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The Impact of Murottal Recitation and Guided Imagery Therapy on Anxiety Reduction in Pregnant Women with Preeclampsia

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ABSTRACT

Background: Preeclampsia is one of the leading causes of morbidity and mortality in pregnant women, contributing to increased maternal mortality rates. One factor that exacerbates this condition is anxiety, which triggers the production of stress hormones such as adrenaline and cortisol, weakens the immune system, and increases the risk of various diseases such as hypertension, heart disorders, and gastrointestinal problems.

Objective: This research aims to determine the effect of murottal therapy and guided imagery in reducing anxiety in pregnant women with preeclampsia.

Method: The study design used a quasi-experimental method with a total of 30 participants divided into two groups, each consisting of 15 individuals. Anxiety levels were measured using the Hamilton Anxiety Rating Scale (HARS). The therapy involved guided imagery for 30 minutes, followed by a 20–30-minute rest period, and then Quranic recitation therapy for 30 minutes.

Results: Before receiving murottal therapy, the highest anxiety category was mild anxiety with 10 participants, while in the guided imagery therapy group, the highest category was moderate anxiety with 12 participants. After undergoing murottal and guided imagery therapies, the most prevalent anxiety category changed to no anxiety, with 10 participants in the murottal group and 9 participants in the guided imagery group. The results of the paired t-test on Murottal therapy showed a p-value of $0.000 < 0.05$, the guided imagery treatment had a p-value of $0.000 < 0.05$ and the results of the independent t-test between the murottal treatment group and guided imagery had a p-value of $0.000 < 0.05$.

Conclusion: Statistical analysis using paired t-tests and independent t-tests showed that both methods were effective in reducing anxiety ($p < 0.05$), but guided imagery was more effective, as indicated by a higher average reduction in anxiety (13.67). Therefore, this study recommends guided imagery as the primary intervention and Quran recitation as an alternative for addressing anxiety in pregnant women with preeclampsia.

Keywords: *Murottal Guide Imagery; Preeclampsia; Anxiety; Pregnant woman*



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BACKGROUND

Although preeclampsia is one of the most common pregnancy complications and significantly contributes to maternal morbidity and mortality, there are still limitations in research that thoroughly examine the relationship between anxiety in pregnant women and the increased risk of preeclampsia. Furthermore, effective non-pharmacological interventions to reduce anxiety in pregnant women with preeclampsia have not been comprehensively studied, especially within the cultural context and midwifery practices in Indonesia. Therefore, research focusing on anxiety management strategies that can help reduce the risk of preeclampsia complications and improve overall maternal health is needed. This research is highly relevant to midwifery practice because midwives play a central role in monitoring and caring for pregnant women, including early detection and management of pregnancy complications such as preeclampsia (Mulyani et al., 2024).

Preeclampsia is a pregnancy complication that can occur during pregnancy, childbirth, and postpartum, characterized by hypertension, edema, and elevated proteinuria. Preeclampsia generally occurs after 20 weeks of gestation and up to 48 hours postpartum. Pregnancies complicated by preeclampsia often cause heightened anxiety in expectant mothers, which may further exacerbate the severity of the condition (Meinawati & Khairoh, 2023).

Anxiety in pregnant women leads to the production of adrenaline and an increase in cortisol levels. High cortisol can impair the immune system, making the body more susceptible to infections and disorders, including cardiovascular issues, hypertension, digestive problems, and pre-eclampsia.

According to Rahmawati et al., (2022) maternal anxiety during pregnancy and childbirth can lead to complications and increase the risk of preeclampsia. Pregnant women experiencing anxiety due to their complications often suffer from sleep disturbances either too little or excessive sleep which can trigger elevated blood pressure. This is due to hemostatic processes that regulate blood pressure balance during pregnancy.

According to the WHO, (2023), approximately 287,000 maternal deaths occur annually worldwide due to complications during pregnancy and childbirth. Preeclampsia, as part of hypertensive disorders in pregnancy, is one of the main risk factors contributing to high maternal mortality rates. In Indonesia, preeclampsia is reported as a significant cause, contributing to approximately 24% of all maternal deaths. In East Java, the incidence of preeclampsia has shown an upward trend, rising from 26.92% in 2019 to 34.88% in 2020.

