



Combination of Music Therapy and Murottal Therapy on Pain Level of Breast Cancer Patients

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ABSTRACT

Cancer causes complaints of pain. Pain is caused by cancer cell metastases, treatment, or both. Pain management can be done using a non-pharmacological approach including music therapy and murottal therapy. The purpose of this study was to determine the effect of a combination of music therapy and murottal therapy on the pain level of breast cancer patients at dr. H. Moh. Anwar Sumenep. This type of research is quantitative with a quasy experimental design and a pre-test post-test control group design approach. A total of 54 respondents were divided into treatment and control groups using purposive sampling technique. The measurement tool used is the McGill Pain Questionnaire (MPQ). Data were analyzed by univariate and bivariate analysis using the Wilcoxon test. The results showed that there was an effect of a combination of music therapy and murottal therapy on the pain level of breast cancer patients (p value = 0.000). The combination of music therapy and murottal therapy has more points, namely beautiful tones and rhythms that are psychologically motivating and uplifting to deal with the problems at hand. The results of this study are expected to be a reference in using complementary therapies to reduce pain in breast cancer patients

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ABSTRAK

Penyakit kanker menimbulkan beberapa keluhan diantaranya yaitu nyeri. Nyeri diakibatkan oleh metastase sel kanker, pengobatan, ataupun keduanya. Penanganan nyeri dapat dilakukan menggunakan pendekatan non farmakologi diantaranya yaitu terapi musik dan terapi murottal. Tujuan penelitian ini yaitu untuk mengetahui pengaruh kombinasi terapi musik dan terapi murottal terhadap tingkat nyeri pasien kanker payudara di RSUD dr. H. Moh. Anwar Sumenep. Jenis penelitian yaitu kuantitatif dengan desain quasy eksperimental dan pendekatan pre-test post-test control group design. Sebanyak 54 responden dibagi menjadi kelompok perlakuan dan kontrol menggunakan teknik purposive sampling. Alat ukur yang digunakan yaitu McGill Pain Questionnaire (MPQ). Data dianalisis dengan analisis univariat dan bivariat menggunakan uji wilcoxon. Hasil penelitian menunjukkan bahwa ada pengaruh kombinasi terapi musik dan terapi murottal terhadap tingkat nyeri pasien kanker payudara (p value=0,000). Kombinasi terapi musik dan terapi murottal memiliki poin lebih yaitu nada dan irama yang indah serta secara psikologis mampu memotivasi dan membangkitkan semangat untuk menghadapi masalah yang dihadapi. Hasil penelitian ini diharapkan dapat menjadi referensi dalam menggunakan terapi komplementer untuk mengurangi nyeri pada pasien kanker payudara

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INTRODUCTION

Breast cancer is a cancer that occurs frequently among women worldwide (Akram et al., 2017; Sun et al., 2017). The incidence of breast cancer in 2018 worldwide reached 2.09 million cases (Bray *et al.*, 2018; World Health Organization, 2018), while in 2020 it is estimated to reach 2.3 million cases (11.7%) (Sung *et al.*, 2021). According to the World Health Organization (WHO), the most cases of cancer in 2018 in Indonesia were breast cancer of 58,256 (Azmi et al., 2020; Utami & Muhartati, 2020) and increased in 2020 to reach 68,858 cases (Rokom, 2022). Sumenep Regency is one of the regencies that ranks 12th in the province of East Java with 4,034 cases (East Java Provincial Health Office, 2021). Cancer cases that occur in Sumenep are quite high where in the past year, Sumenep has occupied the top level of the four districts in Madura (Horri, 2021; Supriyatno, 2022).

The treatment that many breast cancer patients undergo is chemotherapy (Setiawan, 2015). One of the side effects of chemotherapy is pain (Fatma et al., 2018), where around 64% of pain is caused by cancer cell metastases, 33% is caused by treatment, and can also be caused by both (Dewi, 2021; Nugroho, 2016). Pain management in cancer patients can be done using a non-pharmacological approach including music therapy and murottal therapy (Dewi, 2021; Kada et al., 2020; Suhanda et al., 2021). Research conducted by Wurjatmiko (2019) found that music therapy was effective in reducing the level of pain and anxiety experienced by cancer patients.

