Original Article

Effect Of Classical Music And Progressive Muscle Relaxation On Anxiety Levels In Laboring Mothers

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ABSTRACT

Background: Anxiety is a feeling that is most commonly experienced by pregnant women when approaching childbirth; what's more, childbirth is already known to require a cesarean surgery. Anxiety during pregnancy can harm the mother and fetus, such as increasing the risk of premature birth, impaired fetal development, and psychological disorders in the mother. The purpose of this study was to determine the effect of classical music therapy and progressive muscle relaxation on anxiety levels in pre-section cesarean patients in the delivery room of Tuban Hospital..

Methods: This study employed a pretest-posttest quasi-experimental design. The sample consisted of 44 pre-section cesarean patients from two hospitals in Tuban Regency in January and February 2024, selected using simple random sampling. Respondents were divided into two groups: classical music therapy (n = 22) and progressive muscle relaxation (n = 20). Anxiety level was measured with HARS and analysed using the Wilcoxon test. This study underwent ethical review by the Health Research Ethics Institute of IIK NU Tuban.

Results: The results showed that classical music therapy and progressive muscle relaxation effectively reduce anxiety in pre-section cesarean delivery mothers. The Wilcoxon test in both groups showed a value of ρ <0.001 (<0.05), indicating a significant effect on reducing anxiety levels at Tuban Regency Hospital.

Conclusion: Both interventions proved to be significantly effective in reducing anxiety. Based on the results of this study, classical music therapy and progressive muscle relaxation are expected to be non-pharmacological alternatives to reduce anxiety levels in pre-section cesarean patients.

***Keywords*:** Anxiety; Maternity; Progressive Muscle Relaxation; Music Therapy.

Implications for Practice:

- Integration of Non-Pharmacological Interventions in Preoperative Care. Classical music therapy and progressive muscle relaxation can be effectively integrated into standard preoperative care protocols for cesarean section patients to reduce anxiety levels without relying on pharmacological interventions. These techniques are safe, easy to implement, and cost-effective.
- Training for Midwives and Maternity Nurses. Health professionals, particularly midwives and maternity nurses, should be trained in delivering basic music therapy and guiding progressive muscle relaxation exercises. This can empower frontline staff to offer emotional support and anxiety reduction strategies during the pre-labor phase.
- Personalized Patient-Centered Approaches. The use of calming interventions such as classical music or relaxation techniques allows for more personalized and holistic maternity care. Tailoring anxiety-reducing methods to patient preferences can improve maternal satisfaction, promote better birth experiences, and potentially reduce postoperative complications.

Introduction

Pregnancy is a vulnerable period for the risk of psychological disorders for a pregnant woman, and one of these disorders is anxiety (Malange et al., 2025). The level of anxiety during pregnancy varies in each trimester (Hu et al., 2025). Anxiety is the most common feeling experienced by pregnant women when approaching childbirth; what's more, childbirth is already known to require a cesarean surgery. Sectio caesarea is one of the operations that have been very often carried out in the world). Anxiety experienced by pregnant women before undergoing sectio caesarea surgery is a problem experienced not only by patients but also the health team itself (Id, 2024) Before undergoing surgery, pregnant women will be exposed to various stimuli that can trigger anxiety that can cause stress until postoperatively. Anxiety management for patients who will undergo the section cesarean surgery process has been widely researched, but the results of the methods used are still inconsisten(Abera et al., 2024; Jaya & Kadhim, 2022; Sugijantoro et al., 2022).

Some developed countries in the world have a high risk of psychological disorders (anxiety) in pregnant women = 15.6% and postpartum women = 19.8%, including Ethiopia, Nigeria, Senegal, South Africa, Uganda, and Zimbabwe (Hall et al., 2021). Data according to the Ministry of Health's work report (2020) states that in Indonesia, around 29.0% experience anxiety during labour. Anxiety and fear of one's sins or mistakes. This fear manifests as a concern that the baby will be born with defects, as well as other superstitions (Cao-Lei et al., 2021). Based on the annual report in East Java Province in 2019, almost 73.5% of mothers experienced anxiety when experiencing labour with a cesarean. The number of section caesarea (SC) deliveries in Indonesia from January to December 2022 was 217 cases (55.3%) out of 392 total deliveries.

