

## LACTATION READINESS AMONG THIRD-TRIMESTER PREGNANT WOMEN FOLLOWING A BREASTFEEDING PREPARATION CLASS

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### ABSTRACT

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Breastfeeding readiness is an essential aspect that should be prepared during pregnancy to support successful lactation after childbirth. Insufficient understanding among pregnant women regarding lactation physiology, lactogenesis II, early initiation of breastfeeding, as well as proper breastfeeding positioning and latch techniques may increase the risk of breastfeeding problems in the early postpartum period. Therefore, antenatal education through breastfeeding preparation class is an important preventive strategy in midwifery practice. This study aimed to analyze the effect of third-trimester breastfeeding preparation class on lactation readiness among pregnant women. This study employed a quantitative pre-experimental one-group pretest–posttest design with a sample of 25 third-trimester pregnant women selected using purposive sampling. The intervention consisted of a breastfeeding preparation class lasting approximately 60 minutes using educational leaflets. Lactation readiness was measured using a questionnaire before and after the intervention and analyzed using the Wilcoxon Signed Rank test. The results showed that the mean lactation readiness score increased from  $50.24 \pm 2.55$  to  $78.52 \pm 4.93$ , with a statistically significant difference ( $p < 0.05$ ). This study concludes that third-trimester breastfeeding preparation class have a significant effect on improving lactation readiness among pregnant women.

Keywords: Breastfeeding preparation class; third trimester pregnancy; lactation readiness; antenatal education; pregnant women

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## ABSTRAK

Kesiapan menyusui merupakan aspek penting yang perlu dipersiapkan sejak masa kehamilan untuk mendukung keberhasilan proses laktasi setelah persalinan. Kurangnya pemahaman ibu hamil mengenai fisiologi laktasi, laktogenesis II, Inisiasi Menyusu Dini (IMD), serta teknik posisi dan perlekatan menyusui dapat meningkatkan risiko masalah menyusui pada periode awal postpartum. Oleh karena itu, edukasi antenatal melalui kelas persiapan menyusui menjadi strategi preventif yang penting dalam praktik kebidanan. Penelitian ini bertujuan untuk menganalisis pengaruh kelas persiapan menyusui trimester III terhadap kesiapan laktasi ibu hamil. Penelitian menggunakan desain kuantitatif pre-eksperimental one group pretest–posttest dengan sampel 25 ibu hamil trimester III yang dipilih secara purposive sampling. Intervensi berupa kelas persiapan menyusui selama  $\pm 60$  menit menggunakan media leaflet edukatif. Kesiapan laktasi diukur menggunakan kuesioner sebelum dan sesudah intervensi dan dianalisis menggunakan uji Wilcoxon Signed Rank. Hasil menunjukkan rerata skor kesiapan laktasi meningkat dari  $50,24 \pm 2,55$  menjadi  $78,52 \pm 4,93$ , dengan perbedaan yang bermakna secara statistik ( $p < 0,05$ ). Kesimpulan penelitian ini menunjukkan bahwa kelas persiapan menyusui trimester III berpengaruh signifikan terhadap peningkatan kesiapan laktasi ibu hamil.

Kata Kunci : kelas persiapan menyusui; kehamilan trimester III; kesiapan laktasi; edukasi antenatal; ibu hamil

## INTRODUCTION

Exclusive breastfeeding during the first six months of life is a global health recommendation, as it has been proven to provide optimal nutrition, enhance infant immunity, and reduce infant morbidity and mortality. However, despite its well-established benefits, the coverage of exclusive breastfeeding in Indonesia remains suboptimal, reaching approximately 66.4% in 2024. Although this figure reflects an increasing trend compared to previous years and continuous governmental efforts through promotive and supportive policies, the national target has not yet been achieved. This situation highlights persistent challenges in breastfeeding counseling practices and maternal readiness to breastfeed optimally (WHO Indonesia, 2025).

Suboptimal breastfeeding coverage is frequently associated with inadequate maternal lactation readiness, which encompasses physical readiness, knowledge, skills, and preparedness for breastfeeding practices beginning in the antenatal period (Shofiya et al., 2024; WHO Indonesia, 2025). Pregnant women who lack adequate understanding of lactation physiology and breastfeeding practices are at a higher risk of experiencing difficulties in implementing exclusive breastfeeding after childbirth (Shofiya et al., 2024).

One of the most commonly observed early breastfeeding problems in clinical practice is delayed lactogenesis II, defined as the delayed onset of copious milk secretion following childbirth. This condition may contribute to unsuccessful early initiation of breastfeeding and a shorter duration of exclusive breastfeeding. Contributing factors include insufficient maternal understanding of early initiation of breastfeeding (EIBF), improper positioning and latch techniques, and inadequate knowledge of maternal nutrition during breastfeeding. These issues are often addressed only after delivery, whereas a preventive approach initiated during the third trimester of pregnancy may reduce the incidence of delayed lactogenesis and improve maternal lactation readiness (Shofiya et al., 2024; WHO Indonesia, 2025; Syahri et al., 2024).