Another therapy that can provide a sense of security and comfort from pain is murottal therapy. Murottal therapy is able to reduce pain by emphasizing Islamic values (Yamlean, 2021). The results of previous studies showed that music and murottal therapy were able to reduce the pain felt by patients. Music therapy can reduce moderate pain to mild pain, while murottal therapy can reduce severe pain to mild pain. This indicates that the effectiveness between the two is different (Suwardi & Rahayu, 2019).

Previous research explained that music therapy and murottal have a separate effect on the pain level of breast cancer patients, but there has been no research on the effect of the combination of music therapy and murottal therapy on the pain level of breast cancer patients. Therefore, researchers investigated the effect of a combination of music therapy and murottal therapy on the pain level of breast cancer patients at Dr. H. Moh. Anwar Sumenep.

METHOD

Characteristics of participants and study design

This type of research is quantitative with a quasi experimental design and a pre-test post-test control group design approach. The variable measured is the dependent variable (pain). The population in this study were adult patients with breast cancer at Dr. H. Moh. Anwar Sumenep. The total population for the last three months was 183 breast cancer patients, of which 36 were inpatients and 147 outpatients consisting of 66 chemotherapy patients and 81 non-chemotherapeutic patients. Sampling was based on the inclusion criteria set by the researcher, namely undergoing chemotherapy, having had a mastectomy, pain scale ≥ 4 before intervention, stage II-IV, and being Muslim.

Sampling procedure and sample size

The sample in this study were breast cancer patients undergoing chemotherapy and having had a mastectomy and experiencing pain. The place of data collection is in the chemotherapy room when the patient is undergoing chemotherapy. Determining the size of the paired sample was calculated using paired numerical comparative and obtained a sample of 24 respondents with a 10% drop out probability so that 27 respondents were obtained. The sampling technique is non-probability sampling with purposive sampling.

Explanation of interim analysis and termination rules

The instrument for measuring pain is using the McGill Pain Questionnaire (MPQ). MPQ has fulfilled the requirements as a valid and reliable questionnaire. Respondents were pre-tested using a pain questionnaire first. If it fits the inclusion criteria then it will be used as a research respondent. The intervention group will be given a combination of music therapy and murottal therapy for about 15 minutes, while the control group will be given music therapy for 15 minutes. After the intervention is given, pain will be measured again using the same instrument.

Data analysis

The statistical test to determine the mean difference in pain levels before and after intervention was given, namely using Wilcoxon with a significance level of $p < 0.05$. All data analysis was performed using SPSS 24 software

RESULTS AND DISCUSSION

Data collection was carried out in September 2022 at the chemotherapy unit of RSUD Dr. H. Moh. Anwar Sumenep with a total of 54 respondents. The characteristics of the respondents are shown in table 1.

Table 1 describes the characteristics of the respondents from the experimental group and the control group. In the experimental group all were women (100%) and most were married (92.6%). The number of children having a median is 2.00 with a minimum-maximum value (0-6). Breast cancer patients are Muslim (100%). The average age of the respondents is 48.70 with a standard deviation of 9.215. The most recent education of breast cancer patients was low education (elementary-junior high school) (48.1%) and most of the respondents were working (70.4%) with income < 1 million (70.4%). Approximately 16 breast cancer patients had early stage cancer, namely stage 2 (59.3%) with no family history (96.3%). All patients underwent treatment, namely surgery and chemotherapy (100%), with a history of chemotherapy treatment having a median of 3.00 with a minimum-maximum value of 1-8.

In the control group, the criteria for breast cancer were the same as in the experimental group. All breast cancer patients are also women (100%) and most are married (92.6%). The median number of children is 2.00 with a minimum maximum value of 0-4. Breast cancer patients are Muslim (100%). The highest average age value is 49.26 with a standard deviation of 8.300. The most recent education of breast cancer patients was low education (elementary-junior high school) (55.6%) and most of the respondents worked (74.1%) with income < 1 million (81.5%). Approximately 16

breast cancer patients had advanced stage cancer (III-IV) (59.3%) with no family history (96.3%). All patients underwent treatment, namely surgery and chemotherapy (100%), with a history of chemotherapy treatment having a median value of 1.00 with a minimum-maximum value of 1-11.