Based on the results of a preliminary study in two health care facilities in Tuban Regency, it was found that most pregnant women and mothers who undergo a cesarean section experience anxiety. From interviews with five mothers who were about to undergo surgery, 4 of them expressed concerns about the possibility of the surgery not going smoothly, postoperative pain that hindered baby care, and the high costs that had to be incurred. Meanwhile, of the 10 pregnant women who underwent routine prenatal check-ups, 8 of them expressed anxiety ahead of labour, such as fear of pain, the condition of the baby, and the fear of not being able to give birth normally. This anxiety arises in response to situations that are perceived as threatening, especially during labour, which is characterised by intense pain and uncertainty about the process.

The act of childbirth through sectio caesarea surgery, with its various complications, can cause anxiety in patients before the birth process (Zenouzi et al., 2022). Anxiety is an emotional condition and subjective experience of objects that are unclear and specific due to the anticipation of danger that allows individuals to take action to deal with threats(Pratiwi et al., 2021). The emergence of feelings of anxiety in patients before sectio caesarean delivery is caused by feelings of fear of unfamiliar procedures that will be undergone, injections, postoperative wound pain, becoming dependent on others, the threat of death due to surgical procedures and anaesthesia, as well as the onset of disability or even death (Akbaş & Sözbir, 2023; Billy Anoraga et al., 2024)The impact of preoperative anxiety is associated with increased postoperative pain, analgesic requirements, increased hospital stay, and the incidence of postpartum depression

(Oyarzabal et al., 2021). So it is not surprising that often patients and their families show a rather excessive attitude toward the anxiety they experience. Some people are sometimes unable to control the anxiety they face, resulting in disharmony in the body. Suppose this anxiety does not receive adequate treatment from doctors, midwives, and families. In that case, it will have adverse consequences, as if not resolved immediately, it can increase blood pressure and breathing, potentially leading to bleeding during or after surgery (Farrag et al., 2021). Anxiety experienced by pregnant women who will perform pre-section cesarean, so actions to reduce anxiety levels are very necessary (Zendehdel et al., 2022). A simpler and more effective method that can be done to overcome pre-sectio caesarea anxiety is the provision of music therapy and progressive muscle relaxation techniques.

Music therapy can help individuals become more relaxed, reduce stress, create a sense of security and well-being, alleviate sadness, increase happiness, and alleviate pain (Mokaberian et al., 2021). The most beneficial music for a patient's health is classical music. It has been proven that music composed by Bach, Mozart, and other Italian composers is the most effective in providing a distraction effect on patients (Sulistyowati, 2023). The selection of classical music is based on the belief of many experts that the rhythm and tempo of most classical music follow the speed of the human heart rate, which is approximately 60 beats per minute (Rahmawati et al., 2025). Classical music that is heard stimulates the brain through the auditory nerve, then forwarded to the hypothalamus, triggering the release of endorphins, serotonin, and melatonin hormones, which have an impact on a sense of calm, relaxation, and comfort (Sitiyaroh, 2022). In addition, there are progressive muscle relaxation techniques.

The progressive muscle relaxation technique is a relaxation method that involves alternating the contraction and relaxation of muscles, starting with one muscle group and progressing to another, to reduce tension and anxiety (Kaeni, 2021). Relaxation techniques are easy for laboring mothers to practice and can help the body and mind feel calm and relaxed, making it easier to sleep (Oyarzabal et al., 2021). This aligns with the Theory of. (2024), which suggests that the provision of progressive muscle relaxation is an appropriate intervention for mothers in maternity care. The intervention is safe, easy, and improves the mother's psychomotor abilities in a simple manner.

Based on the things mentioned above, the researcher is interested in researching the effect of classical music therapy and progressive muscle relaxation techniques on anxiety levels in labouring mothers.

Methods

Study Design

This research design employs a quasi-experimental design, which is a type of experimental research conducted on a single group, referred to as the experimental group, without a comparison or control group. The method used was a pretest-posttest design.

