

## Al-Qur'an Murottal Therapy as Anxiety Management for Mothers with Children Suffering from Cancer: A Case Report

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### ABSTRACT

**Introduction:** A childhood cancer diagnosis causes mothers to experience a variety of emotional reactions, including anxiety. This anxiety is due to high emotional distress and a very heavy burden. Therefore, it is important as a nurse to provide appropriate self-intervention in overcoming such anxiety. Nurses can implement one of the anxiety management interventions by using Qur'anic murottal therapy.

**Objectives:** This study aims to determine the Effectiveness of the Application of Qur'anic Murottal Therapy as Anxiety Management in Mothers with Cancer Children in the Pediatric Inpatient Room at X Hospital.

**Methods:** This research design uses a case study approach (Case Report) with descriptive methods, observation techniques, and interviews, then analyzes the data using the Man, Material, Method (3M) analysis approach. The instrument used to assess the level of anxiety is the STAI-T Instrument. The sample in this study was mothers with cancer children in X Hospital, totaling 1 person.

**Results:** The first day before the intervention, the family's anxiety was at a score of 54 (Severe anxiety), and after the intervention was at a score of 51 (Severe anxiety), and on the fourth day after the intervention was at a score of 24 (Not anxious). The results of the 3M aspect review showed that nurses had not implemented Qur'anic murottal therapy as an option for family anxiety management interventions in the room.

**Conclusion:** The application of anxiety management with Qur'anic murottal therapy to the patient's family is effective in reducing anxiety. This therapy can be an option to overcome anxiety in families of pediatric patients with cancer.

**Keywords:** anxiety, cancer, management, Al-Qur'an murottal therapy

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### Introduction

According to the World Health Organization (WHO) in 2025, around 400,000 children and adolescents aged 0-19 years are diagnosed with cancer each year, while in Indonesia, according to data from the Global Cancer Observatory (Globocan) in 2020, there are around 11,156 new pediatric cancer patients each year (IARC, 2025). Children diagnosed with cancer will receive treatments such as radiotherapy and chemotherapy (Maulinda et al., 2022).

When a child is diagnosed with cancer, parents often experience various emotional reactions, such as anxiety. This anxiety increases due to uncertainty about the prognosis and side effects of treatment (Mariyana et al., 2018). Research by Kurz et al. (2025) revealed that levels of anxiety and depression are higher in mothers, influenced by various factors such as their primary caregiving role, emotional investment, professional sacrifices, accompanied by a lack of work-life balance and changes in daily routines (Kurz et al., 2025).

The study by Abbas & Jihad (2025) revealed that out of a total of 102 respondents, 72 mothers (70.6%) showed high levels of anxiety. This high level of anxiety was caused by caring for children with severe medical conditions, which can cause emotional stress and a heavy burden (Abass & Jihad, 2025). Given the high prevalence of anxiety among families of patients, especially parents of children with cancer, psychological intervention and social support are essential to help them cope with stress and improve their quality of life (Rusnah, 2024)

The anxiety experienced by parents of patients, especially mothers, is something that nurses need to pay attention to because it will affect the accuracy and speed of parents' decisions regarding nursing and medical treatment for patients (Mariati et al., 2022). Therefore, effective management strategies are needed to reduce anxiety, specifically through non-pharmacological interventions, as these do not cause harmful side effects when used long-term. Several forms of non-pharmacological interventions that can reduce anxiety are music therapy, peppermint

aromatherapy inhalation, progressive muscle relaxation, mindfulness-based stress reduction (MBSR), guided imagery, and Al-Qur'an murottal therapy (Gerliandi et al., 2021). One form of non-pharmacological intervention that is effective in relieving anxiety is Al-Qur'an recitation therapy, because it can be easily applied through audio without the need for special equipment or intensive guidance, making it practical for various patient conditions and can be done at any time (Mirsane et al., 2016).

