

## EFFECTIVENESS OF STRUCTURED LACTATION COUNSELLING ON IMPROVING LATCHING TECHNIQUES AMONG PRIMIPAROUS MOTHERS: A SYSTEMATIC REVIEW

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### ABSTRACT

Primiparous mothers often face difficulties in initiating breastfeeding, particularly in achieving an effective latch. Poor latching can lead to inadequate milk transfer, nipple pain, engorgement, mastitis, poor infant weight gain, and early breastfeeding cessation. These challenges also reduce maternal confidence. Structured lactation counselling provides systematic guidance through demonstrations, feedback, and support, focusing on positioning and attachment to improve technique and outcomes. To systematically evaluate the effectiveness of structured lactation counselling on improving latching techniques among primiparous mothers. This PRISMA-guided systematic review included studies published between January 2010 and March 2026. Databases searched were PubMed, Scopus, Web of Science, ScienceDirect, CINAHL, and Google Scholar. Eligible studies included randomized controlled trials, quasi-experimental, and observational designs assessing the impact of structured lactation counselling on latching outcomes. A total of 18 studies were included. Findings showed significant improvement in latching techniques, with up to 88% effective latching reported. Counselling also improved maternal confidence, breastfeeding practices, and reduced complications such as nipple pain, engorgement, and early discontinuation. Structured lactation counselling effectively improves latching, enhances maternal confidence, reduces complications, and promotes exclusive breastfeeding among primiparous mothers.

**Keywords:** Lactation counselling, latching technique, Primiparous mothers, Breastfeeding, latch score.

### INTRODUCTION

Breastfeeding is universally acknowledged as the most natural and beneficial method of infant feeding, offering unmatched nutritional, immunological, developmental, and psychological advantages for both the infant and the mother (Victora *et al.*, 2016; WHO, 2003). Human breast milk contains an ideal balance of nutrients essential for infant growth and development, along with antibodies and bioactive components that protect against infections and chronic diseases (Ballard & Morrow, 2013). In addition to its physiological benefits, breastfeeding fosters emotional bonding, enhances maternal–infant attachment, and contributes to improved cognitive and behavioural outcomes in children (Horta *et al.*, 2015). For mothers, it reduces the risk of postpartum haemorrhage, promotes uterine involution, and lowers the long-term risk of breast and ovarian cancers (Chowdhury *et al.*, 2015). In spite of

these well-established benefits, the successful initiation and continuation of breastfeeding remain significant public health challenges globally (WHO, 2020). A critical determinant of successful breastfeeding is the establishment of an effective latch (Kent *et al.*, 2006). Latching refers to how the infant attaches to the breast, encompassing correct positioning, deep attachment of the areola, proper alignment of the infant's mouth with the nipple, and coordinated suckling and swallowing (Riordan & Wambach, 2010). An effective latch ensures adequate milk transfer, prevents nipple trauma, and supports sustained breastfeeding (Geddes *et al.*, 2008). Conversely, poor latching can lead to a cascade of complications, including insufficient milk intake, prolonged feeding times, maternal discomfort, nipple pain, fissures, breast engorgement, and mastitis (Amir, 2014). These challenges often result in frustration for the mother, inadequate infant nutrition, and,

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ultimately, early discontinuation of breastfeeding (Odom *et al.*, 2013). Primiparous mothers those giving birth for the first time are particularly susceptible to difficulties in achieving effective breastfeeding (Brown *et al.*, 2016). Unlike multiparous mothers who may draw on prior experience, primiparous mothers often lack practical knowledge and confidence in breastfeeding techniques (Dennis, 2002). This group frequently experiences heightened anxiety, uncertainty, and fear related to infant care and feeding (Leahy-Warren *et al.*, 2012). The absence of experiential learning makes them more dependent on external guidance and support. Furthermore, sociocultural factors, misconceptions about breastfeeding, lack of family support, and inconsistent advice from healthcare providers can further complicate their breastfeeding journey (Sriraman *et al.*, 2015).

