted through several electronic databases, namely Google Scholar, PubMed, and Science Direct. The search was conducted for articles published from 2017 to 2024. In the search process, keywords were used in the form of a combination of the terms “music therapy” or “music” combined with the keywords “pediatric cancer” or “oncology”, and “chemotherapy”. The search focused on articles that discussed the effect of music therapy on children undergoing chemotherapy. The articles selected were quantitative research articles that were available in full text and in English. In addition to searching electronic databases, the search was also conducted by checking the reference lists of relevant systematic review articles to ensure comprehensiveness in the collection of sources.

Inclusion and exclusion criteria

Only original studies involving populations of children and adolescents with a cancer diagnosis who were undergoing chemotherapy were included in this review. There were no restrictions on the type of cancer studied, nor on its clinical phase. Studies included were those that used music therapy (MT) interventions as the sole form of therapy, regardless of the type, duration or characteristics of the therapy. Studies that combined music therapy with other arts interventions or psychosocial interventions were excluded. There

were no specific exclusion criteria regarding the type of controls or outcome measures reported in the selected studies.

Other inclusion criteria included study design: only original studies will be included, whether they are randomized controlled trials (RCTs), non-RCTs, or observational studies. Single case reports or study protocols will be excluded. In addition, only studies published in English will be included in this review. Studies that provide interventions to individuals other than cancer patients, such as family, friends, caregivers, or siblings, will be excluded from this review.

Study selection

Study selection was performed following the PRISMA criteria for study selection and data extraction. All relevant articles were retrieved by one assessor (ES) using electronic databases. The search was conducted through three databases, namely Google Scholar, PubMed, and Science Direct. Articles selected were those published between 2017 and 2024, were in English, and addressed the effects of music therapy on children with cancer. The selected articles were quantitative research articles available in full text. After removing duplicate articles, the titles and abstracts of the articles found were screened to meet the study inclusion and exclusion criteria. All full articles that met the criteria were retrieved and evaluated by two independent reviewers. If there was any disagreement in the full article inclusion/exclusion decision, the difference was resolved through discussion between the two reviewers.

Data from the selected articles were extracted using an Excel-based research template, which included the sociodemographic and clinical characteristics of the population, type and duration of music therapy intervention, study design, as well as the main outcomes reported. Data collection was conducted by two raters separately and disagreements were resolved through discussion.

Quality assessment of study

The quality of the studies included in this literature review was assessed using the Critical Appraisal Skills Program (CASP) and Joanna Briggs Institute (JBI) guidelines. CASP was used to evaluate quantitative research designs, while JBI was used to assess the quality of evidence-based studies in the context of non-pharmacological interventions. These quality assessments were conducted to ensure that only methodologically relevant studies were included in this review. The study selection process involved an in-depth quality assessment based on criteria such as internal validity, sample size, and analytical procedures used in each study. Studies with Randomized Controlled Trials (RCT) designs generally have a low risk of bias, while quasi-experimental designs and retrospective studies show variations in methodological quality. Therefore, quality assessment was rigorously conducted to assess whether potential bias could affect the results of the studies found.

In addition, the Risk of Bias was calculated for each study based on the type of design used. Studies using RCTs were considered to have a lower risk of bias compared to other designs, while quasi-experimental and retrospective studies were judged to be more prone to bias related to sample selection, variable control, and data collection. The assessment was conducted by one lead rater to maintain consistency and transparency in the evaluation process.

Results

Search and Inclusion Results

Figure 1 shows the flow diagram of the literature search conducted using three major electronic databases, namely Google Scholar, PubMed and Science Direct. The search yielded a total of 681 articles. After the removal of duplicate articles, 608 unique articles remained consisting of 230 articles from Google Scholar, 216 articles from PubMed, and 235 articles from Science Direct. Next, an initial screening stage was

conducted through title and abstract examination to assess the relevance of the articles based on the inclusion and exclusion criteria. At this stage, a total of 535 articles were eliminated for various reasons, including articles not written in English (n = 15), not being original research (n = 102), not focusing on children or adolescents (n = 56), not having a specific focus on patients with cancer (n = 123), or not including music therapy interventions (n = 124).