Reciting the Qur'an engages the human voice, which itself functions as a remarkable medium for healing. Vocal expression can lower stress hormone levels, stimulate natural endorphins, and induce a sense of calmness. It contributes to reducing anxiety and physical tension by influencing the body's chemical responses, including decreasing blood pressure and slowing respiration, heart rate, pulse, and brain wave patterns. A slower and deeper breathing rhythm supports emotional regulation, enhances cognitive focus, provides mental clarity, and improves metabolic function. Murottal therapy influences the brain by triggering the production of neuropeptides in response to auditory stimulation from Qur'anic recitation. These neuropeptides interact with receptors distributed throughout the body, generating positive feedback that manifests as feelings of comfort and happiness. (Asrul, 2023).

In providing palliative nursing care, nurses play a crucial role in providing emotional and spiritual support to the families of children with cancer (Pyke-Grimm et al., 2021). Palliative nursing adopts a family-centered care (FCC) approach that places the family as an integral part of the care process. This approach allows for more attention to be paid to the psychological condition of parents so that they can better accompany their children and reduce the emotional burden they experience (Mariyana et al., 2018).

FCC encourages active involvement of mothers and families in child care, including decision-making and education about the child's condition. This involvement increases parents' understanding and independence, thereby reducing stress and anxiety. Mothers involved in FCC have a higher level of comfort because they are with their children during treatment, and they improve communication with the health care staff in the room. This can also reduce parental anxiety (Sapeni & Juwita, 2022).

FCC provides psychological and emotional support to patients' families, helping them manage the anxiety, stress, and emotional burden that arise from the diagnosis and course of childhood cancer (Coats et al., 2018). FCC provides facilities for open communication between the medical team, patients, and parents, including non-pharmacological therapy that helps reduce anxiety, stress, and psychological pressure experienced by parents, so that parents can understand their child's condition comprehensively and be actively involved in treatment decision-making (Deribe et al., 2024). This approach can help parents accept their child's condition and prepare mentally for the course of the illness, including the end of life if necessary (Andriastuti, 2023). FCC can also help reduce children's stress and anxiety levels during hospitalization by directly involving parents in their care. Children will feel safe and comfortable in the hospital environment because of the presence and support of their parents, so that children can be more cooperative in medical procedures (Khotimah et al., 2024).

The phenomenon found by researchers in the Pediatric Ward at Hospital X was that nurses focused on the care of pediatric cancer patients, without providing intervention and support to families during treatment. Nurses prioritize the treatment of physical symptoms and pain in pediatric patients and often ignore the anxiety experienced by the parents of patients. In addition, the selection of murottal therapy as anxiety management in the room based on the results of observations shows that there are public speakers in each patient room that can be used as a means of implementing Al-Qur'an murottal therapy as anxiety management for mothers with children suffering from cancer.

Based on this phenomenon, this study aims to determine the effectiveness of applying Al-Qur'an recitation therapy as anxiety management for mothers with children suffering from cancer in the pediatric ward at Hospital X.

## Method

This study used a case report approach with a descriptive method. Data collection was carried out in the Pediatric Ward of Hospital X in March 2025. The sample in this study consisted of one mother with a child suffering from cancer at Hospital X. In this study, the data collection technique was to collect data from observations in the room, interviews with nurses, and distribution of anxiety level questionnaires to the patient's mother for 4 days, then the results were analyzed using the Man, Material, Method (3M) approach.

The intervention was in the form of playing a recitation of the Qur'an with randomly selected surahs through the YouTube application on a mobile phone. The intervention was carried out for 15 minutes, 4 days in a row, followed by an evaluation of the respondents' anxiety levels using the STAI-T instrument before and after the intervention was given. The audio was played using a mobile phone provided by the researcher.

This study used the STAI-T (State Trait Anxiety Inventory) trait (T) instrument to measure anxiety levels. The STAI trait (T) questionnaire consists of 20 questions to measure anxiety as a trait, which is a person's general tendency to feel anxious in various situations. According to McDowell (2006, cited in Hernawaty et al., 2015), the STAI instrument is standardized and has undergone validity and reliability testing. Its validity value is 0.88, while its reliability alpha value for state anxiety is 0.93 (Hernawaty et al., 2015). There are 20 STAI-T statements, namely 11 statements about anxiety or negative statements and 9 statements about non-anxiety or positive statements. Each negative statement is scored using a Likert scale: 1 = never, 2 = sometimes, 3 = often, 4 = always. Positive statements are the opposite of negative statements. The criteria for anxiety levels are as follows: Normal score: 20-29; mild anxiety: 30-39, moderate anxiety: 40-49, severe anxiety: 50-80 (Mcdowell 2006 in Pratiwi & Ningsih, 2022).

