

Reducing anxiety in first-stage laboring mothers with murottal music therapy and natural sound therapy

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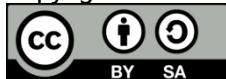
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ABSTRACT

Introduction: Normal labour refers to the spontaneous birth of a single, term foetus, occurring between 4 to 24 hours, without the need of interventions, and often induces minimal anxiety in mothers during the labour process. One of the anxiety treatments encompasses Murottal Music Therapy and Natural Sound Therapy. Administering Murottal Music Therapy and Natural Sound Therapy to moms experiencing anxiety helps alleviate anxiety levels during labor, facilitating a smoother and more normal procedure. **Objectives:** The objective of the study is to assess the efficacy of mutual music therapy and natural sound therapy on anxiety levels in mothers during the active phase of labor at Wonokerto I Health Centre. **Methods:** Quasi-experimental research design utilizing a pretest-posttest control group, with a sample of 32 laboring women selected by purposive sampling. The independent variables are mutual music treatment and natural sound therapy, while the dependent variable is the anxiety level in laboring moms. Administering treatment to nervous moms, followed by the observation of anxiety levels in both the intervention and control groups. **Results:** Statistical analysis utilizing the Independent T-Test revealed a significant p-value of 0.045, less than the alpha level of 0.05. **Conclusion:** This indicates the effectiveness of mutual music therapy and natural sound therapy on anxiety levels in laboring mothers during the active phase, with a P value of 0.045.

KEYWORDS: Anxiety; Labor; Murottal Therapy; Natural Sound Therapy

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INTRODUCTION

Anxiety is a common mental condition that frequently remains unrecognized and insufficiently addressed in individuals affected by it. Typically, female patients exhibit elevated levels of anxiety in comparison to male patients (Mujahidah & Mendrofa, 2020). Anxiety is an individual's emotional distress associated with external factors and a strategy employed to manage challenges (Singh et al., 2020). Anxiety is characterized by apprehension and bewilderment regarding future events, accompanied by sensations of uncertainty and powerlessness (Abera et al., 2024; Chitra. J, 2023; Mujahidah & Mendrofa, 2020). Labor is impacted by passage, power, passenger, psychology, and the birth attendant (Sapkota et al., 2012). The mother's psychological condition impacts labor, which is affected by support from her partner, significant other, family, birth attendants, facilities, and surroundings (Aydın Özkan et al., 2024; Jahromi et al., 2024; Sapkota et al., 2012). Anxiety can induce physiological and psychological alterations, marked by elevated respiratory rate, heightened heart rate, raised blood pressure, and overall diminished energy levels (Singh et al., 2020). Anxiety in parturient patients can result in delayed birth, extended recovery, heightened postpartum pain, reduced immunity to infection, higher painkiller consumption post-delivery, and prolonged hospitalization duration (Abera et al., 2024; Aydın Özkan et al., 2024; Chitra. J, 2023; Dobson et al., 2020).

Approximately 75%-85% of patients exhibit anxiety before labor (Chitra. J, 2023; Sapkota et al., 2012; Singh et al., 2020). Anxiety disorders represent the most prevalent mental diseases globally, impacting 301 million individuals in 2019. A more significant number of women suffer from anxiety disorders compared to men. Anxiety symptoms frequently manifest during childhood or adolescence. There exist highly efficacious interventions for anxiety disorders. Approximately 1 of 4 of individuals with anxiety disorders obtain therapy for their disease (World Health Organization (WHO)., 2023).

Data on the number of patients who gave birth at Wonokerto I Health Center of Pekalongan Regency in 2018 obtained a total of 563 deliveries, 349 deliveries at Wonokerto I Health Center, and 214 deliveries with referrals to the hospital, with the causes of referrals including Pre-Eclampsia 30, Prolonged labor 40, Stuck Partus 15, Early Rupture of Fertility 57, Cephalo Pelvic Disproportion 10, Preterm 6, Post Term 25, History of Sectio Caesarea 25, and Gemelli 6. According to the data presented earlier, Cephalo Pelvic Disproportion and Prolonged labor were the two most common reasons for referral. The worry that a mother experiences when she is about to go into labor as a result of uterine contractions is one of the reasons that contribute to labor lasting longer.

