

# The Impact of Perineal Massage on Reducing Perineal Tears: A Literature Review

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## ABSTRACT

**Background:** Perineal tears occurs in 85% of women undergoing vaginal delivery and can lead to various complications such as bleeding, reproductive organ dysfunction, and lacerations. **Objective:** This study aims to review the effect of perineal massage on the occurrence of perineal tears in postpartum women, based on a comprehensive analysis of existing literature. **Method:** A narrative literature review approach was employed in this study. Secondary data from Google Scholar, PubMed, and ScienceDirect published within the last 10 years were analyzed, with a total of nine articles included in the review. **Result:** Perineal massage, particularly when started in the third trimester, has been shown to reduce the incidence of perineal tears and the need for episiotomy. Studies indicated that regular massage significantly improved perineal tissue elasticity and reduced the severity of perineal tears.

**Keywords:** perineal tears; perineal massage; third semester.

## INTRODUCTION

According to the World Health Organization in 2019, every two minutes, a pregnant woman dies due to complications of pregnancy, primarily occurring in low- and middle-income countries. In 2023, the Maternal Mortality Rate (MMR) across Indonesia showed an average of over 100 deaths per 100,000 live births [1]. Approximately 25–30% of maternal deaths worldwide are caused by postpartum hemorrhage, which can result from complications such as perineal tears [2].

Perineal tears occur in 85% of pregnant women undergoing vaginal delivery. These tears can lead to complications during the second stage of labor, including reproductive organ dysfunction, bleeding, and lacerations [3].

The Sultan Classification is used to assess the severity of perineal tears for easier identification. This classification divides perineal tears into several degrees based on depth and the structures involved. First-degree tears involve mild tearing that affects only the perineal skin. Second-degree tears extend to the perineal muscles without involving the anal sphincter. Third-degree tears are deeper, reaching the anal sphincter. Fourth-degree tears are the most severe, involving the anal sphincter complex and the anal mucosa. This classification guides medical treatment to prevent further complications [4].

Based on a study by Dewi Eriyanti and Nelvi in 2015 involving 183 postpartum women, 76.3% experienced first- and second-degree perineal tears, while 23.7% experienced third-degree tears. Second-degree tears were twice as likely to occur in primiparous pregnancies [5].

One method to prevent perineal tears, according to Mutmainah et al., in 2019, is perineal massage. This involves massaging the perineum—the area between the vagina and the anus. Perineal massage can enhance the elasticity and flexibility of connective tissue and collagen in the perineum during childbirth. Antenatal perineal massage has been shown to reduce the risk of second- and third-degree tears and decrease the need for episiotomy at delivery [6].

## METHOD

This study employed a narrative literature review design. Secondary data were gathered from various databases such as Google Scholar, PubMed, and ScienceDirect were used to retrieve information, with specific criteria applied in selecting journals: they had to be published within the last 10 years, possess an ISSN or DOI, have relevant titles, and align with the study's focus. These journals served as the primary materials for analysis. The analysis involved comparing findings across the selected journals by

identifying similarities and differences and summarizing results based on predetermined parameters, such as the timing and frequency of perineal massage. The results were synthesized to achieve the study's objective: to provide an overview of the effect of perineal massage on the incidence of perineal tears in postpartum women.

## RESULTS AND DISCUSSION

### Massage Frequency

This study was conducted in various locations, including healthcare facilities, hospitals, and independent midwifery practices, with a population of pregnant women meeting the inclusion criteria. A total of nine international and national studies involving both primigravida and multigravida pregnant women were included, as both groups are generally at risk of perineal tears. Respondents were typically in gestational weeks 34 through the term to ensure massages were performed in the late stages of pregnancy.

The number of respondents in each study ranged from 20 to 190 pregnant women, depending on the research method employed, which included four quasi-experimental, two pre-experimental, one randomized clinical trial, one true experimental study, and one posttest-only design. Respondents generally shared similar characteristics: third-trimester pregnant women with gestational ages of 34 weeks or more. This group was selected because the perineal tissue begins to exhibit increased elasticity during this period, making perineal massage more effective in minimizing the risk of rupture or laceration during delivery. Furthermore, most studies focused on primigravida women, who are more vulnerable to perineal trauma compared to multigravida women.