## Result

The results of the interview conducted with the family on March 12, 2025, revealed that since their child fell ill, the family has been feeling anxious, easily agitated, and fearful about their child's condition. The family also feels that they are often unable to cope with the current situation, sometimes feeling happy and nervous, never satisfied with themselves, sometimes feeling like they have failed, and feel that they are experiencing many difficulties that they cannot overcome, but the family continues to do their best for their child. The family also said that they did not know how to deal with their anxiety, and they were also unaware that murottal therapy is effective in reducing anxiety.

Then, on the same day, observations and interviews were conducted with nurses on duty in the pediatric ward. The observations showed that nurses did not assess the level of anxiety of families undergoing cancer treatment for their children, nor did they provide/educate families about anxiety management. The nurses also had not implemented Al-Qur'an murottal therapy intervention for anxiety management in the families of patients.

The following day, March 13, 2025, room observations and interviews with nurses and families were conducted, and it was found that each patient room had a speaker and a television. The Nurstation area has a microphone. There are no leaflets or educational videos related to Al-Qur'an recitation therapy for anxiety management. Families have gadgets/mobile phones that can be used to perform Al-Qur'an recitation therapy independently. On the same day, observations and interviews were also conducted with nurses and ward heads regarding the Standard Operating Procedures (SOPs) in the rooms and the implementation of anxiety management in the rooms. The results showed that SOPs for anxiety management were in place but did not include Al-Qur'an murottal therapy. In addition, it was also found that the recitation of the Qur'an in patient rooms was only done on Fridays and was only intended to fulfill spiritual needs. The recitation of the Qur'an was rarely played through speakers in each patient room, considering that some patients were non-Muslims.

All data obtained were then analyzed using the 3M approach. In the Man aspect, it was found that the patients' families were not aware of the existence of self-directed interventions

that could be used to reduce anxiety levels, and that nurses and families were not aware that Al-Qur'an recitation therapy was effective in reducing anxiety.

In the method aspect, it was found that nurses did not independently intervene with families of patients experiencing anxiety. Nurses also did not assess the level of anxiety experienced by families during the treatment process for childhood cancer. Al-Qur'an recitation therapy has not been implemented as part of the anxiety management strategy in the children's ward. The recitation of the Qur'an in patients' rooms is only done on Fridays and is only intended to fulfill spiritual needs. The recitation of the Qur'an is rarely done through speakers in each patient's room, considering that some patients are non-Muslims. Although there are SOPs related to anxiety management, Al-Qur'an recitation therapy is not included in these SOPs. In addition, nurses have not provided education to patients' families regarding anxiety management, particularly regarding Al-Qur'an recitation therapy as an alternative intervention.

Meanwhile, in the materials aspect, it was found that each patient room is equipped with a public speaker and television, and there is a microphone in the nurse's station (Nurstation). However, there are no educational media, such as leaflets or videos, about Al-Qur'an recitation therapy for managing anxiety. Even so, patients' families have gadgets or mobile phones that can be used to perform Al-Qur'an recitation therapy independently.

Based on the results of the 3M study, an intervention was then developed that referred to the functions of Planning, Organizing, Actuating, and Controlling (POAC) management. The planning carried out was to identify a questionnaire to measure anxiety levels using STAI-T, followed by discussions with nurses regarding the murottal therapy intervention to be given to families and discussions regarding the availability of anxiety management SOPs, which did not yet include al-qur'an murottal therapy, so that the implementation of the intervention would be based on Evidence Based Practice (EBP) found by the researcher.

The activity then continued with the organization stage, which included the researcher making a time contract and obtaining informed consent from the family. This informed consent aimed to determine the right time when the family felt free and relaxed so that the intervention could be implemented optimally. In addition, at this stage, the researcher also explained the purpose of the intervention and its stages so that the intervention could provide optimal effectiveness for the family.