Timely identification of anxiety disorders is crucial for facilitating prompt treatment for patients and averting severe mental health issues. The diagnosis and management of anxiety are crucial, as anxiety can exacerbate a medical condition (Mujahidah & Mendrofa, 2020). The WHO's Comprehensive Mental Health Action Plan 2013–2030 delineates the necessary measures to deliver suitable interventions for individuals with mental health disorders, including anxiety disorders (World Health Organization (WHO)., 2023). Music can influence stress hormones and impact bodily systems (He et al., 2024; Hyunah Cho, 2022; Ibáñez-del Valle et al., 2024; Mujahidah & Mendrofa, 2020). Nonpharmacological methods, like music therapy, have garnered interest as a safer and more accessible alternative for alleviating pain and anxiety during labor (Jahromi et al., 2024). Music therapy has demonstrated an impact on physiological and psychological states, encompassing pain perception, anxiety, heart rate, and blood pressure (He et al., 2024; Hyunah Cho, 2022; Ibáñez-del Valle et al., 2024). Moreover, prior research has shown that music therapy can significantly diminish pain perception and minimize labor duration (Dobson et al., 2020; Durat et al., 2018; Mohammadifard et al., 2021; Wolf et al., 2019). Soothing music reduces catecholamine levels, thereby decreasing blood pressure and pulse rate, facilitating relaxation, and elevating the pain perception threshold (Jahromi et al., 2024; Pettersson et al., 2016; Shahbazi Sighaldehy et al., 2023; Shahbazzadegan & Nikjou, 2022).

METHODS

Design

This research is a quasy experiment research. The research design used Pre and Post-test with control group design.

Research Questions

How effective is the use of murottal music therapy and natural sound therapy in reducing anxiety in labouring mothers?

Sample and Settings

The type of sampling technique used was accidental sampling with a total sample of 32 respondents divided into 2 intervention groups murottal music therapy (n=16) and natural sound therapy control group (n=16). Respondents in this study were mothers in the active phase with an opening of 4-8 cm (active phase acceleration and maximum deceleration). Given for 30 minutes.

Variables

The independent variable in this study is the provision of murottal music therapy and natural sound therapy, while the dependent variable in this study is the level of anxiety in labor.

Instruments

Zung Self-Rating Anxiety was the tool that was utilized in this research.

Data Collections

This research was conducted from 2 October-30 November 2019 at Wonokerto I Health Center, Pekalongan Regency.

Data Analysis

Data analysis using Paired T-Test and Independent T-Test statistical analysis tests with $p < 0.05$

Ethical Consideration

This study has passed the ethical review test from the Ethics Committee of Stikes Karya Husada Semarang with Ethical Test Number 1092/KH.KEPK/KT/IX/2019

RESULTS

Tabel 1 Characteristics of Respondents

Characteristics of Respondents	Frequencies	Percent (%)
Age		
15 - 24	8	25
25 - 34	19	59.4
35 - 44	5	15.6
Education		
Elementary School	3	9.4
Junior High School	5	15.6
Senior High School	20	62.5
College	4	12.5
Parity		
Primipara	14	43.7
Multipara	18	56.3
Labor associate		
Husband	23	71.9
Family	9	28.1

Based on the findings, age characteristics were determined. 59.4% of the respondents were between the ages of 25 and 34 years. Educational characteristics and traits Twenty respondents, or 62.5%, have completed high school or a comparable level of education. Indicators of parity with respect to 18 responders, or 56.3%, were in the multiparous age bracket. Identifying characteristics of a labor companion 23 of the responders, or 71.9%, were husbands or companions.