The Maternal Mortality Rate (MMR) is a key indicator in assessing the health status of a country's population. According to data from the Kementrian Kesehatan, (2020),



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Indonesia's MMR in 2019 was recorded at 305 deaths per 100,000 live births, and increased to 359 deaths per 100,000 live births in 2020. Despite various efforts, this figure remains far from the national target set in the Sustainable Development Goals (SDGs) for 2030, which is 30 deaths per 100,000 live births.

Data from the Family Health Program at the Indonesian Ministry of Health shows that maternal deaths increased to 4,627 cases in 2020, up from 4,221 in 2019 (MoH RI, 2021). The leading causes of maternal death in 2020 in Indonesia were hemorrhage (1,330 cases), hypertension during pregnancy (1,110 cases), and circulatory system disorders (230 cases).

OBJECTIVE

This research aims to determine the effect of murottal therapy and guided imagery in reducing anxiety in pregnant women with preeclampsia. This study has obtained approval from the research ethics committee number: PN.03.10/F.III/3387/2024.

METHODS

The research design used quasi-experimental with a sample of 15 respondents from each group. The instrument used was the Hamilton Anxiety Rating Scale (HARS), with categories of not anxious, mild, moderate, severe and very severe anxiety. with categories of not anxious, mild, moderate, severe and very severe anxiety. The sampling technique used purposive sampling, with inclusion criteria of pregnant women diagnosed with severe preeclampsia accompanied by proteinuria who completed the program. Guided imagery and murottal therapies were administered sequentially, starting with guided imagery for 30 minutes, followed by a 20–30 minute interval, then continued with music therapy for 30 minutes. Bivariate analysis in this study was conducted using the paired t-test.

RESULTS

Univariate Analysis

- a. Pre-Test Anxiety Levels in Mothers Receiving Murottal Therapy

Table 1. Pre-Test Anxiety Levels with Murottal Al-Qur'an Therapy in Pregnant Women with Preeclampsia in the Delivery Room March 2024

Anxiety Level	<i>Pre Test Terapi Murottal</i>	
	N	%
Not Anxious	0	0
Mild Anxiety	10	67



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Anxiety Level	<i>Pre Test Terapi Murottal</i>	
	N	%
Moderately Anxious	4	26
Severe Anxiety	1	7
Very Severe Anxiety	0	0
Total	15	100

Source: Primary Research Data

Based on Table 1 above, the dominant level of anxiety before the administration of Murottal therapy was in the mild anxiety category, with 10 respondents (67%). Additionally, 4 respondents (26%) experienced moderate anxiety, and 1 respondent (7%) experienced severe anxiety

b. Post-test maternal anxiety with Murottal therapy

Tabel 2. Post-Test Anxiety Level with Al-Quran Recitation Therapy in Pregnant Women with Preeclampsia, March 2024

Anxiety Level	<i>Post Test Terapi Murottal</i>	
	N	%
Not Anxious	10	67
Mild Anxiety	5	33
Moderately Anxious	0	0
Severe Anxiety	0	0
Very Severe Anxiety	0	0
Total	15	100

Source: primary research data

In table 2 above, it shows the level of anxiety after Murottal therapy, there was a decrease in anxiety to no anxiety, namely 10 respondents (67%) and the rest were in the mild anxiety category, namely 5 respondents (33%).

a. Pre Test Maternal Anxiety with Guided Imagery

Tabel 3. Pre-Test Anxiety Level with Guided Imagery in Pregnant Women with Preeclampsia in the Delivery Room, March 2024

Anxiety Level	<i>Pre Test Guide Imagery</i>
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	n	%
Not Anxious	0	0
Mild Anxiety	2	13
Moderately Anxious	12	80
Severe Anxiety	1	7
Very Severe Anxiety	0	0
Total	15	100