Participants

The population in this study consisted of all pre-section caesarean patients in the delivery room at two hospitals in Tuban Regency in January and February 2024, totaling 49 patients. The sample in this study consisted of a portion of pre-section caesarean patients who met the inclusion criteria, 2 hours Post SC, with a total of 44 people, using the simple random sampling technique. Respondents were divided into two groups: 22 mothers who received music therapy intervention and 22 respondents who received progressive muscle relaxation technique intervention.

Instruments

To assess the anxiety levels of laboring mothers in this study, researchers used the Hamilton Anxiety Rating Scale (HARS). This well-established clinician-rated instrument evaluates the severity of anxiety symptoms. The HARS questionnaire comprises 14 items, each representing a distinct symptom cluster associated with anxiety. These items are scored on a Likert scale ranging from 0 (not present) to 4 (very severe), yielding a total score range of 0 to 56. The total anxiety score is categorized into four levels: mild (0–17), moderate (18–24), severe (25–30), and very severe (>30). The HARS instrument evaluates both psychic and somatic manifestations of anxiety, covering domains such as anxious mood, tension, fears, insomnia, cognitive impairment, depressed mood, somatic complaints (muscular and sensory), cardiovascular symptoms, respiratory symptoms, gastrointestinal and genitourinary symptoms, autonomic disturbances, and observable behavior during the interview. In this study, HARS was administered before and after the intervention in both groups (classical music therapy and progressive muscle relaxation) to detect changes in anxiety levels. The instrument's validity was confirmed through expert judgment, and reliability testing, using inter-rater reliability, yielded a Kappa coefficient greater than 0.75, indicating high consistency.

Intervention

This study involved two non-pharmacological interventions aimed at reducing anxiety in pre-cesarean section patients: classical music therapy and progressive muscle relaxation (PMR). In the classical music therapy group, participants listened to Mozart's Sonata for Two Pianos in D Major, K. 448, through headphones connected to an MP3 player for 20 minutes in a quiet room. The music was played at a comfortable volume and selected due to its proven relaxing rhythm and harmony, which aligns with the average human heart rate (~60 bpm), promoting a calming physiological response. Respondents were seated in a semi-recumbent position and instructed to focus on the music, remaining silent and undisturbed during the session.

In the progressive muscle relaxation (PMR) group, participants were guided through a standardized muscle relaxation protocol adapted from Rosdiana & Cahyati (2021). The session was also conducted for 20 minutes in a calm environment, with participants seated or lying down in a comfortable position. The PMR technique involved alternating tensing and relaxing of major muscle groups, starting from the feet and progressing upward to the legs, abdomen, chest, arms, shoulders, neck, and face. Each muscle group was contracted for approximately 5–7 seconds and then relaxed for 20–30 seconds, with guidance provided verbally by a trained facilitator using a script. Participants were instructed to breathe deeply throughout the session and to focus on the sensation of relaxation after each release of tension. Both interventions were performed once, immediately before the scheduled cesarean section, and anxiety levels were measured pre- and post-intervention using the HARS instrument.

Data Collection

This study involved two structured non-pharmacological interventions: classical music therapy and progressive muscle relaxation (PMR), both aimed at reducing anxiety levels among laboring mothers scheduled for cesarean section. The interventions were administered in the delivery room setting at two hospitals in Tuban Regency, Indonesia, during January and February 2024.

In the classical music therapy group, each participant received an auditory

intervention in the form of Mozart's Sonata for Two Pianos in D Major, K. 448, which is known for its calming tempo and harmonics. The music was played through an MP3 player with closed-back headphones at a comfortable volume (below 60 dB), ensuring minimal environmental interference. The session lasted 20 minutes and was conducted approximately 1–2 hours before the scheduled cesarean section. Participants were seated or reclined comfortably in a quiet space, instructed to close their eyes, relax, and focus on the music without speaking or external distractions. This session was facilitated by trained researchers (midwives or nurses involved in the study) who had received prior instruction on delivering music therapy in clinical settings.

