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Original Research/Systematic Review

The Effect of Religious Instrumental Music Therapy on Anxiety in Breast Cancer Patients

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ABSTRACT

Background: *Anxiety is a vague and uneasy feeling caused by discomfort or fear accompanied by a response. Anxiety in breast cancer patients is a psychological disorder due to facing uncertainty, worries about the effects of cancer treatment, and fear of disease progression which may lead to death. This study aimed to determine the effect of instrumental music therapy on anxiety levels in breast cancer (ca mamae) patients undergoing chemotherapy at Dr. M. Djamil Hospital, Padang*

Methods: *This research used a pre-experimental design with a one-group pre-test post-test design. Anxiety levels were measured using the HARS questionnaire. Samples were selected using a purposive sampling technique, and data were analyzed using the T-test.*

Results: *The results showed that the average anxiety score before the intervention was 26.79, and after the intervention, it was 19.07. There was a significant difference in anxiety scores before and after the intervention with a p-value = 0.000 (p < 0.05), indicating a significant effect of the intervention.*

Conclusion: *In conclusion, instrumental music therapy had an effect on reducing anxiety in breast cancer patients undergoing chemotherapy. It is recommended that nurses in chemotherapy wards consider instrumental music therapy as a non-pharmacological intervention to help reduce anxiety levels in patients undergoing chemotherapy*

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INTRODUCTION

Anxiety is a vague and uneasy feeling caused by discomfort or fear accompanied by a response (the source is often unspecified or unknown to the individual), with a sense of fear that something bad may happen due to anticipation of danger or threat (Stuart, 2014). Anxiety in breast cancer patients is a psychological disorder caused by the uncertainty they face, concerns about the side effects of cancer treatment, and fear of cancer progression which may result in death. In certain situations, they may experience anger, fear, sadness, depression, and mood changes. Anxiety disorders are common and frequently occur in chronic conditions, marked by a lack of interest, mood changes, and continuous loss of pleasure and motivation. Therefore, appropriate interventions are needed to address anxiety (Roddis et al., 2020; Nurlina et al., 2021).

Therapies to reduce anxiety in breast cancer patients can include pharmacological and non-pharmacological treatments. Pharmacological therapy involves the use of medications such as antidepressants and anti-anxiety drugs (Vildayanti et al., 2018). Non-pharmacological therapy refers to treatment methods that do not involve medication, such as mind-body techniques to relax the body, including meditation, guided imagery, music therapy, humor, laughter, and aromatherapy. These non-pharmacological methods are generally safe, readily available, and can be practiced at home or in various environments, including acute care settings (Fajri et al., 2022).

Music therapy is a type of non-pharmacological therapy that has a significant impact on the central and nervous systems of the human body. Music acts as an anxiolytic agent that can help divert feelings of stress, anxiety, fear, and fatigue by inducing relaxation. Music contains three main components that influence the body, mind, and spirit: beat, rhythm, and harmony. Music therapy can express emotions, positively influence mood and feelings, and help reduce anxiety levels (Martini et al., 2022).

Religious music therapy can be used as a healing aid for patients (Al-Jubouri et al,2021). Moreover, religious music can help people realize the preciousness of life and how limited our time in this world truly is. This awareness can motivate individuals to strengthen their spiritual connection with the Creator and inspire hope and healing. Based on the phenomenon described above and previous studies, the researcher is interested in conducting a study entitled “The Effect of Religious Instrumental Music Therapy on Reducing Anxiety in Patients Undergoing Chemotherapy.”

MATERIALS AND METHOD

This study used a One-Group Pre-Test and Post-Test Design, which is a type of intervention research comparing anxiety levels before (pre-test) and after (post-test) the therapy was administered. The study was conducted in the women’s chemotherapy ward at Dr. M. Djamil General Hospital, Padang, from September 2023 to May 2024. Participant identity and baseline data were collected using the HARS (Hamilton Anxiety Rating Scale) questionnaire, which was distributed to patients prior to chemotherapy. Afterward, music therapy was administered, followed by a second HARS questionnaire to assess post-intervention anxiety levels.

Data were analyzed using univariate analysis to observe the frequency distribution of sample characteristics and anxiety levels. The anxiety scores before and after receiving religious instrumental piano music therapy were compared. Bivariate analysis was conducted to determine the effect of religious music therapy on anxiety levels in breast cancer (ca mamae) patients undergoing chemotherapy. If the data were normally distributed, a paired t-test was used; otherwise, the Wilcoxon test was applied.