Table 2 Distribution of Anxiety Level Before and After Murottal Therapy

The variable	Murottal Music Therapy				p-value
	Before		After		
	N	%	N	%	
Mild Anxiety	0	0	2	1.5	0.000
Moderate Anxiety	2	1.5	6	37.5	
Severe Anxiety	11	68.8	8	50	
Severe Anxiety	3	18.8	0	0	
Mild Anxiety	0	0	2	12.5	
Mean±SD	68.56±7.677		55.00±8.944		
Min	56		80		
Max	80		70		

According to the statistics, before mutual music therapy, 11 respondents (68.8%) exhibited severe anxiety, while two respondents (12.5%) displayed moderate anxiety. After mutual music therapy, it was determined that eight respondents (50%) were classified as experiencing severe anxiety, while two respondents (12.5%) were categorized as having mild anxiety. P-value equals 0.000. Table 2 demonstrates a reduction in anxiety levels by 13.56, signifying that mutual music therapy is beneficial in alleviating the anxiety of mothers in the active period of labor.

Table 3 Distribution of Anxiety Level Before and After Natural Sound Therapy

The variable	Natural Sound Therapy				p-value
	Before		After		
	N	%	N	%	
Mild Anxiety	0	0	0	0	0.013
Moderate Anxiety	2	12.5	7	43.8	
Severe Anxiety	11	68.8	8	50.0	
Severe Anxiety	3	18.8	1	6.2	
Mild Anxiety	0	0	0	0	
Mean±SD	69.12±7.728		61.50±8.626		
Min	56		48		
Max	80		80		

According to the data presented, before the implementation of natural sound music therapy, 11 respondents (68.8%) exhibited severe anxiety, while two respondents (12.5%) displayed moderate anxiety. Following the administration of natural sound music therapy, the results indicated that eight respondents (50%) fell into the category of severe stress, while one respondent (6.2%) was classified as experiencing severe anxiety; the P value recorded was 0.013. Table 3 indicates a reduction of 07.62, suggesting that natural sound music therapy effectively alleviates the anxiety levels of mothers in the active phase of labor.

Table 4 Distribution of the effectiveness Murottal Therapy and Natural Sound Therapy on anxiety level

Variabel	p-value
Murottal Therapy	0.045
Natural Sound Therapy	

Table 4 shows the level of anxiety in active-phase maternity mothers carried out after mutual music therapy and after natural sound music therapy, with the results of the P value of 0.045. Thus, it can be concluded that mutual music therapy is more effective than natural sound music therapy on the anxiety of active-phase maternity mothers.

DISCUSSION

What we mean when we talk about education is the process of changing an individual's attitudes and behaviors as they mature via the use of teaching and training (Nikoozad et al., 2024; Shahbazi Sighaldehy et al., 2023; Wolf et al., 2019). The construction of an understanding of information can be accomplished through the process of adapting to and learning from a variety of circumstances. Mothers have access to a source of strength that health personnel cannot offer, including their husbands and other family members who attend births (Sapkota et al., 2012). In addition, the attention received during childbirth will continue to be recalled by women, particularly those giving birth for the first time. This attention can be an asset for a smooth delivery and make mothers feel safe and less fearful of the experience of giving birth (Nikoozad et al., 2024; Sapkota et al., 2012; Shahbazi Sighaldehy et al., 2023; Wolf et al., 2019).

Qur'an murottal therapy is a religious therapeutic practice including the recitation of Qur'anic verses for extended periods, aimed at eliciting beneficial effects on an individual's physical well-being (Moulai et al., 2023; Sabry & Vohra, 2013). Administering stimuli, such as recitations of the Qur'an, during maternal anxiety in contractions can alleviate the mother's worry, preventing the brain from encoding anxiety signals and enabling the mother to experience reduced or even absent anxiety. Cells in the afflicted regions of the body, upon exposure to the recital of the Quran, will influence bodily waves by transmitting vibrational signals to the central nervous system. The mobility of sick cells, influenced by incoming sound waves, facilitates the repair of bodily cells, as the sound interacts with the body to induce regularity (Eid Aburuz et al., 2023; Moulai et al., 2023; Saleem & Saleem, 2023). Emoto's research from Japan indicates that 70% of the human body comprises water and that sound influences electromagnetic fields and alterations. The Quran's recital significantly influences the body's water molecules, enhancing its quality and promoting healing (Emoto, 2010).