In the progressive muscle relaxation group, participants were guided through a standard PMR protocol adapted from Rosdiana & Cahyati (2021). The procedure involved sequentially tensing and releasing 16 major muscle groups, beginning with the toes and progressing upward through the lower legs, thighs, abdomen, chest, hands, arms, shoulders, neck, jaw, and facial muscles. Each muscle group was tensed for approximately 5–7 seconds and then relaxed for 20–30 seconds, accompanied by deep, rhythmic breathing. The entire PMR session also lasted 20 minutes and was conducted in a quiet and comfortable setting. Verbal instructions were provided by the research assistant using a pre-recorded audio script or live demonstration to ensure consistency. Participants were reminded to remain still and focus on the sensation of releasing physical tension.

Both interventions were administered once per participant, before surgery, ensuring that no sedative medication had been administered beforehand that could interfere with perception or responsiveness. Data collection was performed at two time points: (1) Pre-intervention, immediately before the session, and (2) Post-intervention, 10–15 minutes after the intervention and before the surgical procedure. At both time points, anxiety levels were measured using the Hamilton Anxiety Rating Scale (HARS). The administration of HARS was conducted by trained enumerators who were not involved in delivering the interventions to minimize assessment bias.

To ensure consistency and ethical compliance, all procedures were approved by the Health Research Ethics Committee of the Institute of Health Sciences Nahdlatul Ulama Tuban (No. 192/LEPK.IIKNU/I/2024). Written informed consent was obtained from all participants. The research team ensured patient privacy and comfort throughout the data collection and intervention process. All collected data were anonymized, coded, and stored securely.

Data Analysis

Validity was assessed through expert judgment, and reliability was evaluated using interrater reliability (Kappa > 0.75). Data processing techniques included editing, coding, sorting, entry, and tabulation. Data were analyzed univariately and bivariately using the Wilcoxon Signed-Rank Test, with a significance level of $\alpha = 0.05$. Analyses were performed using IBM SPSS software version 25 for Windows

Ethical Considerations

The Health Research Ethics Commission approved this study, conducted by the Institute of Health Sciences, Nahdlatul Ulama Tuban, under number 192/LEPK.IIKNU/I/2024. The confidentiality of all participants was strictly maintained during the research process

Results

T**able 1** shows that the frequency of respondents' age levels is mostly 20-35

years old, with 26 respondents (59.1%). The occupation of most respondents is working, with 24 respondents (54.5%) employed. The education level of half of the respondents was high school, with 22 respondents (50.0%) having this level of education. The parity level is mostly primipara, with 23 respondents (52.3%) reporting this status. And most were mothers who had never experienced a section cesarean, as many as 29 respondents (65.9%).

Table 1. Frequency Distribution of Respondent Characteristics (n=44)

Respondent Characteristics	Σ	%
Age		
<20 years	11	25
20-35 years	26	59,1
>35 years	7	15,9
Work		
Not working	20	45,5
Working	24	54,5
Education Level		
SD	6	13,6
SMP	7	15,9
SMA	22	50
Higher Education	9	20,5
Paritas		
Primipara	23	52,3
Multipara	21	47,7
Riwayat SC		
Tidak Pernah	29	65,9
Pernah	15	34,1

Table 2. The Effect of Classical Music Therapy and Progressive Muscle Relaxation on Anxiety Levels in Laboring Mothers

Intervention Type	Time Point	None, n (%)	Mild, n (%)	Moderate, n (%)	Severe, n (%)	Total, n (%)
Classical Music Therapy	Pre-intervention	2 (9,1)	4 (18,2)	16 (72,7)	0 (0)	22 (100)
	Post-intervention	5 (22,8)	13 (60,1)	4 (18,8)	0 (0)	22 (100)
Progressive Muscle Relaxation	Pre-intervention	2 (9,1)	3 (13,6)	17 (77,3)	0 (0)	22 (100)
	Post-intervention	6 (27,3)	13 (59,1)	3 (13,6)	0 (0)	100 (100)

Wilcoxon Signed Rank Test: Both interventions resulted in a statistically significant reduction in anxiety levels ($p < 0.001$).