After the initial screening stage, the remaining 73 articles were fully reviewed to ensure compliance with the established inclusion and exclusion criteria. At this stage, a more in-depth evaluation of the article content was conducted, which resulted in the removal of 66 articles for not meeting the criteria. Articles eliminated at this stage included case reports (n = 12), studies that used various forms of art therapy without an exclusive focus on music therapy (n = 32), and articles where the music therapy intervention was aimed at parents of cancer patients or for children with parents with cancer (n = 22). After a systematic and rigorous selection process, 7 articles met all inclusion criteria and were included in the in-depth analysis. These articles were selected for their relevance and contribution in evaluating the impact of music therapy on the quality of life of children with cancer undergoing chemotherapy. The selection process followed PRISMA guidelines to ensure transparency and accuracy in the article selection method. Figure 1 provides a visual representation of the study selection process.

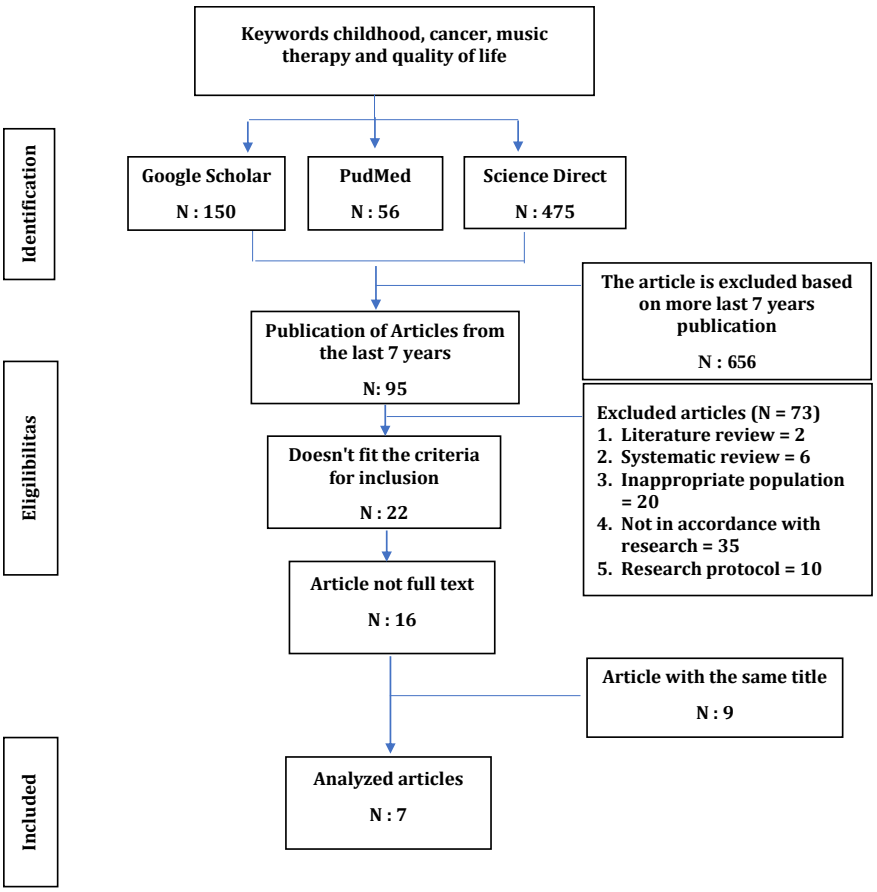

Figure 1 Flow Diagram

Tabel 1. Hasil Analisis Jurnal

Table 1. Journal Extraction Results

No.	Author, Year Article Publication		Research Title	Research Design	Result
1	Fedhila et al., 2023		Impact of Music Therapy on Quality of Life in Children with Cancer	Quantitative (Quasi-experimental) Respondents: 20 child respondents aged between 0 and 18 years. Inclusion criteria; Patients aged 2 to 14 years who were hospitalized on April 1, 2021 Exclusion criteria Children with deafness, severe encephalopathy, or impaired consciousness were excluded. Type of Intervention: Sessions 1-3 were mostly receptive, while Session 4 was receptive and active. Different instruments were used (shaker, kalimba, piano, guitar, maraca, ukulele, etc.), although the most frequently used instrument was guitar. Duration of Intervention Music therapy is given once a week for about 20 minutes. The type of MT (active or passive) is determined according to the child's preference and approved by the music therapist.	Our study showed a significant improvement in the quality of life of children with cancer after music therapy, We also noted a significant decrease in pain ($p = 0.02$), nausea ($p = 0.009$), medical procedure-related anxiety ($p = 0.009$), and treatment-related anxiety ($p = 0.03$), as well as concerns about the future ($p = 0.005$)
2.	Cheung et al., (2019)		Efficacy of musical training on psychological outcomes and quality of life in Chinese pediatric brain	Quantitative (Randomized Control Trial (RCT)) Respondents: 60 children with brain tumor (8-15 years old). 30 children in the control group and 30 children in the intervention group.	There was a statistically significant main effect for the intervention group with a higher quality of life score than the