Factors such as timing, frequency, and duration have been central to research on the effectiveness of perineal massage and its impact on outcomes like elasticity, tear prevention, and episiotomy rates. Fitri and Simamora reported that daily massage for 15 minutes, starting at 34 weeks of gestation in primiparous women under 35 years, significantly reduced the risk of perineal tears and episiotomy tenfold [7]. Similarly, Ma'rifah and Aisyah found that perineal massage performed at least four times a week for 10 minutes, beginning at 34–35 weeks of gestation, effectively reduced spontaneous tears and the need for episiotomy [8].

Some studies emphasize shorter but effective protocols for late pregnancy. Choirunnisa et al. suggested performing massage five times a week for 5–10 minutes, starting from 35–36 weeks of gestation, to improve perineal elasticity before labor [9]. Yudianti et al. demonstrated that daily massages for 15 minutes during the week before labor yielded promising results [10].

A more targeted approach during labor was evaluated by Shahoei et al., who found that a 30-minute massage during the second stage of labor in women with gestational ages of 38–42 weeks

reduced pain, perineal tears, and episiotomy rates [11].

Comparing outcomes based on intervention adherence, Suliswati et al. observed that among 30 women with gestational ages above 34 weeks, those who performed massage 3–4 times a week for 4 minutes per session, or once a week for 10 minutes, experienced fewer tears than those who did not [12]. Anggraini and Anggasari emphasized the importance of consistency, showing that primigravida women who performed 31–40 massage sessions from the third trimester, each lasting more than 5 minutes, avoided perineal tears during delivery [13]. Finally, in a hospital-based study in Sidenreng Rappang District, Jamir, and Tajuddin reported that 14 massages over 14 days, starting at 34 weeks of gestation, improved perineal elasticity and significantly reduced the number of perineal tears [14]. Similarly, Purnami and Noviyanti found that massages conducted for two weeks before labor, starting at 36 weeks, effectively reduced trauma and the need for episiotomy, especially in primiparous women [15].

### Impact of Perineal Massage

Perineal massage has been shown to be effective in reducing the incidence of perineal tears based on various studies. Choirunnisa and Suprihatin reported that mothers who routinely performed perineal massage since 35 weeks of gestation had a lower incidence of perineal tears (26.7%) than the control group (66.7%) with a significant p-value of 0.028 [9]. Similar results were found by Fitri and Simamora, who noted that the incidence of perineal tears in the intervention group was only 6.3%, much lower than 68.7% in the control group, demonstrating the effectiveness of perineal massage in primiparous pregnant women aged under 35 years [7].

Another study conducted by Ma'rifah and Aisyah in Surabaya reported that the incidence of lacerations in the intervention group dropped to 20% compared to 95% in the control group [8]. Sulistiawati et al. confirmed that the frequency of perineal massage three to four times a week for three to four weeks before labor can increase protection against perineal tears. This study showed that 80% of respondents in the intervention group did not experience tears, while only 60% in the control group were free from tears [12]. Jamir and Tajuddin, in a study at Nene Mallomi Hospital, also noted a significant reduction in the risk of perineal tears with a p-value = 0.027 after daily perineal massage up to a total of 14 sessions [14].

However, some studies reported less consistent results. Purnima and Noviyanti found that after giving perineal massage for at least two weeks, there was no significant difference in the incidence of perineal laceration between the intervention and control groups ( $p = 0.433$ ) [15]. On the other hand, a randomized clinical trial by Shahoei et al. Showed positive results, with a lower incidence of first (23.16%) and second (2.11%) degree lacerations in

the intervention group compared to the control group, with no third and fourth degree lacerations [11].

Consistency was also seen in a study conducted by Ratuk et al., which showed that perineal massage from 34 weeks of gestation was effective in reducing perineal trauma, episiotomy, and laceration risk [16]. Faroha et al. support these findings, stating that perineal massage performed in the third trimester can increase blood flow, elasticity, and relaxation of the pelvic floor muscles, while preparing the perineal tissue for the labor process [17].

## CONCLUSIONS

Perineal massage has been shown to reduce the risk of perineal tears by increasing the elasticity of perineal tissue, particularly during the third trimester of pregnancy. While its effectiveness may vary based on individual factors and massage techniques, it remains a recommended method to minimize perineal trauma during labor. Healthcare professionals are encouraged to provide tailored education and guidance to pregnant women to optimize the benefits of perineal massage.

## ACKNOWLEDGMENT

The author would like to express sincere gratitude to te supervisors for their invaluable guidance and support throughout the process of completing this review study and provide essential insights, helping to better understand and explore the topics discussed in this research.

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