Then, it was followed by the implementation of murottal therapy intervention on March 14, 2025. The activity began with an assessment of anxiety levels using the STAI-T questionnaire for families, followed by murottal al-Qur'an therapy intervention for approximately 15 minutes, and continued with an evaluation of anxiety levels using the same questionnaire for 4 days.

On the fourth day, March 18, 2025, the final stage was carried out, namely controlling or evaluating the intervention that had been given to the families for 4 days, and the following results were obtained:

Table 1. Anxiety Score Data Using the STAI-T Scale Before and After the Implementation of Al-Qur'an Murottal Therapy

Description	Day 1	Day 2	Day 3	Day 4
Pre-Test	54	49	37	33
Post-Test	51	44	34	24

Table 1 shows the anxiety scores before and after the application of Al-Qur'an recitation therapy. On the first day before the intervention, families were asked to complete a pre-test using the STAI-T instrument to measure their anxiety levels, and the results showed a score of 54, indicating severe anxiety. After receiving Al-Qur'an recitation therapy for approximately 15 minutes, the anxiety score decreased to 51, which was still in the severe anxiety category. Then, on the fourth day before the intervention was carried out again, the anxiety score was assessed, and a score of 33 (mild anxiety category) was obtained. After being given Al-Qur'an recitation therapy for the same duration, the anxiety score decreased further to 24, which is in the no anxiety category.

## Discussion

Anxiety is described as a psychological condition in which an individual experiences feelings of tension, worry, and emotional discomfort when confronted with particular situations perceived as distressing (Utami, 2019). Caring for a child diagnosed with cancer presents a profound emotional challenge for families, especially parents. They frequently experience psychological strain and fear related to their child's deteriorating health. A cross-sectional study involving 192 biological parents in the United States demonstrated that the highest levels of anxiety occurred during the diagnostic phase and when chemotherapy treatment commenced (Wiener et al., 2017). Similarly, findings by Lewandowska et al. (2024) reported that 20.78% of the 270 parents studied experienced significant anxiety, largely influenced by the prolonged duration of their child's illness and extended treatment demands (Lewandowska et al., 2024).

According to research by Vaarwerk et al. (2019), almost all parents in their study experienced anxiety throughout the treatment process, which was intensified by multiple contributing factors. These included treatment side effects such as fatigue and the long-term physical rehabilitation of the child. Several parents expressed that they were unprepared for the lengthy recovery period, which in some cases extended for years following treatment completion (Vaarwerk et al., 2019).

Consistent with these findings, qualitative research by Alghamdi et al. (2023) revealed persistent emotional responses among parents, including sadness, fear, anxiety, and stress. Many parents reported experiencing uncertainty when making decisions regarding their child's medical care. The chronic nature of cancer contributed not only to heightened stress but also disrupted family stability, making it challenging to maintain normal routines. As parents navigated ongoing treatment and unpredictable outcomes, feelings of helplessness and concern about the future further contributed to symptoms of anxiety and depression (Alghamdi et al., 2023). Additionally, a study by Kurz et al. (2025) indicated that mothers exhibited higher levels of anxiety and depression, which may be linked to their primary caregiving responsibilities, emotional burden, professional sacrifices, work-life imbalance, and significant lifestyle changes during the treatment period (Kurz et al., 2025).

The anxiety experienced by the patient's mother needs to be addressed by nurses because it can affect the accuracy and speed of the family's decision-making regarding nursing interventions and treatment for the patient (Mariati et al., 2022). The appropriate approach to addressing this anxiety is through Family Centered Care (FCC). Family Centered Care is an approach that provides comprehensive psychosocial support for mothers, including non-pharmacological therapy that helps reduce anxiety, stress, and psychological pressure experienced by mothers (Deribe et al., 2024). One effective non-pharmacological intervention approach in reducing anxiety levels is Al-Qur'an recitation therapy (Mirsane et al., 2016).