Table 1
Characteristics of Breast Cancer Respondents in the Chemotherapy Unit of RSUD Dr. H. Moh. Anwar Sumenep

Characteristics of Respondents	Category	Experimental group		Control Group	
		n	%	n	%
Gender	female	27	100	27	100
Religion	Islam	27	100	27	100
Education	No school	8	29,6	7	25,9
	Lower education (elementary-junior high school)	13	48,1	15	55,6
	Higher education (senior high school-college)	6	22,2	5	18,5
Profession	Doesn't work	8	29,6	7	25,9
	Working	19	70,4	20	74,1
Income	< 1 million	19	70,4	22	81,5
	≥ 1 million	8	29,6	5	18,5
Marital status	Merried	25	92,6	25	92,6
	Not married	2	7,4	2	7,4
Cancer stage	Early stage (II)	16	59,3	11	40,7
	Advanced stage (III-IV)	11	40,7	16	59,3
Family history	Yes	1	3,7	1	3,7
	No	26	96,3	26	96,3
Treatment	Surgery and Chemotherapy	27	100	27	100
Age	M±SD	48,70	9,215	49,26	8,300
Disease history	Median/ Min-Max	3,00	1-8	1,00	1-11
Number of children	Median/ Min-Max	2,00	0-6	2,00	0-4

n(%)=number of respondents (percentage); M±SD = Mean ± Standard Deviation; Min-Max=Minimum-maximum value

Table 2
Distribution of Pain Domain Data Before and After Given Intervention in the Experiment Group and Control Group in the Chemotherapy Unit of RSUD Dr. H. Moh. Anwar Sumenep

	Experimental Group		Control Group	
	Pre (M±SD)	Post (M±SD)	Pre (M±SD)	Post (M±SD)
Sensory description	18,22 ± 5,221	0,00 ± 0,000	19,04 ± 3,956	5,52 ± 3,203
ffective description	5,00 ± 1,941	0,00 ± 0,000	4,48 ± 2,666	0,56 ± 0,974
evaluative description	2,22 ± 1,121	0,00 ± 0,000	1,96 ± 1,400	0,67 ± 0,555
Miscellaneous description	8,81 ± 2,386	0,00 ± 0,000	8,26 ± 2,347	2,19 ± 1,570
Pain intensity	2,44 ± 0,698	0,000 ± 0,00	2,26 ± 0,447	0,81 ± 0,396

M±SD = Mean ± Standard Deviation

Table 3
Distribution of Pain Quality Data Before and After Given Intervention in the Experiment Group and the Control Group in the Chemotherapy Unit of RSUD Dr. H. Moh. Anwar Sumenep

	Pain rating scale (PRI)			
	Pre-Intervention		Post-Intervention	
	Median	Min-Max	Median	Min-Max
Experimental Group	32,00	26-49	0,00	0-0
Control Group	31,00	26-56	10,00	0-18

M±SD = Mean ± Standard Deviation

Pain measured using the McGill Pain Questionnaire consists of several domains, namely sensory, affective, evaluative, miscellaneous/mixed descriptions, and there is also an assessment of pain intensity. The highest average value in the experimental group before being given the intervention was in the sensory description domain (18.22) with a standard deviation value of 5.221 and the lowest value was in the evaluative description (2.22) with a

standard deviation of 1.121. The average value of the patient's pain intensity is 2.44 with a standard deviation of 0.698. After being given the intervention of a combination of music therapy and murottal therapy, all pain domains and also pain intensity decreased, where the average value was 0.00 with a standard deviation of 0.000.

In the control group, the highest average value before being given the intervention also occurred in the sensory

domain (19.04) with a standard deviation of 3.956 and the lowest average value, namely the evaluative domain (1.96) with a standard deviation of 1.400. The average value of pain intensity is 2.26 with a standard deviation of 0.447. After the intervention was given, all domains and pain intensity decreased, where the highest decrease occurred in the sensory domain (5.52) with a standard deviation of 3.203 and the lowest decrease occurred in the evaluative domain (0.67) with a standard deviation of 0.555. The average value of pain intensity is 0.81 with a standard deviation of 0.396.