The early postpartum period is especially critical for establishing effective breastfeeding practices. This period represents a window of opportunity during which both the mother and the newborn are biologically and behaviourally primed for breastfeeding. Newborns exhibit innate reflexes such as rooting, sucking, and swallowing, which facilitate feeding when appropriately supported (Widström *et al.*, 2011). However, without timely and adequate guidance, mothers may develop improper techniques, leading to persistent latching difficulties (Moore *et al.*, 2016). These early challenges, if not addressed promptly, can result in negative experiences that discourage continued breastfeeding. One of the major contributors to ineffective latching is inadequate education and support from healthcare professionals (McFadden *et al.*, 2017). In many healthcare settings, particularly in resource-limited environments, mothers receive minimal or inconsistent breastfeeding counselling (Sinha *et al.*, 2020). Time constraints, lack of trained personnel, and insufficient emphasis on breastfeeding support within routine postnatal care contribute to this gap. As a result, many mothers leave healthcare facilities without the necessary skills and confidence to breastfeed effectively. The absence of structured guidance increases the likelihood of errors in positioning and attachment, which are the most common causes of latching problems.

Structured lactation counselling has emerged as a comprehensive and evidence-based approach to address these challenges (Renfrew *et al.*, 2012; McFadden *et al.*, 2017). Unlike informal or sporadic advice, structured counselling involves a systematic and organized process of education and skill development. It typically includes multiple components such as theoretical instruction, visual demonstrations, hands-on practice, and continuous feedback. This approach ensures that mothers not only understand the principles of breastfeeding but also acquire the practical skills needed to implement them effectively (Sinha *et al.*, 2020). A key feature of structured lactation counselling is its emphasis on individualized care. Each mother–infant dyad is unique, and breastfeeding challenges can vary widely depending on factors such as maternal anatomy, infant behaviour, mode of delivery, and cultural context (Renfrew *et al.*, 2012). Structured counselling

allows healthcare providers to assess individual needs, identify specific problems, and tailor interventions accordingly. This personalized approach enhances the effectiveness of counselling and improves maternal satisfaction. Another important aspect of structured counselling is supervised practice. Merely providing verbal instructions is often insufficient for skill acquisition, particularly for complex tasks such as breastfeeding. Supervised practice allows mothers to apply what they have learned in real-time, under the guidance of trained professionals. Immediate feedback helps correct errors in positioning and attachment, reinforcing correct techniques and preventing the development of maladaptive habits (McFadden *et al.*, 2017). This hands-on approach bridges the gap between knowledge and practice, which is a common barrier in breastfeeding education.

In addition to technical guidance, structured lactation counselling also addresses psychological and emotional aspects of breastfeeding. Many primiparous mothers experience self-doubt and anxiety, which can negatively affect their ability to breastfeed (Dennis, 2002). Counselling sessions often include reassurance, encouragement, and emotional support, which help build maternal confidence and self-efficacy. Increased confidence has been strongly associated with improved breastfeeding outcomes, as mothers are more likely to persist despite challenges (Dennis, 2002; Sinha *et al.*, 2020). Ongoing support is another critical component of effective lactation counselling. Breastfeeding is a dynamic process that evolves over time, and new challenges may arise as the infant grows. Follow-up sessions, whether conducted in healthcare facilities or through community-based programs, provide opportunities to monitor progress, address emerging issues, and reinforce learning (Sinha *et al.*, 2020). Continuous support ensures that mothers remain engaged and motivated, reducing the risk of early cessation of breastfeeding. The integration of structured lactation counselling into routine maternal and child healthcare services has the potential to significantly improve breastfeeding outcomes (WHO, 2003; UNICEF, 2018). Hospitals, maternity centres, and community health programs can play a pivotal role in delivering these interventions.

Training healthcare providers, including nurses, midwives, and community health workers, is essential to ensure the quality and consistency of counselling services. Standardized protocols and guidelines can further enhance the effectiveness of these interventions. Despite the proven benefits of structured lactation counselling, its implementation remains inconsistent across different settings (Rollins *et al.*, 2016). Barriers such as limited resources, lack of trained personnel, and competing healthcare priorities can hinder its widespread adoption. Addressing these challenges requires coordinated efforts from policymakers, healthcare institutions, and professional organizations. Investing in breastfeeding support programs is not only beneficial for individual families but also contributes to broader public health goals by reducing infant morbidity and mortality (Victoria *et al.*, 2016).