Source: primary research data

Table 3 above shows that the level of anxiety of respondents before guided imagery was carried out was dominated by the moderate anxiety category with 12 respondents (80%), mild anxiety 2 respondents (13%) and only 1 respondent (7%) in the severe anxiety category.

b. Post Test for Maternal Anxiety with Guided Imagery

Tabel 4. Post-Test Anxiety Level with Guided Imagery in Pregnant Women with

Preeclampsia in the Delivery Room, March 2024

Anxiety Level	Post-test <i>Guide Imagery</i>	
	n	%
Not Anxious	9	60
Mild Anxiety	5	33
Moderately Anxious	1	7
Severe Anxiety	0	0
Very Severe Anxiety	0	0
Total	15	100

Source: primary research data

In table 4 above, it shows the level of anxiety after being given guided imagery action, there is a decrease in the level of anxiety which is dominated by the non-anxious category, namely 9 respondents (60%) and 5 respondents (33%) in the mild anxiety category and still 1 respondent (7%) experiencing moderate anxiety.

Before the t-test was carried out, a normality test was first carried out using Shapiro Wilk and showed a probability value of the p value of the normality test of more than α 0.05, so it was concluded that the data was normally distributed, so that statistical testing could be continued using the t-test.



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Bivariat Analysis

- a. The Effect of Murrotal Therapy on Anxiety in Pregnant Women with Preeclampsia

Tabel 5. Effects of Al-Quran Recitation Therapy on Anxiety Levels in Pregnant Women with Preeclampsia in the Delivery Room, March 2024

	Anxiety Levels of Al-Quran Recitation Therapy				Total	<i>p-value</i>
	Mild n (%)	Moderate n (%)	Severe n (%)	Very Severe n (%)		
Posttest	0 (0)	10 (33.3)	4 (13.3)	1 (3.3)	15 (50)	0.000 < 0.05
Pretest	10 (33.3)	5 (16.7)	0 (0)	0 (0)	15 (50)	
Total	10 (33.3)	15 (50.5)	4 (13.3)	1 (3.3)	30 (100)	

The effect of treatment with Murrotal therapy of the holy verses of the Qur'an, according to table 5 above, shows a significant decrease in the level of anxiety after being given Murrotal Alqur'an therapy. Testing on anxiety score data with a paired t-test, obtained a significance value of $0.000 < \alpha 0.050$. Thus, H_0 is rejected and H_1 is accepted, so the conclusion is that there is an effect of Murrotal Alqur'an therapy treatment on reducing anxiety.

- b. The Influence of Guide Imagery on Anxiety in Pregnant Women with Preeclampsia

Tabel 6. The Effect of Guide Imagery on Anxiety Levels in Pregnant Women with Preeclampsia in the Delivery Room, March 2024

	Anxiety Levels of Guide Imagery				Total	<i>p-value</i>
	Mild n (%)	Moderate n (%)	Severe n (%)	Very Severe n (%)		
Posttest	0 (0)	2 (6.7)	12 (40)	1 (3.3)	15 (50)	0.000 < 0.05
Pretest	9 (30)	5 (16.7)	1 (3.3)	0 (0)	15 (50)	
Total	9 (30)	7 (23.3)	13 (43.3)	1 (3.3)	30 (100)	

Based on table 6 above, it shows a significant decrease in anxiety levels after being given Guide Imagery. Testing the anxiety score data with a paired t-test, obtained a



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significance value of $0.000 < \alpha 0.050$. Thus, H_0 is rejected and H_1 is accepted, so the conclusion is that there is an effect of Guide Imagery treatment on reducing anxiety.

c. Effectiveness of Murottal and Guided Imagery on Anxiety in Pregnant Women with Preeclampsia

Tabel 7. The Effectiveness of Murottal Therapy and Guided Imagery on Anxiety Levels in Pregnant Women with Preeclampsia in the Delivery

Perlakuan	Tendensi Sentral	Pre Test	Post Test	p-value
Murottal Therapy	Mean	26	19	
	Median	24	18	
	Modus	21	18	
	Std Deviasi	6,5	4,2	
	Minimum	21	14	
	Maximum	43	27	
Guide Imagery	Mean	33	19	0,000
	Median	33	19	$< \alpha$
	Modus	28	15	0,050
	Std Deviasi	5,9	4,4	
	Minimum	24	13	
	Maximum	47	28	

Source: primary research data

Table 7 above shows the mean anxiety scores before and after each intervention. The table indicates that the mean difference in anxiety scores for the Murottal therapy group was 7, while the Guided Imagery group had a mean difference of 14. Other measures of central tendency also show a decrease in anxiety levels following both interventions.