The quality of pain (Pain rating Index) before being given intervention in the experimental group had a median value of 32.00 with a minimum-maximum value of 26-49 and after being given intervention the median value was 0.00 with a minimum maximum standard of 0-0. Likewise in the control group, the median value before being given the intervention was 31.00 with a minimum-maximum value of 26-56 and after being given the intervention the pain level decreased with a median value of 10.00 and a minimum-maximum value of 0-18. This also shows a decrease in the quality of pain before and after intervention in both the experimental group and the control group.

Based on the Chi-Square and Fisher's Exact tests in table 4, it was found that the significance value for the characteristics of all respondents was > 0.05. This means that the intervention group and the control group are homogeneous based on education, occupation, income, marital status, cancer stage, and family history. In addition, all respondents in the intervention and control groups were female (100%), Muslim (100%), and underwent surgery and chemotherapy (100%). Therefore, data in the intervention

and control groups were also found to be homogeneous based on gender, religion, and treatment.

Based on the Shapiro-Wilk test in table 5, it was found that the significance value for the characteristics of the age respondents in both the experimental and control groups was >0.05, while the history of the disease and the number of children had a significance value of <0.05. This means that the age data is normally distributed, and the disease history data and the number of children are not normally distributed. Therefore, age data can be continued for homogeneity tests. The results of the oneway ANOVA test obtained a significance value of 0.268 (p>0.05), meaning that the age data was homogeneous. The experimental group and the control group have homogeneous data based on age data.

Table 4
Homogeneity Test on the Characteristics of Breast Cancer Respondents in the Chemotherapy Unit of RSUD Dr. H. Moh. Anwar Sumenep

Characteristics of Respondents	Homogeneity Test	Interpretation
Education	0,861*	Homogeneous
Profession	0,761*	Homogeneous
Income	0,340*	Homogeneous
Marital status	1,000**	Homogeneous
Cancer stage	0,174*	Homogeneous
Family history	1,000**	Homogeneous

* = Chi-Square Test; ** = Fisher's Exact Test

Table 5
Test for Normality and Homogeneity of Respondent Characteristics of Breast Cancer in the Chemotherapy Unit of RSUD Dr. H. Moh. Anwar Sumenep

Characteristics of Respondents	Shapiro Wilk's test		Homogeneity Test (Oneway ANOVA)
	Experimental Group	Control Group	
Age	0,752	0,394	0,268
Disease history	0,023	0,000	-
Number of children	0,017	0,008	-

Table 6
Normality Test of Research Data Before and After Given Intervention in the Experiment Group and Control Group in the Chemotherapy Unit of RSUD Dr. H. Moh. Anwar Sumenep

Variable	Experimental Group	Evaluation	Control Group	Evaluation
	Sig		Sig	
Pre-Intervention Pain Rating Index	0,002	Abnormal	0,001	Abnormal
Post-Intervention Pain Rating Index	-	-	0,013	Abnormal

Table 7
Wilcoxon test results Pain Levels Before and After Given Music Therapy in the Control Group

		N	Mean Rank	Sum of Rank	Asymp.Sig (2-tailed)
		Pain rating index pre-post intervention	Negative Ranks	27	
Positive Ranks	0		0,00	0,00	
Ties	0				

Berdasarkan uji *Shapiro Wilk Test* pada tabel 6 didapatkan bahwa nilai signifikansi pada kedua kelompok

sebelum dan setelah diberikan intervensi <0,05. Artinya data penelitian tidak berdistribusi normal. Oleh karena itu, uji

yang digunakan yaitu uji *Wilcoxon* untuk mengetahui pengaruh intervensi terhadap tingkat nyeri pasien kanker payudara, sedangkan untuk mengetahui perbedaan tingkat nyeri sesudah diberikan intervensi pada kelompok kontrol dan kelompok eksperimen bisa menggunakan uji *Mann-Whitney*.

The results of the statistical test analysis showed that there were differences in pain levels before and after the intervention was given with a value of $p = 0.000$ ($p < 0.05$). This shows that there is an effect of music therapy on the pain level of breast cancer patients. The results of this study are in accordance with previous studies, where the pain scale of breast cancer patients undergoing chemotherapy before and after being given music therapy showed a change. There was a decrease in the pain scale before and after the intervention. Before being given the intervention, most of the respondents experienced moderate pain (63.2%) and after being given the music intervention, most of the respondents experienced mild pain (68.4) (Purnamasari et al., 2016).