			tumor survivors	Inclusion Criteria: Children with cancerous tumors who have an Epidemiological Studies Depression Scale for Children (CES-DC) score of 16 or more and a Modified Mini-Mental Scale (MMSE) score of 18 or more Have received cancer treatment for at least 2 months Aged 7 to 16 years old Can speak Cantonese and read Chinese characters Children who have not received any musical training. Exclusion criteria: Children who have recovered or are likely to recover completely from cancer. Type of Intervention: Intervention group: Musical training Control group: respondents were visited by research assistants to do various free leisure activities such as playing card games, chess, watching online videos, drama series, or movies. Duration of Intervention: One session was conducted for 45 minutes once a week, over a period of 52 weeks. The study was conducted in each child's home. The children were patients at the pediatric oncology clinic of a general acute hospital in Hong Kong.	control group, during the 52 weeks of intervention with a P value of 0.049 (ANOVA test). While the P value of quality of life using the Tukey test procedure obtained the value of T1 = 0.983; T2 = 0.054; T3 = 0.000
3.	Uggla et al., (2018)		Music therapy supported the health-related quality of life for children	Quantitative (RCT) Respondents: 29 children aged 0.2-17 years with haematopoietic stem cell transplants	At the time of discharge from hospitalization, the total quality of life score for

			undergoing haematopoietic stem cell transplants	(HSCT). 14 children in the intervention group and 15 children in the control group. Inclusion criteria: 0 to 18 years old. Exclusion criteria Hearing impairment and language barrier Did not show up for the meeting Refused to participate Type of Intervention: Group intervention: Music therapy sessions took place in the child's room and the child was invited to sing, play with different musical instruments, and listen to music with the music therapist. The parents can participate if the child wishes. The control group received standard medical care and usual psychosocial support. Duration of Intervention 2 times a week for 45 minutes. The total duration of the study is 4-6 weeks. The study was conducted in the pediatric inpatient ward for the intervention group and the outpatient ward for the control group at Karolinka University Hospital, Huddinge, Stockholm, Sweden.	children in the music therapy group increased (54.84-56.08) in contrast to the control group, whose total score decreased (64.38-60.35). More scores indicated better quality of life
4	Duran et al., (2021)		Patient Perspectives on Active vs. Passive Music Therapy for Cancer in the Inpatient Setting: A Qualitative Analysis	Qualitative retrospective analysisI Respondents: Sample size = 20 hospitalized patients who have received active or passive music therapy in the past 24 hours. Type of Intervention:	The results of the study were: Four themes emerged: 1) Differences in the articulation of benefits for active and passive MT recipients; 2) patient choice as a form of