The third trimester of pregnancy represents a critical period for educational interventions, as women are still in the antenatal phase while hormonal changes related to lactation have already begun, enabling more effective reception and processing of breastfeeding-related information. Antenatal breastfeeding preparation class are therefore considered a key strategy in midwifery practice to enhance maternal knowledge, confidence, and breastfeeding self-efficacy (Samosir et al., 2025; Nurfajrillah et al., 2025). Studies conducted in Indonesia have demonstrated that breastfeeding education delivered through guidebooks and audiovisual media to third-trimester pregnant women significantly improves maternal knowledge and attitudes toward exclusive breastfeeding (Nurfajrillah et al., 2025). Furthermore, breastfeeding preparation education during the third trimester has been shown to increase breastfeeding self-efficacy among pregnant women when compared to pre-intervention levels (Winarsih & Revika, 2025; Fritria et al., 2022). Simple educational media, such as leaflets, offer additional advantages due to their ease of understanding and suitability for independent learning, particularly when combined with pretest and posttest approaches (Fritria et al., 2022).

Despite the implementation of various breastfeeding education interventions, most existing studies primarily focus on improving breastfeeding knowledge or skills during the postpartum period or on measuring exclusive breastfeeding practices after birth. Quantitative studies that specifically evaluate the effect of third-trimester breastfeeding preparation class on maternal lactation readiness using pretest–posttest designs remain limited, particularly those employing leaflets as the primary educational medium. This research gap underscores the need for robust empirical evidence to support midwifery clinical recommendations aimed at

enhancing lactation readiness during the antenatal period as a preventive strategy to improve exclusive breastfeeding outcomes (Samosir et al., 2025; Fritria et al., 2022; Nurfajrillah et al., 2025).

Based on this background, the present study aims to analyze the effect of a third-trimester breastfeeding preparation class on lactation readiness among pregnant women. This study was conducted at MAMINA Baby Spa and Lactation Massage Center as part of promotive and preventive antenatal care efforts to enhance maternal breastfeeding readiness during pregnancy. The findings of this study are expected to strengthen the evidence-based role of midwives in delivering antenatal breastfeeding education to support the successful implementation of exclusive breastfeeding.

## **METHODS**

This study employed a quantitative approach using a pre-experimental one-group pretest–posttest design and was conducted at MAMINA Baby Spa and Lactation Massage Center on November 23, 2025. The study population comprised all third-trimester pregnant women, with a sample of 25 participants selected through purposive sampling based on field conditions. The independent variable was a third-trimester breastfeeding preparation class, while the dependent variable was maternal lactation readiness, reflecting preparedness in breastfeeding-related knowledge and practices, including lactogenesis II, early initiation of breastfeeding (EIBF), breastfeeding positioning and latch, maternal nutrition during breastfeeding, and exclusive breastfeeding. The pretest–posttest design was applied to assess changes in lactation readiness before and after the intervention within the same group (D’Sa et al., 2024).

The intervention consisted of a third-trimester breastfeeding preparation class delivered in a single session lasting approximately 60 minutes using an educational leaflet as the instructional medium. The educational content covered delayed lactogenesis II and its management, early initiation of breastfeeding, breastfeeding positions and latch techniques, maternal nutrition during breastfeeding, and strategies to maintain exclusive breastfeeding. Lactation readiness was measured using a structured questionnaire administered during both the pretest and posttest phases. Data analysis included univariate analysis to describe respondent characteristics and bivariate analysis using the Wilcoxon signed-rank test in accordance with the data distribution (Anggraini et al., 2022).

## **RESULTS**

Based on Table 1, most respondents were third-trimester pregnant women within the reproductive age range of 20–35 years, totaling 21 participants (84%). Pregnant women aged

under 20 years accounted for 1 participant (4%), while those aged over 35 years comprised 3 participants (12%). Regarding parity, the majority of respondents were primigravida, with 18 participants (72%), whereas multigravida women accounted for 7 participants (28%).

Table 1. Characteristics of Respondents

Characteristic	Results	
	n	%
<b>Age</b>		
<20 years	1	4%
20-35 years	21	84%
>35 years	3	12%
<b>Parity</b>		
Primigravida	18	72%
Multigravida	7	28%
<b>Education Level</b>		
Junior High School	0	0%
Senior High School	7	28%
Bachelor's Degree	16	64%
Master's Degree	2	16%
<b>Employment Status</b>		
Employed	14	56%
Unemployed	11	44%

In terms of educational level, most respondents held a bachelor's degree (S1), totaling 16 participants (64%), followed by senior high school education (SMA) with 7 participants (28%) and master's degree (S2) with 2 participants (16%). No respondents had a junior high school (SMP) educational background. Based on employment status, more than half of the respondents were employed (14 participants; 56%), while 11 participants (44%) were unemployed.