To determine which intervention was more effective between Murottal Al-Qur'an therapy and Guided Imagery, the pre-post test score differences for each group were analyzed. The reduction in anxiety scores was found to be greater in the Guided Imagery group compared to the Murottal group.

Based on the results of the Independent t-test, the significance value was $0.000 < 0.050$, indicating that H_0 is rejected and H_1 is accepted. It can be concluded that Guided Imagery is more effective in reducing anxiety among pregnant women with preeclampsia than Murottal therapy.

DISCUSSION

Anxiety arises as a form of self-anticipation toward potential danger. Research on anxiety in pregnant women with preeclampsia shows that pregnant women experiencing anxiety have a risk of developing preeclampsia up to 7.84 times higher. If anxiety occurs



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in women who already have preeclampsia, it can worsen the condition. Anxiety also affects vascular spasms, which can trigger an increase in blood pressure (Cong et al., 2025).

Guided imagery is a technique that utilizes the power of the mind to direct the body in the process of healing and maintaining health or relaxation. This method involves communication with all the senses, such as vision, touch, guidance, and hearing. Relaxation achieved through guided imagery can make the body feel calmer and more comfortable during sleep. Additionally, by practicing slow deep breathing, the body becomes increasingly relaxed (Saputri & Rahayu, 2020).

Anxiety experienced by pregnant women plays a role in triggering the occurrence of preeclampsia. Research by Saddam et al., (2023) shows that pregnant women who experience anxiety have a 4.6 times higher risk of developing preeclampsia compared to those without anxiety

Murottal Al Qur'an is the recitation of Qur'anic verses that are delivered properly, applying correct tajwid, and accompanied by melody by a Qari (Agustin et al., 2025). This practice can help reduce anxiety levels. Anxiety itself is an emotion or feeling that arises as an initial response to psychological stress and threats to things that are important to the individual. Anxiety is often described as feelings of insecurity, doubt, helplessness, restlessness, worry, and nervousness, which are usually accompanied by physical discomfort (Agustin et al., 2025).

This research is supported by a study conducted by Meinawati & Khairoh, (2023) which showed that pregnant women who regularly listen to murottal experience calmness and feel more relaxed during pregnancy. This helps them accept that pregnancy, whether with or without complications, is a normal condition, thereby contributing to a reduction in anxiety levels. Furthermore, the relaxation gained from listening to murottal also affects anxiety, as reported in the study by Islamiaty et al., (2023) which found a significant difference in anxiety scores before and after listening to murottal.

Sound influences the overall physiological functions of the body through the activation of the sensory cortex, which then triggers further activity in the deeper parts of the neocortex, and continues to the limbic system, hypothalamus, and autonomic nervous system (Xiao et al., 2023)

The study conducted by Aji et al., (2022) found that guided imagery has a significant effect in reducing anxiety levels in the respondents. The combination of therapies applied had a positive impact not only on anxiety but also on blood pressure, making this method an effective independent nursing practice.

Furthermore Suhermi & Karuniawati, (2024) also stated that the use of distraction through guided imagery is effective in reducing anxiety in pregnant women, in line with



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previous research findings.

CONCLUSION

The case study results indicate that the application of music therapy and guided imagery in pregnant women with preeclampsia was able to reduce anxiety levels after three intervention sessions. This was marked by a decrease in anxiety levels from moderate anxiety to mild anxiety.

However, this study has limitations, namely the relatively small sample size. In addition, control over other factors that might influence the intervention outcomes is needed to ensure more accurate findings.

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