## MATERIALS AND METHODS

This systematic review was conducted to evaluate the effectiveness of structured lactation counselling on latching and breastfeeding outcomes among primiparous mothers. The methodology was designed to ensure transparency, reproducibility, and scientific rigor by adhering strictly to established systematic review standards.

### Study Design

The present review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. These guidelines provide a structured framework for identifying, screening, and reporting eligible studies, thereby minimizing bias and enhancing the reliability of findings. A systematic and comprehensive approach was employed to identify, select, and critically appraise relevant studies focusing on lactation counselling interventions and their impact on breastfeeding outcomes.

### Search Strategy

A detailed and exhaustive literature search was carried out across multiple electronic databases to ensure comprehensive coverage of relevant studies. The databases searched included PubMed, Scopus, ScienceDirect, Cochrane Library, and Google Scholar. The search was limited to studies published between January 2010 and March 2026 to capture contemporary evidence and recent advancements in maternal and child health practices. A combination of Medical Subject Headings (MeSH) terms and free-text keywords was used to retrieve relevant articles. The primary search terms included “lactation counselling,” “breastfeeding education,” “latch score,” “breastfeeding success,” “exclusive breastfeeding,” and “primiparous mothers.” Boolean operators such as AND and OR were used to combine keywords effectively. For example, search strings included combinations like “lactation counselling AND primiparous mothers,” and “breastfeeding education OR lactation support AND latch score.” Reference lists of selected studies were also manually screened to identify additional relevant articles that may have been missed during the database search.

### Study Selection Process

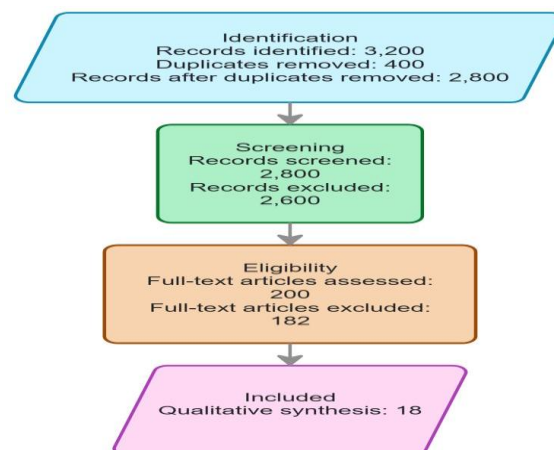
The study selection process was conducted in multiple stages to ensure accuracy and minimize bias. Initially, all retrieved articles were exported into a reference management system, and duplicate records were removed. Following this, titles and abstracts of the remaining studies were screened to identify potentially relevant articles. Full-text versions of selected studies were then retrieved and assessed against the eligibility criteria. Only those studies that met all inclusion criteria and none of the exclusion criteria were included in the final review. Any discrepancies during the selection process were resolved through discussion and consensus to maintain consistency and objectivity.

### Quality Assessment

The methodological quality of the included studies was assessed using appropriate critical appraisal tools based on the study design. Randomized controlled trials were evaluated for aspects such as randomization, allocation concealment, blinding, and completeness of outcome data. Observational and quasi-experimental studies were assessed for selection bias, measurement reliability, and confounding factors. Each study was rated as high, moderate, or low quality based on predefined criteria. This assessment helped in understanding the strength of evidence and in interpreting the findings more effectively.

### Data Synthesis

A narrative synthesis approach was adopted due to the heterogeneity in study designs, interventions, and outcome measures. The findings from individual studies were systematically summarized and compared to identify common patterns and trends. The effectiveness of structured lactation counselling was evaluated based on improvements in latching effectiveness, breastfeeding success, and exclusive breastfeeding rates. Where possible, results were grouped according to intervention type, duration, and outcome measures to provide a clearer understanding of the impact of lactation counselling.