Table 2: Wilcoxon test results, where the intervention and posttest intervention obtained a 2-tailed Sig. Value of <0.001 (<0.05). It can be concluded that there is a difference in the average anxiety score before and after the application of classical music therapy. Based on the results of table 2, it can be concluded that the provision of auditory distraction interventions is effective in reducing anxiety scores in pre sectio caesarea mothers

Wilcoxon test results where the intervention and posttest intervention obtained a Sig.2-tailed value of <0.001 <0.05, it can be concluded that there is a difference in the average anxiety score before and after the application of progressive muscle relaxation. Based on the results of Table 3, it can be concluded that

the provision of interventions is effective in reducing anxiety scores in pre-section cesarean mothers.

Discussion

Anxiety Level in Patients Before Classical Music Therapy

The results of this study are in line with research conducted by Novita (2014) on the effect of music therapy on the level of anxiety in pre-operative patients at the Regional Public Hospital. It was found that the level of anxiety in patients before receiving music therapy was moderate (67.8%). Maternal anxiety will increase as the time of delivery approaches, especially when it is known that the pregnancy requires surgical intervention. According to Toqan et al (2022), cesarean section is an artificial delivery in which the fetus is born through an incision in the front wall of the abdomen and the uterine wall, on the condition that the uterus is intact and the fetus is above 500 grams.

The anxiety they experience is usually related to all kinds of unfamiliar procedures that patients have to undergo, and also the threat to life safety due to all types of surgical procedures (Apryanti, 2023). Surgery is a difficult experience for almost all patients. Various adverse possibilities can occur, which may be dangerous for the patient and her baby if the anxiety is not handled adequately by the doctor. According to Mueller & Grunwald (2021), as pregnant women often experience anxiety, the difference lies in the different levels of anxiety. And some factors cause anxiety before giving birth, including age, education, parity, income, and husband's support.

According to the research results, the age characteristics of the respondents, as shown in Table 1, indicate that most are aged 20-35 years, with 26 respondents (59.1%) planning to give birth via caesarean section. This aligns with the theory (Shahpari et al., 2024) that the optimal reproductive age for a mother to conceive is 20-35 years old, as the uterus is more receptive to pregnancy at this age. Not only age, but parity is also a factor that influences anxiety. The characteristics of respondents, based on parity, as shown in Table 4, indicate that most are primiparas, with 23 respondents (52.3%) falling into this category. According to Kusumawati & Andini (2024), Multigravida mothers have lower levels of anxiety compared to primigravida mothers. Previous childbirth experience can reduce anxiety in subsequent childbirth.

Based on the description above, the researcher assumes that the anxiety of mothers giving birth pre-section caesarean is related to the threat to the safety of life and the worry of the baby that will be born, so that an anxious response can arise if the respondent thinks about the anxiety factors they experience. The anxiety experienced also varies from mild to severe anxiety. Anxiety can be felt in every age group. The level of anxiety that occurs in mothers with pre-section caesarean varies from mild to severe anxiety. Anxiety can be felt in every age group. The level of anxiety that occurs in mothers with pre-section caesarean varies, depending on several factors, one of which is the mother.

Anxiety Levels in Pre-Cesarean Section Patients After Classical Music Therapy

In this study, the researcher used classical music because it is considered comfortable, calming, and relaxing. The type of classical music used is Mozart's work, namely Sonata for Two Pianos in D Major, K. 448. Classical music is a genre of music whose composition originated from European culture and is classified through specific periodizations. (Weingarten et al., 2021). Classical music therapy can stimulate the body to release endogenous opioids, namely endorphins and enkephalins, which have properties like morphine, namely to reduce anxiety (Toker

et al., 2021). The research results are in line with research conducted by Hakimi et al (2021) that the decrease in anxiety levels after being given music therapy in menopausal women occurs because listening to music can activate cells in the limbic system that are related to emotional behavior and the client's autonomic nerves, the limbic system is activated and the individual becomes relaxed. The effects of classical music therapy on anxiety are distraction from thoughts about reducing anxiety, pain, stimulating a more regular breathing rhythm, reducing body tension, providing a positive picture of visual imagery, relaxation, and increasing positive mood (Ji et al., 2024).