Based on the results of a study using the 3M analysis method, in the Man aspect, it was found that nurses did not yet understand that Al-Qur'an murottal therapy is an effective method in anxiety management. Ideally, nurses should be aware of the latest evidence-based practice (EBP) regarding anxiety management in patients' families. This knowledge can be obtained through activities such as sharing sessions or Case Reflection Discussions (DRK) held in the treatment room. This is supported by research by Fatiyah et al. (2022), which states that DRK can directly increase nurses' knowledge through discussion and reflection on real cases in nursing practice. Thus, nurses can gain a deeper understanding of current nursing standards and procedures (Fatiyah et al., 2022).

Furthermore, in the context of the Man aspect, it is known that the patient's family does not yet have knowledge about self-care interventions that can be used to reduce anxiety levels, including not knowing that Al-Qur'an recitation therapy can be an effective way to reduce anxiety. Nurses should play a role in providing education related to anxiety management, including introducing Al-Qur'an recitation therapy as a form of intervention that can be applied. This education has the potential to increase the family's understanding, as explained by Prasetya (2015), who reported that the family's knowledge about hypertension increased after being given health education (Prasetya, 2015).

In terms of Method aspect, it was found that the implementation of self-directed interventions to address anxiety by nurses in the Pediatric Ward of Hospital X has not been optimized. Education from nurses regarding anxiety management, especially related to the use of Al-Qur'an murottal therapy, is also not yet available as an intervention option. Ideally, nurses should provide education that can help families manage anxiety independently, especially considering that families of pediatric cancer patients tend to experience high levels of anxiety. In addition, nurses should also conduct a comprehensive assessment, including the psychological condition of the family. This aspect is important as a basis for establishing a nursing diagnosis and developing interventions that are relevant and appropriate to the psychological condition of the family (Mariyana et al., 2018).

Furthermore, it was also found that although there are SOP related to anxiety management, Al-Qur'an recitation therapy is not included in these SOP. Ideally, all non-pharmacological management/self-therapy that can be performed independently by nurses should be based on existing SOPs. The provision of these SOP aims to ensure that all actions taken for patients are in accordance with standards. In line with the statement from the Ministry of Health of the Republic of Indonesia (Kemenkes), all nursing actions must be based on Standard Operating Procedures (SOPs), which are part of nursing service standards. This is regulated in official Kemenkes regulations and guidelines, which state that nursing actions must follow the Standar Ashan Keperawatan (SAK), Standar Operasional Prosedur (SOP), and nursing profession standards to ensure the quality and safety of services (Permenkes, 2015). In addition, SOPs also serve as guidelines or references for nurses in carrying out their nursing duties. This helps to ensure that every action taken has clear and consistent standards (Taufiq, 2019).

The recitation of the Qur'an in patient rooms is only done on Fridays and is intended solely to fulfill spiritual needs. The recitation of the Qur'an is rarely played through the speakers in each patient room, as some patients are non-Muslim. Therefore, for non-Muslim patients' families, nurses can use classical music therapy as an alternative intervention in anxiety management. This is supported by Rizkyani et al. (2024) research, which shows that Mozart's classical music therapy significantly reduces anxiety in patients undergoing inpatient treatment (Rizkyani & Lestaria, 2024).

The results of anxiety level evaluation using the STAI-T scale after four days of Al-Qur'an recitation therapy showed a significant decrease in the anxiety of the patients' families. These results indicate that Al-Qur'an recitation therapy is effective in reducing anxiety in families of children with cancer. These findings are in line with the study by Humaira et al. (2024), which also confirmed the effectiveness of recitation therapy in reducing anxiety (Humaira et al., 2024). This is also explained in Sulistyowati (2021) study, which revealed that one 13-minute 55-second session of reciting Surah Ar-Rahman was able to significantly reduce anxiety in patients in the ICU (Sulistyowati & Hasibuan, 2021).

Al-Qur'an murottal therapy is effective in reducing anxiety in preoperative patients. Listening to Al-Qur'an murottal recitations through audio is one alternative that can serve as a calming and self-reminder (Asrul, 2023). These results are also reinforced by Permadi's (2024) research, which revealed a significant difference in the anxiety levels of preoperative patients with spinal anesthesia before and after being given murottal therapy, indicating that this therapy is effective as an anxiety management strategy (Permadi, 2024).