RESULTS

Table 1. Frequency distribution of respondent characteristics based on education, occupation, marital status, and chemotherapy history:

Variabel	f	%
Age		
40-45 years	3	21.4
46-50 years	5	35.7
51-55 years	3	21.4
56-60 years	2	7.1
66-70 years	1	14.3
Education		
Elementary School	4	28.6
Junior High School	1	7.1
Senior High School	5	35.7
College/University	4	28.6
Occupation		
Employed	3	21.4
Unemployed	11	78.6
Marital status		
Married	12	85.7
Unmarried	2	14.3
Chemotherapy Stage		
First session	8	57.1
Second session	6	42.9

Based on the table above, the largest age group of breast cancer patients was 46–50 years (35.7%). Most had completed senior high school (35.7%), and the majority were unemployed (78.6%). Most were married (85.7%), and over half (57.1%) were undergoing their first chemotherapy session.

Table 2. Average Anxiety Score of Breast Cancer Patients Before and After Intervention at Dr. M. Djamil Hospital, Padang (2024)

Anxiety Level	Mean	SD	95% CI	Shapiro-Wilk
Before	28.86	5.021	25.96 – 31.76	0.646
After	19.07	3.269	17.18 – 20.96	0.119
Difference	9.79	1.752	8.78 – 10.8	0.527

Based on Table 2, the average anxiety score before music therapy was 28.86 (95% CI: 25.96–31.76) with a standard deviation of 5.021. After music therapy, the average score was 19.07 (95% CI: 17.18–20.96). The Shapiro-Wilk test indicated normal distribution of data both before and after the intervention (p-value > 0.05).

DISCUSSION

Average anxiety level of breast cancer patients undergoing chemotherapy before receiving religious instrumental music therapy

The results showed that the average anxiety score of breast cancer (ca mamae) patients undergoing chemotherapy before receiving instrumental music therapy was 28.86. Based on measurements taken before the intervention, 4 participants (28.6%) had moderate anxiety, 9 participants (64.3%) had severe anxiety, and 1 participant (7.1%) had mild anxiety. This was evident from patients' tense facial expressions, increased heart rate and respiration, sweaty palms, and restlessness. Anxiety is a subjective feeling

experienced by almost all patients before or after chemotherapy, and its severity may differ from one individual to another.

Average anxiety level after receiving religious instrumental music therapy

The results revealed that the average post-intervention anxiety score was 19.07. After the intervention, 4 patients (28.6%) had moderate anxiety and 10 patients (71.4%) had mild anxiety. This suggests that anxiety levels decreased after the therapy. These findings are consistent with Laely (2016), who reported an average anxiety score of 36.33 in breast cancer patients undergoing hemodialysis, indicating that anxiety can be reduced following appropriate interventions.

The effect of instrumental music therapy on anxiety in breast cancer patients undergoing chemotherapy at Dr. M. Djamil Hospital Padang

Based on Table 2, the p-value obtained was 0.000, indicating a significant effect of instrumental music therapy on anxiety levels in breast cancer patients undergoing chemotherapy at Dr. M. Djamil Hospital Padang. This is in line with a study by Bethari Pradnya Paramita et al. (2016), which found a significant reduction in anxiety levels among patients undergoing cesarean section surgery after receiving music therapy, with a p-value of 0.000 ($p < 0.05$).

Music therapy works by delivering sound through auditory nerves, converting it into vibrations transmitted to the brain through the limbic system. In the limbic system (specifically the amygdala and hypothalamus), the stimulation affects the autonomic nervous system and the endocrine system by reducing stress- and anxiety-related hormones, while activating endorphins to promote relaxation (Ince, M., & Genç, H, 2023).

The autonomic nervous system is divided into the sympathetic and parasympathetic nervous systems. The sympathetic system becomes more active during stress, increasing heart rate, blood pressure, and respiratory rate. In contrast, the parasympathetic system is dominant during relaxed states (Kim, M., & Lee, H, 2021). Music therapy acts as a facilitator that helps the body relax and promotes parasympathetic dominance (Thaut, M. H., McIntosh, G. C., & Rice, R. R, 2015). Listening to music makes individuals feel calmer and more comfortable, greatly influencing anxiety levels when facing stressful situations. Music therapy can be tailored to address various concerns and is useful for pain management, stress, and anxiety (Samrika Bareh, 2017).

The effectiveness of music therapy in reducing anxiety in breast cancer patients undergoing chemotherapy is due to music's profound influence on human life, both individually and collectively. Hidayat (2020) explains that music has a comprehensive role across all stages of life—young or old—impacting psychological, physiological, and spiritual dimensions. Music interventions can provide comforting stimulation, evoke pleasant sensations, and help individuals focus on the music. To ensure the success of music therapy, it is important to assess patients beforehand, including how often they listen to music, their music preferences, and their reasons for listening to particular types of music (Henry, L., & Viega, M, 2023, April 6).