				The music intervention was divided into 2 sessions with a licensed and certified clinical music therapist. Then patient and therapist discussion and observation at the bedside, the music therapist assessed symptoms, mood, energy levels, and music preferences on a case-by-case basis and involved the patient as much as possible in the choice of active or passive music therapy music. Various active or passive music therapy techniques are used during the session. During passive music therapy sessions (i.e. sessions using music-assisted relaxation or receptive listening), the music therapist will provide music to promote relaxation and well-being in a calm, meditative state as the patient listens During these sessions, live music is directed and played by the therapist, with little contribution from the patient; they may have higher levels of symptoms and so be less involved in decision-making during the session During active TM sessions (i.e., sessions using interactive music making or active listening), the music therapist will guide the patient to engage in the music through the practice of sound exploration, improvisation, playing an instrument, singing, composing lyrics, and/or participating in other forms of activities. Duration of Intervention: The therapist plays live music at the patient's bedside in active and passive sessions. Music therapy lasts 20-40 minutes depending on	empowerment; 3) changing perceptions of the hospital experience; and 4) differences in recommendations for future MT. Active MT recipients emphasized the interactive elements of the sessions, finding them stimulating by providing opportunities for enjoyable social interaction and not centering on their diagnosis. Passive MT recipients focused on the calming therapeutic effects of the sessions, reducing anxiety through focus and reflection on the music itself

				patient/caregiver preference, patient stamina, availability of music therapist, and flow of other hospital activities	
5.	Gramaglia et al., (2019)		Outcomes of music therapy interventions in cancer patients—A review of the literature	A review of the literature Respondents: Patients aged ≥ 18 years, with an oncologic/co-hematologic diagnosis Type of Intervention: Using music therapy there are two main types namely: Receptive and Active. The former includes any intervention where the patient simply listens to the music with the help of a reproducer, and actively engages in the process of perception, imagination, and elaboration under the guidance of the therapist In active MT, the patient is directly involved in the production of sound, through singing, use of instruments, improvisation Duration of Intervention: On average, music therapy lasts for 20-40 minutes	The results showed positive effects of Music Therapy on measured outcomes, with greater reductions in anxiety and depression in breast cancer patients. Music Therapy involving hospitalized patients was less effective in quality of life. The growing body of evidence on the effectiveness, tolerability, feasibility, and appreciation of MI supports the need for implementation of MI in Oncology, Radiotherapy, and Surgery wards, and promotion of knowledge among healthcare operators. Music therapy (MT) has been supported

					by research that cancer patients can benefit from musical expression and musical experiences. MT in cancer care should address the psycho-physiological needs arising from the disease, focusing on relieving anxiety, depressive symptoms, and pain, with the aim of ultimately promoting improved quality of life
6.	Rodríguez-Rodríguez et al.,(2022)		The relevance of music therapy in paediatric and adolescent cancer patients: a scoping review	Comprehensive academic literature, 522 articles were identified, 27 of which met the inclusion criteria. Respondents: Children and adolescents between 2 months and 18 years old Type of Intervention: Several publications specified the type of music used in music interventions, including lullabies, folk songs, children's songs, pop and classical music, music by J. Thompson, classical, folk, instrumental, and medieval music, nursery rhymes and Vietnamese songs, songs from The Four Seasons, or some of Doc Childre's Heart Zones songs. The opening song Willoughby Wallaby Woo , action	The results highlight the use of music therapy as a means to facilitate self-esteem, to improve physical, emotional and cognitive aspects related to the disease and, to a lesser extent, to alleviate its physiological symptoms. Both children and adolescents with cancer are represented in the academic literature. The

				songs Five Little Monkeys and Five Little Speckled Frogs , versions of I am a Great Musician and Momma Don't Allow , illustrated storybook songs Wheels on the Bus and Down by the Bay , and the closing song Time to Say-Bye. Other publications list the musical instruments used as percussion, classical guitar, omnichord, and keyboard, guitar, keyboard, percussion instruments, autoharp, and omnichord as well as percussion instruments, vocals, and body percussion. Duration of Intervention: MT sessions are offered either on an individual basis or on an individual and group basis The duration of MT sessions varies between 15 and 60 minutes. The number of MT sessions also varies, ranging from one and three	most common finding described in these studies is the benefit of music therapy in improving psychological well-being and social relationships in children which ultimately improves the quality of life in children
7	Knott et al., (2022)		Music Therapy for Children with Oncology & Hematological Conditions and Their Families: Advancing the Standards of Psychosocial Care	Based on practice survey Respondents: 50 Best Children's Hospitals for Cancer Type of Intervention: Individual sessions two to three times a week on a consistent basis. During individual sessions, singing, playing musical instruments, and moving to the music helps Duration of Intervention: Music therapy is conducted for 20-30 minutes	Music therapy is becoming a standard psychosocial supportive care service in many children's hospitals integration of music therapy services can help ensure personalized and comprehensive care.