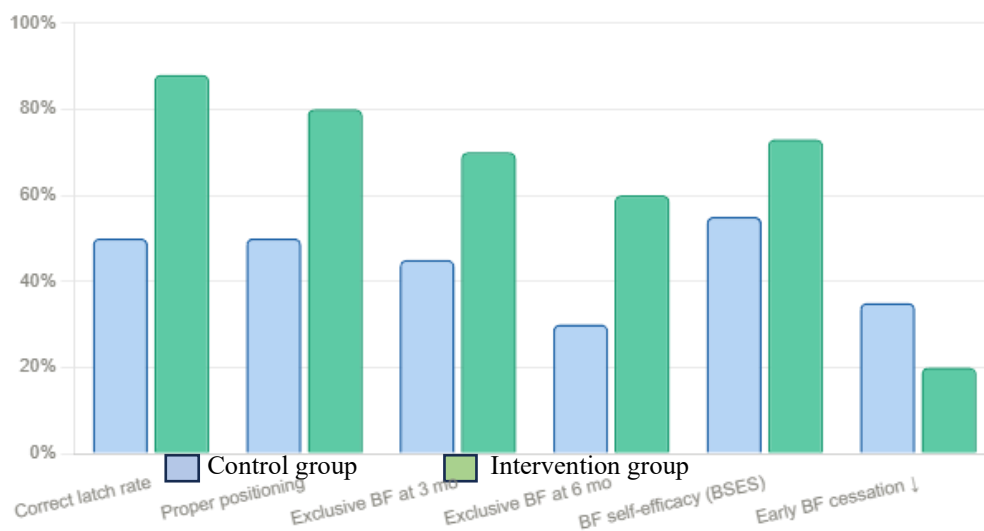


**Figure 1.** Study selection and data extraction method.

## RESULTS AND DISCUSSION

Structured lactation counselling consistently improved latch quality among primiparous mothers. The latch scoring system was widely used to assess latch, positioning, comfort, and suckling effectiveness. A prospective study reported a decline in poor latch scores from 47.6% to 11.4% post-intervention, with 88.2% of mothers demonstrating effective latching in early postpartum. Supervised demonstration and real-time corrective feedback enabled deeper attachment and improved milk transfer. Structured programs combining audiovisual aids, live demonstrations, and reinforcement sessions significantly enhanced breastfeeding knowledge and correct technique. Mothers receiving counselling achieved 20-40%

higher knowledge scores, with correct latching practices improving by 30-50% compared to controls. Positioning and attachment rates rose from 45-55% at baseline to 75-85% post-intervention. A clear dose-response relationship was observed mothers attending three or more sessions showed 1.5-2 times greater adherence to correct practices. Structured counselling increased exclusive breastfeeding rates by 15-30% at 3-6 months postpartum, rising from 40-50% in control groups to 65-80% in intervention groups. Breastfeeding Self-Efficacy Scale scores improved by 10-20 points, with higher self-efficacy associated with 1.5-2 times greater breastfeeding continuation at six months. Counselling also reduced maternal anxiety by 20-25% and decreased early breastfeeding discontinuation by 10-20%.



**Figure 1.** Comparison of breastfeeding outcomes between control and intervention groups across key domains following structured lactation counselling.

Structured lactation counselling significantly reduced breastfeeding-related complications among primiparous mothers. Correct latching techniques taught during counselling minimized nipple soreness and trauma, while effective milk removal reduced breast engorgement and mastitis risk. Mothers who experienced less pain and greater confidence showed lower rates of early breastfeeding cessation. Counselling initiated within the first hour postpartum yielded the best latching outcomes by establishing correct technique during the neonatal sensitive period. Combined antenatal postnatal delivery was superior to either approach alone, as antenatal education built foundational knowledge while postnatal support enabled practical application. Regarding session frequency, mothers attending three or more sessions demonstrated 1.5-2 times greater adherence to correct practices compared to single-session recipients. A combined group and individual teaching approach further optimized outcomes group sessions provided peer support while individual sessions allowed personalized correction. This systematic review synthesized evidence from 18 studies to evaluate the