In this study, the music used is instrumental music. Instrumental music therapy has a relaxing effect that treats, relieves, and is able to heal pain. This is because instrumental music has a balanced tempo and harmonization of tones (Utami, 2014 dalam Suhartiningsih et al., 2021). Instrumental music therapy is able to reduce pain by providing a stimulus to the descending control system resulting in at least pain stimulus being conveyed to the brain. Instrumental music provides an analgesic effect which can function to relieve complaints of pain (Suhartiningsih et al., 2021).

The results of another study found that there were differences in pain levels in the experimental group before and after being given music therapy ($p < 0.05$). This indicates that music therapy is effective for reducing pain in cancer patients (Bareh & D’Silva, 2017). Music has the effect of relaxation, distraction, endorphin release, and also familiarity. The relaxation effect is a calming effect. The effect of distraction is the ability of music therapy to divert the patient's attention from pain. The endorphin release effect is the ability of music therapy to stimulate the brain to release endorphins, and the familiarity effect is an effect that gives a feeling of comfort. Research conducted by Hertanti et al (2015) proved that music therapy is effective for reducing pain in cancer patients.

Researchers assume that giving music therapy to breast cancer patients undergoing chemotherapy has a positive effect on perceived pain. After giving music therapy, the level of pain felt by the patient has decreased. Soft music makes patients feel more comfortable, calm and able to distract from the pain they feel. This is because music stimulates the brain to release endorphins, where the endorphins function as natural analgesics to reduce pain.

In the control group, the highest average score before the intervention was given was in the sensory domain (19.04) with a standard deviation of 3.956 and the lowest average

value was the evaluative domain (1.96) with a standard deviation of 1.400. After the intervention was given, all domains and pain intensity decreased, where the highest decrease occurred in the sensory domain (5.52) with a standard deviation of 3.203 and the lowest decrease occurred in the evaluative domain (0.67) with a standard deviation of 0.555. The quality of pain that is often experienced by breast cancer patients is sensory and affective pain. Sensory pain such as throbbing, stabbing, hot, tender, sharp, etc., while affective pain is described as tiring, sickening, punishing, and cruel. The sensory domain describes neuropathic pain. All of these pain domains help determine the characteristics of pain experienced by cancer patients and help provide suggestions regarding treatments that can be done to overcome any symptoms. Affective pain serves to assess the emotional and pain felt by the patient and is able to provide advice regarding treatments related to psychology (Fukui et al., 2021; Rett et al., 2022).

Pain is one of the symptoms that appears when patients are undergoing chemotherapy. Music therapy is one of the nursing actions that provides positive value because it can increase physical, emotional, and social well-being, increase patient confidence, reduce stress levels, isolation, nausea, anxiety, pain, and increase comfort (Bilgiç & Acaroğlu, 2016). Kolcaba developed a concept that discusses comfort, where this theory is known as the theory of comfort or the theory of comfort (Parks et al., 2017; Puchi et al., 2018). The comfort needed by a person includes physical, psycho-spiritual, social, and environmental comfort. Physical comfort needed in cancer patients is to reduce the pain felt, while psychospiritual comfort is obtained when the patient has achieved harmony of heart and peace of mind. Socio comfort is obtained if the patient has good relationships with family, community, and also interpersonal relationships, and environmental comfort is obtained if the environment around the patient supports his health (Ngatmi et al., 2019).

Kolcaba introduced music therapy in his theory which is called the theory of comfort, where the need for comfort can be handled using non-pharmacological therapy, namely music therapy (Wurjatmiko, 2019). Music therapy has no side effects and can be applied together with other clinical interventions (Valero-Cantero et al., 2020). The American Society of Clinical suggests that music therapy can be used as a treatment to reduce pain or soreness in cancer patients (Kocot-Kępska et al., 2021). The use of music therapy requires only a small fee. Cancer patients who listen to music will experience benefits such as releasing themselves from worries about the disease and treatment they are experiencing, evoking pleasant memories and images, causing feelings of happiness and relaxation. Music therapy has been shown to be able to reduce psychological burden and improve the well-being of cancer patients during hospitalization (Toccafondi et al., 2018).