Discussion

The results of this literature review confirm that music therapy, both active and passive, provides significant benefits in supporting improvements in the quality of life of children with cancer. Active music

therapy facilitates emotional expression and improves children's social skills through activities such as playing musical instruments and singing, while passive therapy offers much-needed relaxation during chemotherapy. A study by Fedhila et al., (2023) showed that music therapy helped reduce physical symptoms, such as pain and nausea, and lowered the level of anxiety that patients often feel during medical procedures. In addition, Gramaglia et al. (2019) emphasized that a more supportive environment for child care can be created through music therapy, which also contributes to their emotional well-being.

The effectiveness of active music therapy is mainly seen in the social and emotional aspects, where children are given the opportunity to directly participate in playing musical instruments or singing. Cheung et al., (2019) found that active music therapy was able to improve children's mood and reduce symptoms of depression. Thus, this active participation creates a space for children to express their emotions and reduce the stress that comes with intensive treatment. On the other hand, Uggla et al., (2018) showed that passive music therapy, which involves listening to music, is effective in reducing anxiety during medical procedures, creating a calmer and safer experience for patients. This study makes an important contribution to the development of nonpharmacological therapies in Indonesia. The implementation of music therapy that considers local cultural aspects can help create a relevant and effective approach in improving the well-being of pediatric patients, especially in hospitals with limited resources.

The types of music therapy interventions used in the seven articles analyzed can be divided into three main groups: passive music therapy, active music therapy, and combination interventions. Passive music therapy, which was found in several studies, mainly involves listening to pre-recorded music without any direct interaction between the patient and the therapist. In a study conducted by Fedhila et al., (2023), most of the music therapy sessions on children with cancer were passive, where patients simply listened to music played through various instruments such as shakers, kalimba, piano, guitar and ukulele. In the fourth session, the intervention included both active and passive elements, allowing patients to interact with the music. This therapy is done once a week for about 20 minutes. The results showed a significant improvement in the quality of life of children with cancer, with a decrease in anxiety associated with medical procedures and treatment. Another study by Cheung et al., (2019) also tested the effectiveness of passive music therapy in improving quality of life and psychological well-being in children with brain tumors. In this study, the music used included classical, folk, instrumental and nursery rhyme genres, with session durations varying from 15 to 60 minutes. The results of this study showed that passive music therapy can improve children's psychological well-being and social relationships as well as alleviate physiological symptoms associated with cancer disease (Rodríguez-Rodríguez et al., 2022).

On the other hand, active music therapy involves direct interaction between the patient and the therapist, where the patient engages in music-making through musical instruments or singing. Research by Knott et al., (2022) revealed that active music therapy, which involves singing and playing musical instruments, is applied two to three times a week with a session duration of 20 to 30 minutes. In this study, music therapy became part of the standard psychosocial services in many pediatric hospitals, which was shown to help reduce anxiety and provide emotional support to cancer patients and their families. Combination interventions, which combine elements from passive and active music therapy in one session, were also found in several studies. Fedhila et al., (2023) used a combined approach in a fourth session, where patients listened to music and also participated in musical activities using musical instruments. The results showed a significant decrease in anxiety and improvement in quality of life in children with cancer.