Listening to the recitation of the Qur'an is also closely related to the aspect of faith in Islam, because the Qur'an is believed to be the word of Allah and a guide for life. Therefore, this therapy can make a person feel closer to Allah, calmer, and able to surrender their burdens to Him, thereby increasing peace of mind (Permadi, 2024). The therapy is carried out for 15 minutes at a volume of around 50 dB. This is consistent with Kasanah et al. (2023) research, which shows that murottal therapy using headphones for 15 minutes at a sound intensity of 50 dB—equivalent to a quiet office environment—can make patients feel more comfortable (Kasanah et al., 2023).

In the material aspect, each patient room is equipped with speakers that can be used for murottal therapy as anxiety management for patients' families in the pediatric ward, but this has not yet been implemented by nurses. This requires optimization in the use of existing facilities

and infrastructure, considering the playback of Al-Qur'an murottal therapy in several rooms of Muslim patients so that nursing services can be provided optimally, especially in relation to anxiety management for families of patients with cancer.

### Conclusion

The application of anxiety management through Al-Qur'an recitation therapy has been proven effective in reducing anxiety in patients' families. This approach provides psychological and spiritual calming effects, enabling patients' families to cope with stressful situations in a calmer and more positive manner. Thus, Al-Qur'an recitation therapy can be used as a non-pharmacological intervention alternative by nurses in managing anxiety among families of pediatric cancer patients.

Therefore, it is recommended that nurses begin to apply Al-Qur'an recitation therapy as a form of independent intervention in an effort to manage anxiety in the patient's family. This therapy can be applied twice a day for 10 minutes, in the morning before the child receives medication and at night before the child and parents rest/sleep, to reduce the anxiety of the child and parents. In addition, socialization activities, such as sharing sessions or discussions, are needed to increase nurses' understanding of how to implement Al-Qur'an recitation therapy. For non-Muslim patients, nurses can apply classical music therapy as an alternative intervention for anxiety management for families.

For pediatric wards, it is recommended to provide educational media such as leaflets to support education related to anxiety management using Al-Qur'an recitation therapy. In addition, this therapy should also be included in the standard operating procedures (SOP) for anxiety management as one of the intervention methods that can be used. Optimize the use of room facilities, such as speakers, as supporting tools in the implementation of Al-Qur'an recitation therapy.

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### Reference

- Abass, H. T., & Jihad, S. K. (2025). Anxiety, social dysfunction, and coping strategies among mothers of children with cancer. *Bahrain Medical Bulletin*, 47(1). <https://www.bahrainmedicalbulletin.com/general/BMB-24-801.pdf>
- Alghamdi, S. ; Alqurashi, A. ; Almarbae, N. ; Fadul, Y. ; Alharbi, M. ; & Bashammakh, R. (2023). Experience of parents with children undergoing chemotherapy. *SAGE*. <https://doi.org/10.1177/23779608231207233>
- Andriastuti, M. (2023). Peran Pelayanan Paliatif dan Suportif pada Pasien Kanker Anak. *Sari Pediatri*, 25(4), 278–282. <http://dx.doi.org/10.14238/sp25.4.2023.278-82>
- Asrul, A. (2023). Efektivitas Terapi Murottal Al-Quran Terhadap Kecemasan Pasien Pre Operasi. *Jurnal Ilmiah Kesehatan Sandi Husada*, 12. <https://doi.org/10.35816/jiskh.v12i1.913>
- Coats, H. , Bourget, E. , Starks, H. , Lindhorst, T. , Saiki-Craighill, S. , Curtis, J. R. , & Doorenbos, A. (2018). Nurses' reflections on benefits and challenges of implementing family-centered care in pediatric intensive care units. *American Journal of Critical Care*, 27(1), 52–58. <https://doi.org/10.4037/ajcc2018353>
- Deribe, L. , Girma, E. , Lindström, N. , Gidey, A. , Teferra, S. , & Addissie, A. (2024). Association of family-centered care with psychological distress among caregivers of children with cancer