Table 8
Results of the Wilcoxon test Pain Levels Before and After Given a Combination of Music Therapy and Murottal Therapy in the Experimental Group at the Chemotherapy Unit of RSUD Dr. H. Moh. Anwar Sumenep

		N	Mean Rank	Sum of Rank	Asymp.Sig (2-tailed)
Pain rating index pre-post intervention	Negative Ranks	27	14,00	378,00	0,000
	Positive Ranks	0	0,00	0,00	
	Ties	0			

The results of the statistical test analysis showed that there were differences in pain levels before and after the intervention was given with a value of $p = 0.000$ ($p < 0.05$). This shows that there is an effect of a combination of music therapy and murottal therapy on the pain level of breast cancer patients. No previous research has discussed the effect of a combination of music therapy and murottal therapy on pain levels in breast cancer patients. Previous research that has been conducted discusses the combination of listening to music and listening to murottal to reduce postpartum depression (Sumaningsih et al., 2022) and anxiety in third trimester pregnant women (Sumaningsih et al., 2019).

The results of previous research explain that the combination of music and murottal makes the soul calmer because respondents become more grateful and surrender to the creator (Sumaningsih et al., 2019). This is because music therapy is universal and easily accepted by the ear because music has a calm rhythm, very soft strains that create a feeling of relaxation, calm and reduce tension, as well as murottal therapy makes a person more calm, relaxed, optimistic, able to think positively, be sincere, and surrender to whatever will happen (Suwanti et al., 2022). The researcher assumed that the combination of music therapy and murottal therapy had a positive effect on respondents regarding the pain they felt. This is because the combination of music therapy and murottal therapy makes respondents closer to Allah SWT so they feel calmer, able to think positively, able to accept their condition, reduce the pain they feel, be sincere and surrender to what will happen in the future.

Music therapy has often been used as an intervention in nursing practice to reduce aches or pains, anxiety, and increase comfort (Rustam et al., 2018). The comfort theory was developed by Kolcaba, in whose theory Kolcaba introduced music therapy as an intervention to gain a sense of comfort (Puchi et al., 2018; Wurjatmiko, 2019). One type of music therapy that has a positive effect on those who listen to it is murottal Al-Qur'an therapy (Ricky & Maru, 2019). Giving Al-Qur'an murottal therapy is able to provide comfort so that it can reduce the pain felt (Nurhayati & Nurjanah, 2020). Therefore, researchers assume that giving a combination of music therapy and murottal therapy can provide comfort so that it can reduce the pain felt by breast cancer patients undergoing chemotherapy.

The highest average pain score in the experimental group before the intervention was given was in the sensory description domain (18.22) with a standard deviation value of 5.221 and the lowest value was in the evaluative description (2.22) with a standard deviation of 1.121. After being given the intervention of a combination of music therapy and murottal therapy, all pain domains decreased, where the average pain value was 0.00 with a standard deviation of 0.000. The quality of pain that is often experienced by breast cancer patients is sensory and affective pain. Sensory pain such as throbbing, stabbing, hot, tender, sharp, etc., whereas affective pain is described as tiring, sickening, punishing, and cruel (Fukui et al., 2021; Rett et al., 2022).

The combination of music therapy and murottal therapy has more points, namely beautiful tones and rhythms that are psychologically motivating and uplifting to deal with the problems at hand. If the individual has finished listening to a combination of music therapy and murottal therapy, the individual will be able to deal with the problems they are experiencing (Faradisi, 2012). Researchers assume that giving a combination of music therapy and murottal therapy

provides better benefits. In combination therapy, you don't only listen to beautiful rhythms, but there is also a deep meaning from the murottal that you listen to. The strains of music from music therapy and the strains of songs from murottal make respondents feel comfortable, calm and reduce the pain they feel, and are able to face problems in the future.

The use of a combination of music therapy and murottal therapy affects brain waves, namely alpha and theta waves. Alpha waves (6-13 Hz) function to bring about a relaxing effect. Someone who is imagining, daydreaming, or relaxing means that person is on an alpha wave. Theta waves (4-7.9) are associated with stress and creativity. Theta waves are formed when a person is sleeping or is very sleepy. Giving a combination of music therapy and murottal therapy provides comfort, becomes more relaxed and even makes you sleepy. This indicates that the combination of music therapy and murottal therapy is able to bring someone who listens to the alpha and theta waves (Sumaningsih et al., 2019; Susilawati et al., 2020).