In a study by Fedhila et al., (2023) the quality of life of children who received music therapy was reported

to improve significantly after the intervention. Decreases in anxiety, pain, nausea, and concerns about the future contributed to improving the quality of life of the children in this study. Cheung et al., (2019) highlighted how active music therapy provided opportunities for children to interact socially, which contributed to their improved quality of life. In contrast, passive music therapy sessions focused more on relaxation and anxiety reduction, which also improved quality of life in terms of emotional and psychological well-being. Active music therapy, which involves direct interaction with musical instruments or participation in musical activities, showed significant improvements in social interaction and relationships between patients and their families. Children receiving active music therapy felt more connected to their social environment, which greatly contributed to their improved quality of life.

On the emotional side, Fedhila et al., (2023) reported that after receiving music therapy, children showed increased positive facial expressions and happier feelings during and after therapy sessions. This had a direct impact on their quality of life, especially in reducing feelings of anxiety and distress during chemotherapy. Passive music therapy, which focuses on music listening or relaxation, was found to be effective in reducing anxiety associated with medical procedures. A significant reduction in anxiety was reported after passive music therapy sessions, which had a direct impact on improving their quality of life. This was also reported by Cheung et al., (2019) who showed that children who received passive music therapy sessions felt calmer and better able to cope with anxiety arising from their treatment.

The results showed that both active and passive music therapy can improve the quality of life of children with cancer undergoing chemotherapy, although in different ways. Active music therapy provided benefits in increasing social interaction and positive expression, while passive music therapy focused more on reducing anxiety and promoting relaxation. Both approaches have been shown to be beneficial in reducing stress, anxiety and discomfort, while improving the emotional and psychological well-being of pediatric patients (Knott et al., 2022).

All of the articles included in this literature review show diversity in design and methodology used, which may affect potential bias. Most studies had quantitative experimental designs, such as randomized controlled trial (RCT) or quasi-experimental studies, which generally provide stronger evidence and less potential bias. However, some articles use survey or observational methods which can increase the potential for bias, especially if the instruments used to measure the outcomes do not have high validity or reliability. For example, in Fedhila et al., (2023) study, music therapy intervention was conducted in the pediatric oncology unit of Bechir Hamzah Children's Hospital, but only included 20 respondents, which may reduce the generalizability of the findings. In addition, the type of music therapy used (active or passive) was determined based on children's preferences, which may affect the objectivity of the results obtained. On the other hand, Cheung et al., (2019) used an RCT with 60 respondents, which provides a more robust design to measure the effect of music therapy on quality of life. Nonetheless, bias may arise from the selection of inclusion criteria that may not be fully representative of the entire population of children with cancer.

Most studies also relied on outcome measurement through self-report or interviews with parents, which has the potential to introduce subjective bias in the assessment of music therapy effects. Taking into account that bias is completely unavoidable in social and health research, we decided to still include all relevant articles in this review, despite the moderate potential for bias, particularly in articles that used outcome measurement through parental report (Uggla et al., 2018). These findings have important clinical implications, especially in the fields of pediatric oncology and palliative care. Music therapy can be integrated in patient care to support children's emotional and physical well-being during chemotherapy.

Active music therapy can help children express their emotions, improve social interactions and reduce feelings of isolation often experienced during treatment. Meanwhile, passive music therapy can help reduce anxiety and provide relaxation during medical procedures. In Indonesia, the integration of music therapy in treatment programs can begin with collaboration between hospitals and music therapy organizations, thus providing access for patients with limited resources. Adapting music therapy to suit local culture and patient needs will help ensure that this intervention is effective in improving the quality of life of children facing serious health challenges.

Conclusions

The results of this literature review suggest that music therapy, in both active and passive forms, has a significant influence in improving the quality of life of children with cancer undergoing chemotherapy. Music therapy can provide a wide range of benefits, including improved mood, decreased anxiety, and increased social interaction. Therefore, music therapy can be used as one of the effective non-pharmacological interventions in supporting the physical and psychological well-being of children with cancer. Music therapy can be applied in various care facilities for children with cancer, such as hospitals and halfway houses. The use of music therapy as part of comprehensive care can help create an environment that is more conducive to healing and treatment. This intervention also provides an opportunity for healthcare providers to adopt a holistic approach that focuses not only on medical aspects, but also on the emotional and social well-being of patients.

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