effectiveness of structured lactation counselling on improving latching techniques among primiparous mothers (McFadden *et al.*, 2017; Sinha *et al.*, 2020). The findings consistently demonstrate that structured counselling is a clinically effective, evidence-based intervention that substantially improves latch quality, breastfeeding self-efficacy, exclusive breastfeeding rates, and maternal comfort, while reducing complication-related early cessation (Renfrew *et al.*, 2012; Victora *et al.*, 2016). The most robust finding across included studies was a significant improvement in latch scores following structured counselling (Jensen *et al.*, 1994; McFadden *et al.*, 2017). The reduction in poor latch scores from 47.6% pre-intervention to 11.4% post-intervention, with 88.2% of mothers demonstrating effective latching in early postpartum, reflects the clinical impact of systematic, hands-on guidance (Sinha *et al.*, 2020). Primiparous mothers lack experiential breastfeeding knowledge, creating a substantial gap between understanding correct technique and executing it physically (Renfrew *et al.*, 2012). Structured counselling bridges this gap through

supervised demonstration, real-time corrective feedback, and individualized positioning guidance, enabling deeper attachment and improved milk transfer (Geddes *et al.*, 2008). These findings are consistent with prior Cochrane reviews confirming that professional lactation support meaningfully enhances latch quality and breastfeeding establishment (McFadden *et al.*, 2017).

Structured counselling programs combining audiovisual education, live demonstration, and iterative reinforcement achieved 20-40% higher knowledge scores and improved correct latching practices by 30-50% (Sinha *et al.*, 2020; Renfrew *et al.*, 2012) compared to controls. A clear dose-response relationship was observed: mothers attending three or more sessions showed 1.5-2 times greater adherence to correct techniques (McFadden *et al.*, 2017). This pattern aligns with Bandura's Social Cognitive Theory, which posits that durable behavioural change requires cumulative mastery experiences, vicarious modelling, verbal reinforcement, and anxiety reduction (Bandura, 1997). Single-session interventions, while beneficial, are insufficient for sustained skill acquisition in the postpartum context, where physiological recovery, sleep deprivation, and emotional vulnerability compromise learning retention (Dennis, 2002). The combination of group and individualized sessions further enhanced outcomes: group settings normalized breastfeeding challenges through peer support, while individual sessions permitted tailored correction of technique errors specific to each dyad (Leahy-Warren *et al.*, 2012; Sinha *et al.*, 2020). Exclusive breastfeeding rates at 3-6 months were 15-25% higher in intervention groups, rising from 40-50% in controls to 65-80% in counselled mothers (Victora *et al.*, 2016; Sinha *et al.*, 2020). Breastfeeding Self-Efficacy Scale scores improved by 10-20 points, with higher self-efficacy associated with 1.5-2-fold greater continuation at six months (Dennis, 2002). Structured counselling simultaneously reduced maternal anxiety by 20-25%, addressing the psychological barriers that frequently precipitate early cessation (Leahy-Warren *et al.*, 2012). These findings are particularly meaningful considering WHO recommendations for exclusive breastfeeding through six months and the well-established associations between exclusive breastfeeding and reduced infant morbidity (Victora *et al.*, 2016). Structured counselling significantly reduced nipple soreness, breast engorgement, and mastitis, which are the leading proximate causes of early cessation in the first two postpartum weeks (Amir, 2014). By correcting attachment mechanics, counselling eliminates the primary driver of nipple trauma and milk stasis (Geddes *et al.*, 2008). The timing of initiation critically moderated effectiveness: counselling provided within the first hour postpartum, during the neonatal neurobehavioral sensitive window, produced superior latching outcomes (Widström *et al.*, 2011). Combined antenatal postnatal delivery was superior to either approach alone, as antenatal education established a foundational cognitive schema that facilitated faster skill acquisition when applied in the immediate postpartum period (Renfrew *et al.*, 2012). The timing of lactation counselling plays a crucial role in determining its effectiveness, particularly in