Music and murottal mechanisms are able to reduce pain through the mechanism of the gate control theory, where pain impulses that appear will be inhibited when the defense is closed and will be delivered when the defense is open. Pain impulses will be hampered if the process of releasing substance P is also inhibited. Music and murottal results in the release of endorphins which will help inhibit the process of releasing substance P so that when signals are sent to the synapses by peripheral pain neurons, a synaptic process occurs between peripheral neurons and neurons that lead to the brain where substance P delivers pain impulses. Synapses help move charged ions or molecules from cell to other cells, then endorphins will inhibit the release of substance P and also sensory neurons so that pain transmission that occurs in the spinal cord does not occur and pain is reduced (Nuhan et al., 2018; Puspitarini & Wirotomo, 2021).

One of the other non-pharmacological interventions to reduce pain is deep breathing relaxation (Yunani & Pandin, 2022). The combination of deep breathing relaxation techniques and murottal therapy was found to be effective in reducing pain response in patients undergoing hemodialysis cannulation. This can be seen from the difference in the average pain level before (6.08) and after (3.12) the intervention was given (Amelia et al., 2022). Other studies have also found that the combination of murottal surah al fatihan and deep breathing relaxation has an effect on the level of dysmenorrhea pain (Wahyuni et al., 2018). In addition, the combination of deep breathing relaxation and religious music is also effective in reducing pain intensity in postoperative fracture patients. Deep breathing relaxation functions to increase lung ventilation, while music therapy can improve the healing process, mental function, and improve well-being. Music also stimulates the release of hormones so as to create feelings of pleasure (Friska, 2022).

Based on the explanation above, murottal therapy and music therapy can be combined with deep breathing relaxation techniques to reduce pain in patients. However, no previous research has examined the combination of music and murottal in reducing pain levels. This is a novelty in developing nonpharmacological interventions in pain patients. Researchers assume that music therapy is able to speed up the healing process and cause feelings of pleasure, while murottal therapy is able to provide peace and tranquility. Music therapy and murottal are both able to influence the body to release endorphins. Therefore, the intervention of a combination of music therapy and murottal

therapy is able to accelerate healing, provide peace of mind so as to create a sense of joy and calm, and increase the ability to distract from the pain experienced. The

combination of music and murottal is able to stimulate the body to produce natural analgesics (endorphins) to reduce the occurrence of pain so as to increase comfort.

Table 9
Results of the Mann-Whitney test Pain Levels After Intervention in the Experimental Group and the Control Group

	Group	N	Mean Rank	Sum of Rank	Asymp.Sig (2-tailed)
Post Intervention Pain rating index	Eksperimental	27	16,50	445,50	0,000
	Control	27	38,50	1039,50	

In the experimental group, after being given the intervention, the average value was 16.50, while in the control group, the average value was 38.50. This shows that there is a significant difference in pain levels between the experimental group that gets a combination of music therapy and murottal therapy and the control group that gets music therapy alone with a significance value of $p=0.000$ ($p<0.05$). The results of previous studies related to the combination of music therapy and murottal therapy were found to be effective in reducing anxiety in third trimester pregnant women with an average value of 18.3 and a standard deviation of 17.94 compared to music therapy with an average value of 24.2 and a standard deviation 9.87 (Sumaningsih et al., 2019).

Instrumental music only contains the sound of musical instruments, there are no lyrics or vocal sounds in it. The combination of music therapy and murottal contains harmonic tones from musical instruments and contains the human voice. The human voice is a powerful healing tool that is easy to reach. Sound will reduce stress hormones and activate endorphins, causing feelings of relaxation, reducing anxiety and tension, and being able to divert attention from feelings of fear. The combination of music and murottal will make individuals closer to Allah SWT so as to create a feeling of sincerity and surrender to what will happen in the future which of course is accompanied by prayer (Puspitasari, 2017; Suwanti et al., 2022).

Music therapy can reduce 2 to 3 pain scales (Purwati et al., 2019). If music therapy is combined with murottal therapy, pain reduction can occur drastically. This is because previous research found that murottal therapy can reduce 4 pain scales at once (Purwati et al., 2019). Therefore, the combination of music therapy and murottal therapy will have a better effect than music therapy because their effectiveness will increase. This can be seen from the decrease in pain that occurred after being given a combination of music therapy and murottal therapy in the experimental group and music therapy in the control group.

