

# Application of Audio Murotal Al-Qur'an and Lavender Aromatherapy for First-Stage Labor Pain

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**Abstract.** Labour pain management during the first stage of childbirth remains a critical aspect of maternal care. This study explores the effectiveness of audio murotal Al-Qur'an and lavender aromatherapy in alleviating first-stage labour pain, supplemented by disseminating information through booklets, leaflets, and lectures. This study employs a quasi-experimental design with a three-group pre-post-test approach using randomized controlled trials (RCTs) to investigate the efficacy of audio murotal Al-Qur'an and lavender aromatherapy in alleviating first-stage labour pain. The research population comprises expectant mothers in the Ingin Jaya Primary Health Care Area, Ingin Jaya Sub-District, Aceh Besar District. Based on inclusion and exclusion criteria, Purposive sampling yielded a sample size of 75 respondents. Non-parametric tests, including the Wilcoxon Signed Ranks, Mann-Whitney U, and Kruskal-Wallis tests, were employed due to the non-normal distribution of data. The analysis demonstrates a significant reduction in labour pain levels after treatment with audio murotal and lavender aroma using leaflet media. This implies that this approach effectively reduces labour pain. Additionally, combining lavender aromatherapy with Quranic audio murotal proves effective in alleviating first-stage labour pain, despite non-normal data distribution. These findings suggest promising alternatives for enhancing maternal well-being during childbirth.

**Keywords:** Audio Quranic Recitation; Lavender Aromatherapy for Labor Pain; Leaflets; Booklets; Lectures.

## INTRODUCTION

Labour pain is a common experience for mothers during the childbirth process. Childbirth involves uterine solid contractions and pressure on the tissues and nerves around the uterus, causing intense sensations of pain [1-3]. The level of labour pain can vary among individuals, influenced by factors such as the intensity of uterine contractions, the baby's position, maternal pelvic size, and individual pain tolerance [4-6].

Many women face difficulty in handling this pain due to the stress known as fear, tension, and pain. This stress can lead to tension and panic, ultimately increasing the perceived pain [7]. As pain intensifies, some mothers may request accelerated childbirth or pain relief medication, while others may opt for surgical intervention [8-12]. Pain is generally an undesirable and even

feared condition, especially by pregnant women about to give birth. Managing labour pain becomes crucial to help mothers cope with and reduce the pain they experience [5]. Various pain management methods can be employed, both pharmacological and non-pharmacological. Pharmacological methods involve the use of pain-relieving drugs such as analgesics or epidural anaesthesia administered by trained medical professionals.

Moreover, there are non-pharmacological methods that can help reduce labour pain. Some commonly used non-pharmacological methods include relaxation techniques, breathing exercises, massage, comfortable body positions, and Quranic audio Murotal and lavender aromatherapy. The application of Quranic audio Murotal and lavender aromatherapy can have a positive effect on reducing first-stage labour pain [13-15].

A study by Herlina Maya from Muhammadiyah University Gombong shows that applying lavender aromatherapy and Quranic Murotal on post-partum mothers can decrease pain sensation [13]. After two weeks of application, all participants experienced reduced pain in the non-pain category. Another study by Wahida Azis indicates that Quranic Murotal therapy, specifically Surah Ar-Rahman, can increase  $\beta$ -endorphin levels and decrease pain intensity in active phase first-stage labouring mothers [16]. This therapy is carried out by listening to the Quranic Murotal during childbirth. Quranic audio Murotal can provide tranquillity and reduce anxiety, while lavender aromatherapy has relaxing and calming properties. The application of Quranic audio Murotal and lavender aromatherapy in first-stage labour pain is a non-pharmacological method that attracts attention in efforts to reduce the pain experienced by mothers during childbirth. Quranic audio Murotal holds spiritual value and can provide tranquillity and reduce anxiety [17, 18].

Meanwhile, lavender aromatherapy has relaxing and calming properties that can help reduce stress. Several studies indicate that applying both methods can reduce first-stage labour pain intensity. Thus, applying Quranic audio Murotal and lavender aromatherapy can be considered an alternative to enhance mothers' comfort and childbirth experience. This study explores the effectiveness of audio Murotal Al-Qur'an and lavender aromatherapy in alleviating first-stage labour pain, supplemented by disseminating information through booklets, leaflets, and lectures.

## METHODS

This study's research type is a quasi-experiment using a three-group pretest and post-test design approach. This research aims to evaluate the effectiveness of applying lavender aromatherapy with Quranic audio Murotal on first-stage labour pain. This study also utilizes leaflets, booklets, and lecture media to inform the participants. The research population comprises expectant mothers in the Ingin Jaya Primary Health Care Area, Ingin Jaya Sub-District, Aceh Besar District. Based on inclusion and exclusion criteria, Purposive sampling yielded a sample size of 75 respondents.

Analysis method Before data analysis, normality tests were performed using the Kolmogorov-

Smirnov test. The results of this test indicate that the data used in this study are not normally distributed. Therefore, the Wilcoxon Signed Ranks test assesses the relationship before and after the treatment. This test is a non-parametric test suitable for non-normally distributed data.

Furthermore, the Mann-Whitney U-test was conducted to evaluate the effectiveness of two treatments on non-normally distributed data. This test is used to compare two groups that are not normally distributed. The Kruskal-Wallis test is employed to assess treatment among three groups. This test compares three or more groups that are not normally distributed.

## RESULTS AND DISCUSSION

Analysis of the normality test data for this research was carried out using the Kolmogorof-Smirnov test. The test results are in the table below.