- at a tertiary-level hospital in Ethiopia: Cross-sectional study. *JMIR Cancer*, 10(1). <https://doi.org/10.2196/54715>
- Fatihah, Hariyati, R. T. S. , & Rusdiyansyah. (2022). Optimalisasi pendidikan keperawatan berkelanjutan melalui implementasi diskusi refleksi kasus (DRK). *Jurnal Keperawatan Silampari*, 5(2), 878–886. <https://doi.org/10.31539/jks.v5i2.3513>
- Gerliandi, G. B. , Maniatunufus, Pratiwi, R. D. N. , Agustina, & Habsyah S. (2021). Intervensi Non Farmakologis untuk Mengurangi Kecemasan pada Mahasiswa: Sebuah Narrative Review. *Jurnal Keperawatan BSI*, 9(2), 234–245. <https://ejournal.ars.ac.id/index.php/keperawatan/article/view/624>
- Hernawaty, T. , Ramdhani, R. I. , & Solehati, T. (2015). *Gambaran tingkat kecemasan pasien kanker serviks di RSUP Dr. Hasan Sadikin Bandung*. <https://pustaka.unpad.ac.id/archives/147235>
- Humaira, A. N. K., Nasution, T. H., & Rahmayanti, D. (2024). *Perbandingan Pemberian Terapi Murottal dengan Terapi Musik Suara Alam Terhadap Tingkat Kecemasan Keluarga Pasien*. 12(2), 156–166. <https://doi.org/10.20527/dk.v12i2.236>
- IARC marks International Childhood Cancer Day 2025. (n.d.). <https://www.iarc.who.int/news-events/iarc-marks-international-childhood-cancer-day-2025/>
- Kasanah, A. Al, Putri, M. A., & Diliaana, Y. F. (2023). Penerapan terapi murottal Al-Qur'an untuk menurunkan kecemasan pada pasien pre operasi. *Natural: Jurnal Pelaksanaan Pengabdian Bergerak Bersama Masyarakat*, 3(1), 100–105. <https://doi.org/10.61132/natural.v3i1.975>
- Khotimah, K. , Wijayanti, F. , & Devi, N. (2024). Penerapan Family Centered Care terhadap kecemasan pasien hospitalisasi pada anak. *Health Sciences and Pharmacy Journal*, 8(2), 96–103. <https://doi.org/10.32504/hspj.v8i2.1126>
- Kurz, H., Paul, V., Nasse, M. L., Krauth, K. A., Kandels, D., Rutkowski, S., & Bergelt, C. (2025). Beyond treatment: prevalence, predictors, and changes in anxiety and depression among parents of childhood cancer survivors. *Psycho-Oncology*, 34(3). <https://doi.org/10.1002/pon.70115>
- Lewandowska, A. , Lewandowski, T. , Bartosiewicz, A. , Papp, K. , Zrubcová, D. , Šupínová, M. , . . . , & Apay, S. E. (2024). *Prevalence of anxiety and depression among parents of children with cancer*. 11(10). <https://doi.org/10.3390/children11101227>
- Mariati, Hindriyastuti, S. , & Winarsih, B. D. (2022). Gambaran Tingkat Kecemasan Keluarga Pasien yang di Rawat di ICU Rumah Sakit Mardi Rahayu Kudus. *Journal of TSCS1Kep*, 7(1). <https://doi.org/10.35720/tscs1kep.v7i01.326>
- Mariyana, R., Allenidekania, & Nurhaeni, N. (2018). Respon emosional orang tua dalam merawat anak dengan kanker dalam kondisi perawatan paliatif. *Jurnal Keperawatan*, 14(2), 54–62. <https://doi.org/10.25077/njk.v14i2.13>
- Maulinda, D. , Adelia, G. , & Kharisna, D. (2022). Latihan Fisik (Senam) sebagai Terapi Komplementer dan Modalitas dalam Mengatasi Kelelahan pada Anak Kanker. *Journal of Public Health Concerns*, 2(2), 96–100. <https://doi.org/10.56922/phc.v2i2.206>
- Mirsane, S. A. , Kheirkhah, D. , Shafagh, S. , Ajorpaz, N. M. , & Aminpour, J. (2016). *The Effect Of Listening To Vaghe'a Surah and Its Translation On The State And Trait Anxiety Before General Surgeries: a Randomized Controlled Clinical Trial*. 3(3), 12–17. <https://doaj.org/article/8f4919aa6cdb4300bfc7979f60a706ee>
- Permadi, F. , S. A. , & Y. D. T. (2024). The Effect of Murottal Therapy on Reducing Anxiety in Pre-Operative Patients Undergoing Spinal Anesthesia. *Development Nursing Research*, 1(1), 33–37. <https://orcid.org/0000-0001-9111-211X>
- Prasetya, C. H. (2015). Efektifitas pendidikan kesehatan terhadap peningkatan pengetahuan keluarga tentang hipertensi. *Mutiara Medika: Jurnal Kedokteran Dan Kesehatan*, 15(1), 67–74. <https://doi.org/10.18196/mmjkk.v15i1.2496>
- Pratiwi, C. J. , & Ningsih, A. D. (2022). Instrumen State-Trait Anxiety Inventory–Trait (STAI-T) Mengukur Kecemasan Pada Pasien Kemoterapi. *MAHESA: Malahayati Health Student Journal*, 2(4), 827–837. <https://repository.stikes-ppni.ac.id/handle/123456789/3230>