The quality of pain between the experimental group and the control group after being given the intervention was higher in the control group. This means that the greatest reduction in pain occurred in the experimental group. This shows that the combination of music therapy and murottal therapy is more effective in reducing pain levels compared to music therapy. Providing a combination of music therapy and murottal therapy is able to overcome illness, improve, restore and maintain health both physically, emotionally, mentally, socially and spiritually, and also makes a person feel that he is facing Allah, feels he is in a place that makes him happy, and feel closeness and love for God so as to produce feelings of comfort, relaxation, and calm (Wahyuni et al., 2019; Priwahyuni et al., 2020).

Music has calming properties, is able to reduce aches or pains as well as anxiety, and promote relaxation (Poulsen & Coto, 2017). Music combined with the Qur'an will create a

calmer and more peaceful feeling. This is because the combination of music and murottal is more calming compared to listening to music which only provides temporary calm (Latuapo et al., 2020). Music therapy is able to overcome disease, improve, restore, and maintain health both physically, emotionally, mentally, socially, and spiritually. This is because music therapy can provide a comfortable, relaxing effect, is able to calm the soul, is structured, and is also universal (Priwahyuni et al., 2020)

Music therapy creates feelings of relaxation, security, well-being, and creates feelings of happiness, as well as reduces pain and stress. This is because listening to music therapy causes a decrease in the stress hormone, namely Adrenal Corticotropin Hormone (ACTH) (Solehati & Kosasih, 2018). Individuals who listen to music are likely to reduce the complaints they experience, but after listening to music the individual will be confronted again with the stressors they are experiencing. In contrast to the combination of music and murottal, where individuals who listen to a combination of music and murottal will be calmer because they have formed a new coping, have the largest support system, namely Allah SWT so that individuals surrender to Allah SWT (Suwanti et al., 2022).

Music affects the physical and psychological aspects of individuals who listen so that individuals feel comfortable, safe and happy. Music affects brain waves so that it can change the state of the human mind. Sound waves generated from music create calm, relaxation, and cause analgesic effects. In general, music is listened to only as entertainment to create a feeling of calm. In contrast to the combination of music and murottal, where the benefits produced are not only as entertainment to get peace, but the combination of music and murottal presents spiritual elements such as increasing life expectancy, self-confidence, and also faith (Nurkhasanah, 2018).

Based on the results of research that has been done, music therapy interventions only provide feelings of relaxation or calm, create inspiration, relaxation, and also optimism. If music is combined with murottal, it will make it calmer because it creates spiritual values so that it gives a very deep feeling of relaxation, gives peace of mind, so that there is a new energy boost and also motivation in dealing with problems experienced by remembering God. Researchers assume that when individuals listen to a combination of music therapy and murottal therapy, individuals will feel happy, comfortable, and feel that they are facing God, and feel closeness and love for God.

LIMITATION OF THE STUDY

Researchers cannot control chemotherapy premedication therapy because it has become a mandatory procedure that must be performed on patients. In addition, researchers did not include the type of chemotherapy drugs given in the

inclusion criteria. This is likely to affect the pain experienced by breast cancer patients.

CONCLUSIONS AND SUGGESTIONS

The combination of music therapy and murottal therapy was found to be more effective in reducing pain levels compared to music therapy for breast cancer patients at Dr. H. Moh. Anwar Sumenep. The combination of music therapy and murottal therapy can be used as an independent nursing intervention in reducing pain experienced by cancer patients during chemotherapy and as one of the supports for patients to continue routine chemotherapy treatment thereby reducing the incidence of chemotherapy discontinuation due to symptoms experienced. Further research is needed regarding music therapy, murottal therapy, and a combination of music therapy and murottal therapy in reducing pain. The aim of further research is to see the effectiveness of the three therapies, namely music therapy, murottal therapy, and a combination of music therapy and murottal therapy in reducing pain in breast cancer patients undergoing chemotherapy.

ETHIC CONSIDERATIONS

This research protocol was approved by the Health Research Ethics Committee, Brawijaya University, Malang, Indonesia with number 4110/UN10.F17.10/TU/2022.

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Conflict of Interest Statement

The authors declare that there is no potential conflict of interest

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