Murottal therapy exerts a beneficial psychological effect since the brain interprets the murottal upon its auditory reception. Our perception is shaped by collected experiences, desires, needs, and preconceptions (Sabry & Vohra, 2013; Saleem & Saleem, 2023). Murottal therapy enhances an individual's knowledge of God, regardless of their understanding of the Qur'an's meaning. This awareness will lead to complete submission to Allah, during which the brain operates in alpha waves, characterized by a frequency of 7-14Hz. This ideal condition for cerebral energy alleviates stress and reduces worry. In a tranquil state, the brain can think clearly and contemplate the existence of God, facilitating coping mechanisms or fostering hopeful expectations in patients (Albar, 2007; Eid Aburuz et al., 2023; Moulai et al., 2023; Sotuddeh et al., 2022).

Nature sounds therapy is a complementary treatment that employs non-pharmacological relaxing techniques utilizing sounds that promote comfort, tranquility, and relaxation (Mujahidah & Mendrofa, 2020). Natural sounds are auditory phenomena familiar to all humans and are consistently encountered in daily life. Humans possess an intrinsic affinity for nature, resulting in a therapeutic impact on themselves through their interactions (Amiri et al., 2017; Wu & Yao, 2023). The study revealed that natural sound music therapy effectively reduces anxiety in moms during the active period of labor. The data obtained before and during natural sound music therapy yielded a p-value of 0.013 via the Paired T-test. Respondents saw a reduction in anxiety levels, but not considerable,

while some respondents experienced no drop in anxiety either. This scenario can be affected by parity, age, companionship, environment, education, and experience.

Nature sounds music is not classified as classical music. It is an amalgamation of classical music and natural sounds. This musical piece is complemented by the ambient sounds of ocean waves, rustling trees, and other natural elements. This genre of nature music typically enhances the listener's connection to the natural environment (Amiri et al., 2017; Lalezari et al., 2022; Wu & Yao, 2023). For youngsters, these natural sounds elicit specific connections and serve as stimuli for learning. The presence of this music in a tranquil environment during learning significantly enhances imagination and associations (Amiri et al., 2017; Mujahidah & Mendrofa, 2020; Wu & Yao, 2023).

Research findings indicate that murottal therapy is more effective in alleviating anxiety, particularly among Muslim respondents who regularly listen to melodious recitations of the Qur'an, such as Surah Ar-Rohman (Albar, 2007; Sabry & Vohra, 2013; Sotudeh et al., 2022). This practice calms the hearts and minds of mothers in labor, fostering feelings of surrender and closeness to God. Even without comprehension of the verses' meanings, patients experience a reduction in anxiety levels (Eid Aburuz et al., 2023; Moulaei et al., 2023; Saleem & Saleem, 2023).

Strengths and Limitations

Limitations in this study are that researchers have not tested confounding variables, nor have researchers used biomarker tests to determine whether there is a decrease in adrenaline hormones and whether there is an increase in serotonin, dopamine and endorphins in assessing the reduction of labour anxiety.

Implications for Practice

Future researchers intend to employ biomarkers to prove the efficacy of murottal music therapy and natural sound therapy in lowering anxiety in laboring moms. Confounding elements such as spiritual and cultural, socioeconomic, nutrition, rest duration, and psychology may all be connected with lower levels of anxiety during labor.

CONCLUSIONS

This study concludes that marital therapy and natural sound therapy are effective in alleviating anxiety. Midwives are anticipated to implement non-pharmacological interventions to mitigate anxiety in women during labor.

Conflict of Interest Statement

None

Funding Source

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