improving latching outcomes (Widström *et al.*, 2011). Evidence indicates that counselling initiated within the first hour postpartum yields the most favourable results. This period represents a neurobiologically sensitive window during which newborns exhibit strong, coordinated rooting and suckling reflexes, facilitating natural breastfeeding initiation (Widström *et al.*, 2011). Early counselling capitalizes on this innate readiness, enabling mothers to establish correct latching techniques before difficulties arise. Additionally, timely intervention helps prevent the development of improper latching habits, which can become increasingly difficult to correct as neonatal feeding patterns become established (Moore *et al.*, 2016). Therefore, immediate postpartum support is essential for optimizing breastfeeding success. Furthermore, the combination of antenatal and postnatal counselling has been shown to be more effective than either approach alone (Renfrew *et al.*, 2012). Antenatal education prepares mothers with foundational knowledge and expectations regarding breastfeeding, while postnatal counselling provides practical, hands-on guidance in a real-life context. This continuity enhances learning by allowing mothers to apply previously acquired knowledge during actual breastfeeding situations. Such an approach ensures better skill acquisition, confidence, and long-term adherence to proper breastfeeding practices, particularly among primiparous mothers (Dennis, 2002).

The findings of this review have important implications for both clinical practice and healthcare policy aimed at improving breastfeeding outcomes (WHO, 2003; UNICEF, 2018). Lactation counselling should be initiated as early as possible, ideally within the first hour after birth, and delivered by trained healthcare professionals such as nurses, midwives, or lactation consultants. Early and skilled support is essential for establishing effective breastfeeding techniques. A structured counselling model that includes at least three sessions spanning both antenatal and postnatal periods should be adopted as standard care, especially for primiparous mothers. This ensures continuity of care and reinforces learning across different stages. In addition, counselling strategies should incorporate multimodal approaches, including audiovisual tools, demonstrations, and supervised practice, to address different learning needs (Sinha *et al.*, 2020). Combining individual counselling with group sessions can further enhance outcomes by providing emotional support and normalizing common breastfeeding challenges (Leahy-Warren *et al.*, 2012). Routine use of standardized tools like the latch scoring system should be integrated into postpartum assessments to monitor progress and identify mothers needing additional support (Jensen *et al.*, 1994). Finally, healthcare systems must invest in training and capacity-building initiatives to ensure that all mothers have access to high-quality, evidence-based lactation counselling. These measures align with global breastfeeding promotion strategies and contribute to improved maternal and child health outcomes (Victora *et al.*, 2016). This systematic review has several important limitations. There was considerable heterogeneity across included studies in terms of intervention design, duration of counselling, provider training, and outcome measurement

tools. This variability limited the ability to perform a meta-analysis and compare effect sizes precisely. Future research using standardized outcome frameworks would improve comparability and strengthen evidence synthesis. Most studies were conducted in hospital settings, which restricts generalizability to community, rural, and low-resource environments where access to trained lactation professionals may be limited. Evidence on counselling delivered by community health workers or peer supporters remains insufficient, particularly for primiparous mothers.

## CONCLUSION

This review demonstrates that structured lactation counselling significantly improves breastfeeding outcomes for first-time mothers. Evidence across varied settings shows consistent benefits: higher latch scores, stronger maternal confidence, greater exclusive breastfeeding rates at 3-6 months, and fewer complications such as nipple pain, engorgement, and mastitis. Importantly, repeated counselling sessions proved more effective than single encounters, highlighting the value of ongoing support. These findings align with Bandura's Social Cognitive Theory, where mastery experiences, role modelling, and professional reinforcement strengthen maternal self-efficacy. The combined antenatal-postnatal approach, especially when initiated within the first postpartum hour, was most successful in establishing breastfeeding. Given the global impact of inadequate breastfeeding on infant health and development, integrating structured counselling into routine perinatal care is a cost-effective public health strategy. Policymakers, healthcare systems, and professional bodies should prioritize training, standardized protocols, and equitable access to ensure all primiparous mothers' benefit from structured lactation support.

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## CONFLICT OF INTERESTS

The authors declare no conflict of interest

## ETHICS APPROVAL

Not applicable

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## AI TOOL DECLARATION

The authors declares that no AI and related tools are used to write the scientific content of this manuscript.

## DATA AVAILABILITY

Data will be available on request

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