- Pyke-Grimm, K. A., Fisher, B., Haskamp, A., Bell, C. J., & Newman, A. R. (2021). Providing palliative and hospice care to children, adolescents, and young adults with cancer. *Seminars in Oncology Nursing*, 37(3), 151-156. <https://doi.org/10.1016/j.soncn.2021.151166>
- Rizkyani, S. , & Lestaria, D. (2024). Pengaruh Terapi Musik Klasik Mozart Dalam Mengurangi Tingkat Kecemasan Pada Pasien Rawat Inap Di Rumah Sakit Marinir Cilandak. *Mayapada Nursing Journal*, 1(2), 64-71. <https://jurnal.stikesmayapada.ac.id/index.php/MNJ/article/view/7>
- Rusnah. (2024). *Gambaran Tingkat Kecemasan Pada Anak Penderita Kanker Selama Proses Kemoterapi Di RSUP DR Wahidin Sudirohusodo Makassar*. <http://repository.unhas.ac.id:443/id/eprint/34509>
- Sapeni, M. A. A. R. S., & Juwita, H. J. (2022). Pengalaman Orangtua Dan Hasil Family Centered Care (Fcc) Pada Anak Yang Dirawat Di Rumah Sakit: Literature Review. *Jurnal Mitra Kesehatan*, 5(1), 33-40. <https://doi.org/10.47522/jmk.v5i1.163>
- Sulistiyowati, Y., & Hasibuan, M. T. D. (2021). Pengaruh Terapi Relaksasi Audio Murottal Al-Qur'an Terhadap Perubahan Tingkat Kecemasan Pada Pasien Yang Di Rawat Di Ruangan Icu Rumah Sakit Aminah. . *Indonesian Trust Health Journal*, 4(2), 487-490. <https://doi.org/10.37104/ithj.v4i2.82>
- Taufiq, A. R. (2019). Penerapan standar operasional prosedur (SOP) dan akuntabilitas kinerja Rumah Sakit. *Profita: Komunikasi Ilmiah Dan Perpajakan*, 12(1), 56-66. <https://doi.org/10.22441/profita.2019.v12.01.005>
- Utami, A. (2019). *Perbedaan Tingkat Kecemasan Dan Depresi Pada Mahasiswa Yang Tinggal Bersama Orang Tua Dengan Yang Tinggal Sendiri*.
- Vaarwerk, B. , Limperg, P. F. , Naafs-Wilstra, M. C. , Merks, J. H. M. , & Grootenhuis, M. A. (2019). *Getting control during follow-up visits: the views and experiences of parents on tumor surveillance after their children have completed therapy for rhabdomyosarcoma or Ewing sarcoma*. 27, 3841-3848. <https://doi.org/10.1007/s00520-019-04678-4>
- Wiener, L. , Battles, H. , Zadeh, S. , Pelletier, W. , Arruda-Colli, M. , & Muriel, A. C. (2017). *The perceived influence of childhood cancer on the parents' relationship*. 26(12), 2109-2117. <https://doi.org/10.1002/pon.4313>