Descriptive statistical analysis presented in Table 2 shows lactation readiness scores of third-trimester pregnant women before (pretest) and after (posttest) participation in the breastfeeding preparation class. The mean pretest lactation readiness score was  $50.24 \pm 2.55$ , with a minimum score of 46 and a maximum score of 55. Following the intervention, the mean posttest lactation readiness score increased to  $78.52 \pm 4.93$ , with scores ranging from 69 to 89. This increase in mean scores indicates a positive change in maternal lactation readiness after attending the breastfeeding preparation class, reflecting improved readiness in both breastfeeding knowledge and practices.

Table 2. Descriptive Statistics of Lactation Readiness Scores

Variable	Mean ± SD	Minimum-Maximum
<i>Pretest</i>	50,24 ± 2,55	46-55
<i>Posttest</i>	78,52 ± 4,93	69-89

The results of the Wilcoxon signed-rank test presented in Table 3 show that all respondents (100%) experienced an increase in lactation readiness scores following the intervention, as indicated by 25 positive ranks (100%) and no negative ranks. The statistical test yielded a Z value of  $-4.377$  with a p-value of 0.00 ( $p < 0.05$ ), indicating a statistically significant difference between lactation readiness scores before and after participation in the third-trimester breastfeeding preparation class.

Table 3. Wilcoxon Signed-Rank Test Results for Lactation Readiness

Variable	Negative Ranks (n (%))	Positive Ranks (n (%))	Z	p-value
Difference in lactation readiness (posttest – pretest)	0 (0,0)	25 (100,0)	-4,377	0,00

Note : \*significance level  $p < 0.05$

## DISCUSSION

The respondent characteristics in this study were predominantly third-trimester pregnant women of reproductive age (20–35 years) and primigravida, who represent the primary target group for breastfeeding education interventions. Primigravida women generally have limited prior breastfeeding experience, making them more reliant on structured antenatal education to enhance lactation readiness. Antenatal breastfeeding education plays a crucial role in improving both physical and psychological preparedness for lactation (Renuka et al., 2020).

The findings of this study demonstrate that participation in a third-trimester breastfeeding preparation class significantly improved maternal lactation readiness, as evidenced by increased lactation readiness scores and statistically significant test results. These findings are consistent with previous studies reporting that antenatal breastfeeding education contributes to improvements in maternal cognitive and psychological readiness, including breastfeeding knowledge, attitudes, and confidence (Khatony et al., 2025).

The observed improvement in lactation readiness can be explained through the framework of breastfeeding self-efficacy theory. Structured antenatal education, such as breastfeeding preparation class, equips pregnant women with essential knowledge regarding lactation physiology, lactogenesis II, correct breastfeeding positioning and latch techniques, and management of common breastfeeding challenges. This knowledge enhances maternal

confidence in their ability to breastfeed successfully, which is a key determinant of breastfeeding outcomes (Metin et al., 2024).

Furthermore, the results of this study align with evidence from systematic reviews indicating that antenatal breastfeeding education interventions significantly improve breastfeeding readiness and exclusive breastfeeding outcomes compared to routine antenatal care without targeted education (Necipoglu & Bebis, 2025). Planned and structured education allows women to prepare both physically and mentally, thereby reducing anxiety and potential barriers to breastfeeding during the early postpartum period (Oggero et al., 2024).

Overall, these findings underscore the importance of integrating breastfeeding preparation class into third-trimester antenatal care as a promotive and preventive strategy. Such class not only enhance maternal knowledge regarding early initiation of breastfeeding, breastfeeding positioning and latch, maternal nutrition during breastfeeding, and exclusive breastfeeding, but also strengthen overall lactation readiness. Consequently, midwives play a strategic role in delivering evidence-based antenatal breastfeeding education as part of continuous midwifery care.

## CONCLUSION

This study demonstrates that a third-trimester breastfeeding preparation class has a significant effect on improving lactation readiness among pregnant women. Structured breastfeeding education delivered using leaflet-based media was shown to enhance maternal lactation readiness in terms of both knowledge and preparedness for breastfeeding practices, thereby potentially supporting the successful initiation and continuation of exclusive breastfeeding in the early postpartum period.

Third-trimester breastfeeding preparation class are recommended to be routinely integrated into antenatal care services provided by midwives as a promotive and preventive strategy to enhance maternal lactation readiness. Future research is encouraged to employ study designs with control groups and to evaluate long-term outcomes, such as the success of early initiation of breastfeeding and the sustainability of exclusive breastfeeding up to six months postpartum.

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