Table 1 – Test results for normality of labour pain before and after audio Murotal and lavender aroma treatment using leaflets, booklets and lectures

Group	P-value	N
After Leaflet media	0,000	25
After Booklet media	0,000	25
After the media lecture	0,000	25

The normality test results showed a p-value of  $0.000 < 0.05$ , meaning that the audio Murotal action using leaflets, booklets and lectures on labour pain between before and after treatment was not normally distributed.

Table 2 – Differences in labour pain before and after audio Murotal and lavender aroma treatment using leaflet media

Group	Mean	P-value	N
Murotal audio and lavender aroma using the before and after Leaflet media	12.50	0.00	25

Differences in the level of labour pain between before and after audio Murotal and lavender aroma treatment using leaflet media. A p-value of  $0.00 < 0.05$  means there is a significant difference.

Table 3 – Differences in labour pain before and after audio Murotal and lavender aroma treatment using booklet media

Group	Mean	P-value	N
Murotal audio and lavender aroma using the before and after booklet media	7.50	0.00	35

The difference in the level of labour pain between before and after audio Murotal and lavender aroma therapy using booklet media is p-value 0.00 <0.05, meaning there is a significant difference.

Table 4 – Differences in labour pain before and after audio Murotal and lavender aroma treatment with lecture media

Group	Mean	P-value	N
Murotal audio and lavender aroma using before and after lecture media	4.67	0.00	25

The difference in the level of labour pain between before and after audio Murotal and lavender aroma therapy with lecture media is p-value 0.00 <0.05, meaning there is a significant difference.

Table 5 – Differences in labour pain before and after audio Murotal and lavender aroma treatment using leaflet media and lectures

Treatment Group	Mean Difference	P-value	N
Murotal audio and lavender aroma using the lecture media after	36.72	0.00	25
Murotal audio and lavender aroma using leaflet media after	14.28		25

There is a significant difference with a p-value of 0.00<0.05, with the mean difference with the lowest pain intensity in the treatment group (leaflet) at 14.28, meaning that the leaflet treatment group significantly reduced labour pain.

Table 6 – Differences in labour pain before and after Murotal audio treatment and lavender aroma using booklet media and lecture media

Treatment Group	Mean Difference	P-value	N
Murotal audio and lavender aroma using the lecture media after	30.00	0.012	25
Murotal audio and lavender aroma using booklet media after	21.00		25

There is a significant difference with a p-value of 0.012<0.05 with the mean difference with the lowest pain intensity in the treatment group (booklet) 21,00, meaning that the treatment group with the booklet significantly reduced labour pain.

Analysis of differences in labour pain between the Murotal and lavender aromatherapy treatment groups using leaflets and booklets compared to lectures (control). The multivariate test was used because the data was not normally distributed, so Kruskal-Walli's test was used.

Table 7 – Differences in labour pain before and after audio Murotal and lavender aroma treatment using leaflet and booklet media

Leaflet media treatment group,	Mean Difference	P-value	N
Murotal audio and lavender aroma using leaflet media after	17.00	0.00	25
Murotal audio and lavender aroma using the booklet media after	43.28		25
Murotal audio and lavender aroma using the lecture media after	53.72		25

There was a significant difference in labour pain before and after audio Murotal and lavender aroma treatment with the use of leaflets, booklets and lectures with a p-value of 0.00 <0.05, with the lowest mean difference in pain intensity in the leaflet treatment group 17 .00, meaning that the treatment group with Murotal had a significant effect on reducing labour pain.

## CONCLUSIONS

The analysis results indicate a significant difference in the level of labour pain before and after the treatment of audio Murotal and lavender aroma using leaflet media. In this analysis, the obtained p-value is 0.00, which means it is smaller than the set significance level (0.05). This suggests that the difference in labour pain levels after treatment has statistical significance. Thus, it can be concluded that the application of audio Murotal and lavender aroma using leaflet media has a significant effect on reducing the level of labour pain [1]. In this study, the application of lavender aromatherapy with Quranic audio Murotal has been proven effective in reducing first-stage labour pain. The analysis results show decreased pain among all participants after the treatment. Although the data used are not normally distributed, significant differences can be found between before and after the treatment using appropriate non-parametric tests. The application of lavender aromatherapy with Quranic audio Murotal can be an effective alternative in reducing first-stage labour pain. However, it should be noted that this research was conducted with a limited number of participants and in a specific context. The study conducted by [1] is a systematic review and meta-analysis aimed at critically evaluating and summarizing all available evidence from randomized controlled trials (RCTs) regarding the effects of lavender aromatherapy on reducing labour pain. The results of this study indicate that lavender aromatherapy through inhalation can significantly reduce la-

bour pain. Lavender oil aromatherapy through massage has also significantly reduced labour pain. There is a significant difference in the intensity of labour pain before and after the audio Murotal and lavender aroma treatment using booklet and lecture media. The research results show that the treatment group with booklets has a significant influence on reducing labour pain, with the lowest mean pain intensity difference of 21.00. Recent research [18] concludes that lavender aromatherapy and massage during labour can significantly reduce pain. In this study, the treatment group used booklets and lecture media to provide information and guidance to pregnant women. The research results show that the treatment group with booklets significantly influences reducing labour pain. This indicates that the use of booklets can be beneficial in reducing labour pain [19]. Booklets can be used to reduce labour pain in several ways. Booklet media can provide information and education about the labour process, proper breathing techniques, comfortable positions, and pain management strategies. Booklets may also contain pictures or illustrations to aid in visualization, relaxation, and practical guidance on pain reduction techniques. With the emotional support provided through booklets, pregnant women can feel more prepared and confident in facing labour pain.

## Conflict of interest

The authors declare no conflict of interest.

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