Despite its advantages, music therapy has limitations. It may not be effective for all breast cancer patients, particularly those with hearing impairments. Additionally, a noisy environment may interfere with the therapy. In this study, the therapy was administered only once for 30 minutes, which may not have been sufficient to produce effective results for all respondents. Moreover, as individuals age, their ability to focus may decline, potentially reducing the effectiveness of the intervention.

CONCLUSION

The average anxiety score of patients undergoing chemotherapy before the administration of instrumental music therapy at Dr. M. Djamil Hospital Padang was 28.86. After the intervention, the average anxiety score of breast cancer patients was 19.07. There was a significant difference in the anxiety scores before and after the intervention, with a p-value of 0.000 ($p < 0.05$), indicating that instrumental music therapy had a significant effect on reducing anxiety in breast cancer patients undergoing chemotherapy. In conclusion, instrumental music therapy had an effect on reducing anxiety in breast cancer patients undergoing chemotherapy.

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REFERENCES

Al-Jubouri, M., Isam, S., Hussein, S., & Machuca-Contreras, F. (2021). Recitation of Qur'an and music to reduce chemotherapy-induced anxiety among adult patients with cancer: A clinical trial. *Nursing Open, 8*(4), 1606–1614. https://doi.org/10.1002/nop2.781

Bareh, S., & D'silva, F. (2017). Effect of music therapy on pain and quality of life among cancer survivors. *Journal of Health and Allied Sciences NU, 7*(3), 25–29. https://doi.org/10.1055/s-0040-1708720

Fajri, I., Nurhamsyah, D., Mudrikah, K. A., & Aisyah, S. (2022). Terapi NonFarmakologi Dalam Mengurangi Tingkat Nyeri Pada Pasien Kanker Payudara stadium 2-4: Literature Review. Jurnal Ilmiah Keperawatan Indonesia, 5(2), 106-120

Henry, L., & Viega, M. (2023, April 6). *Reducing stress with music can be as simple as listening to what you love*. Verywell Health. https://www.verywellhealth.com/how-music-relieves-stress-5198432

Hidayat, A., Anisa Fajar, Sri Enawati, Siti Sarifah, & Yuli Widyastuti. (2022). *Penerapan music movement therapy terhadap kemampuan aktivitas harian pada pasien stroke*. Jurnal Kesehatan Dan Kedokteran, 1(2), 81–87. https://doi.org/10.56127/jukeke.v1i2.928

Ince, M., & Genç, H. (2023). *Physiology of music: How music affects the limbic, autonomic, and neuroendocrine systems*. In *Music and Its Healing Effects*. IntechOpen. https://doi.org/10.5772/intechopen.110123

Kim, M., & Lee, H. (2021). Mechanisms of music impact: autonomic tone and the physical effects of music. *Frontiers in Psychology, 12*, Article 727231.

Laely, N. (2016). Pengaruh terapi musik instrumental terhadap tingkat kecemasan pada pasien kanker payudara yang menjalani hemodialisa di RSUD Dr. Moewardi Surakarta. *Jurnal Kesehatan, 7*(2), 105–112.

Martini, M., Arifin, L. N., & Hadi, M. S. (2022). The effect of music therapy on anxiety levels in cancer patients undergoing chemotherapy: A literature review. *Jurnal Keperawatan Soedirman*, *17*(2), 123–131. https://doi.org/10.20884/1.jks.2022.17.2.5325

Nurlina., Syam, Y., Saleh, A. (2021). Terapi Musik Efektif Terhadap Penurunan Kecemasan Pada Pasien Kanker. Jurnal Keperawatan Silampari, 4(2), 634- 642

Paramita, B. P., Kristiawati, R., & Haryanti. (2016). Pengaruh terapi musik terhadap penurunan tingkat kecemasan pada ibu post operasi seksio sesarea di Ruang Bougenville RSUD Dr. Moewardi Surakarta. *Jurnal Kebidanan dan Keperawatan Aisyiyah (JKKA)*, *12*(2), 123–130. https://doi.org/10.31101/jkka.v12i2.1234

Roddis, J. K., Holloway, I., Bond, C., Galvin, K., & Griffiths, P. (2020). Living with breast cancer: A meta-synthesis of qualitative literature. *Psycho-Oncology*, *29*(3), 468–481. https://doi.org/10.1002/pon.5304

Stuart, G. W. (2014). *Principles and practice of psychiatric nursing* (10th ed.). Elsevier Mosby.

Thaut, M. H., McIntosh, G. C., & Rice, R. R. (2015). Can music influence autonomic nervous system function? A systematic review. *Progress in Brain Research*, *217*, 211–232.

Vildayanti,H. dkk. 2018. REVIEW: FARMAKOTERAPI GANGGUAN ANXIETAS. Farmaka.Vol 1 No 16 : 196-214