Researchers assume that listening to classical music can make patients feel more relaxed. Patients who received a classical music intervention reported feeling calmer. They appeared relaxed and stated they were ready to start the surgical procedure. This is likely due to the relaxing effect of the music intervention, which helped them forget the anxiety they were experiencing.

The Effect of Giving Classical Music Therapy on Anxiety Levels in Pre-Sectio Caesarea Patients

The study proved that there was a difference in anxiety levels in pre-section cesarean patients before and after being given classical music therapy.

This has been proven in research; in 1996, the Journal of the American Medical Association reported on the results of a music therapy study in Austin, Texas, which found that half of pregnant women who listened to music during childbirth did not require anesthesia. According to the Theory of Shimada et al (2021), sedative music is not only a distraction effect in inhibiting the perception of anxiety. Endorphins are the primary source of the feeling of relaxation and calmness that arises. The midbrain releases Gamma-Aminobutyric Acid (GABA), which functions to inhibit the transmission of electrical impulses from one neuron to another through neurotransmitters in the synapse. The midbrain releases enkephalin and beta-endorphins, which can cause a relaxing effect that ultimately eliminates the neurotransmitters of anxiety in the somatic sensory perception and interpretation center of the brain, thereby reducing the appearance of anxiety.

Based on this, the researcher argues that listening to classical music for approximately 20 minutes can reduce anxiety levels and make clients feel relaxed in the face of a cesarean section surgery.

Anxiety Level in Patients Before Performing Progressive Muscle Relaxation Techniques

According to the Theory of. (2021), the process of giving birth and becoming a new mother can be a stressful and challenging experience, especially for those who face new or unexpected situations (Aswitami et al., 2021). The process of natural childbirth can cause fear of pain, complications that may occur, or concern for the health of the baby. This is reinforced by research by Fan et al (2021), which shows that anxiety in pregnant women before childbirth is closely related to lack of information, previous negative experiences, and perceptions of pain. Psychological preparation is needed by mothers who are about to give birth. Help from the closest people is the most important factor, as well as assistance from healthcare workers who handle it (Fathian-Dastgerdi et al., 2021).

According toMueller & Grunwald (2021), the level of anxiety in laboring mothers can be influenced by individual characteristics, one of which includes previous experiences in childbirth, such as a history of cesarean section. Based on the research, it was found that mothers who had never experienced sc were mostly 29 respondents (65.9%). This is supported by Toqan et al (2022), who found that mothers who have never undergone SC surgery tend

to have a higher level of anxiety because they do not have a real picture of the delivery process, so that feelings of fear, anxiety, and doubt about the procedures that will be undertaken appear.

The researcher assumed that anxiety that occurs before the act of delivery, especially in pregnant women who will undergo a cesarean section, arises as a response to a new situation full of uncertainty and emotional distress. This anxiety can be influenced by a lack of information, previous negative experiences, and perceptions of pain and complications.

Anxiety Level in Patients After Performing Progressive Muscle Relaxation Techniques

Anxiety experienced by mothers at the beginning of labor can affect the mother's ability to deal with the labor process. Mothers who experience increased anxiety will reduce their ability to cope with pain. In addition, the mother is also likely to experience a deceleration of the fetal heart rate (DJJ) in labor, a slow second stage, or the possibility of cesarean delivery, and also be more in need of neonate resuscitation assistance for her baby at birth (Khir & ..., 2024).

Relaxation is the most commonly used method of pain control(Winarni et al., 2022). Several studies have been conducted on the effectiveness of progressive muscle relaxation in reducing pain (Mokaberian et al., 2021). A decrease in the level of pain felt by the mother can occur due to reduced muscle tension, decreased anxiety levels, and increased distraction. A reduction in pain levels is associated with an increase in comfort felt by the mother, as evaluated by feelings of relief and relaxation. This study showed that the intervention group had lower afterpains scores. The results of this study are supported by other studies, which show that progressive muscle relaxation can help mothers reduce postpartum pain by providing relaxation, allowing them to become more comfortable (Oyarzabal et al., 2021).

Based on the description above, the researcher assumes that the provision of progressive muscle relaxation therapy interventions has an effect in reducing anxiety levels in preoperative sectio caesarea patients, after the mother finishes relaxing the body will become relaxed, so that it can improve various aspects of physical health and in the central nervous system and autonomic nerves.

Effect of Progressive Muscle Relaxation Technique on Maternal Anxiety

Research proves that there are differences in anxiety levels in pre-section cesarean patients before and after being given therapy with progressive muscle relaxation techniques. From the results of the treatment that has been carried out by researchers, involving 22 respondents (100%) who have been given progressive muscle relaxation, it turns out that the level of anxiety can decrease to almost entirely experiencing mild anxiety levels, 13 (59.1%) respondents. Based on the results of the Wilcoxon Signed Rank Test with a significance level of $\alpha = 0.05$, this means that there is an influence between the provision of therapy with progressive muscle relaxation techniques on anxiety levels in pre-section cesarean patients in the Tuban Hospital Delivery Room.

This study aligns with the Theory of Abera et al. (2024), which posits that the provision of progressive muscle relaxation is an appropriate intervention for laboring mothers. The intervention is safe, easy, and increases the mother's psychomotor abilities. The progressive muscle relaxation intervention shows that it can reduce anxiety complaints during the labor process. Progressive muscle relaxation has a physiological mechanism that can reduce fatigue gradually.

When progressive muscle relaxation exercises achieve the desired effect, namely

increasing the activity of parasympathetic nerves, the body becomes more relaxed, its organs return to normal function, and the breakdown of lactic acid that accumulates in the muscles occurs (Toqan et al., 2022). Progressive muscle relaxation techniques can help relieve muscle tension and stress associated with anxiety during labor (Pratiwi et al., 2021). This technique involves sequentially identifying and relaxing each muscle group in the body to achieve a deeper state of relaxation. Choose a comfortable and calm environment, starting with deep breathing, followed by identifying muscle groups such as the legs, hips, abdomen, shoulders, and facial muscles (Duman et al., 2022).

Researchers assume that this relaxation is effective in reducing anxiety because it can relieve muscle tension that is directly related to emotional responses. If a woman has had a difficult or traumatic childbirth experience in the past, she may feel more anxious ahead of her next delivery. When the body is physically relaxed, mental anxiety also tends to decrease.

One limitation of this study is its limited sample coverage. Although the study was conducted in two hospitals in the Tuban District, the sample size was limited. It may not reflect the condition of laboring mothers in other areas with different social, cultural, or health service characteristics. Nonetheless, future researchers are advised to expand the research location to various health facilities with different social and cultural backgrounds.

Relevance to Clinical Practice

The findings of this study are highly relevant to clinical practice as they can help patients manage or reduce anxiety before delivery or before a cesarean section. Healthcare providers should be trained to understand and respectfully engage with patients' beliefs and practices, thereby fostering trust and open communication. Integrating complementary midwifery or holistic care, especially in labor

Conclusion

The results showed that before being given the intervention, most laboring mothers experienced moderate anxiety levels. After being given classical music therapy and progressive muscle relaxation techniques, anxiety levels decreased to the mild category in most respondents. This finding indicates a significant effect of both interventions on anxiety reduction. This can be explained because classical music with a calm rhythm can stimulate the emotional center in the brain and reduce the activity of the sympathetic nervous system, thus providing a relaxing effect. Meanwhile, progressive muscle relaxation techniques help reduce physical tension directly related to stress and anxiety by systematically releasing muscle tension.

It is recommended that future researchers develop a similar study using a design that involves a control group, so that the comparison of results is clearer between the groups that received the intervention and those that did not. In addition, further research can also explore other variables that affect anxiety, so that classical music therapy and progressive muscle relaxation techniques can continue to be studied and refined as effective interventions.

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CrediT Authorship Contributions Statement

Umu Qonitun: Conceptualization, Methodology, Supervision, Writing - Original Draft

Miftahul Munir: Conceptualization, Methodology, Validation, Formal Analysis, Writing - Review & Editing

Conflicts Of Interest

There is no conflict of interest.

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