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ORIGINAL ARTICLE

Association Between Early Postpartum Counseling and Breastfeeding Success Rates: A Cross-Sectional Study

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ABSTRACT

Background: Early initiation of breastfeeding within the first hour of life and exclusive breastfeeding for six months are essential for optimal infant health and maternal well-being. Despite global recommendations, breastfeeding practices in Pakistan remain suboptimal due to social, cultural, and systemic barriers. Early postpartum counseling may play a critical role in improving these outcomes, yet local evidence is limited.

Objective: To evaluate the impact of early postpartum counseling on breastfeeding initiation, exclusivity, maternal knowledge, and satisfaction.

Methodology: This cross-sectional study was conducted at a tertiary care hospital in Quetta, Pakistan, from November 2022 to June 2023. A total of 100 postpartum women were divided into two equal groups: Group A received structured breastfeeding counseling within six hours of delivery, while Group B received routine care without counseling. Outcomes assessed included time to breastfeeding initiation, exclusivity at six weeks, maternal knowledge score (0–10), satisfaction level (Likert scale), and need for formula supplementation. Data were collected through structured interviews and analyzed using SPSS version 25. Chi-square and t-tests were applied where appropriate.

Results: Early initiation within one hour was significantly higher in Group A (86%) than in Group B (52%) ($p = 0.001$). Exclusive breastfeeding at six weeks was 76% in Group A versus 44% in Group B ($p = 0.002$). Maternal knowledge and satisfaction scores were significantly higher in the counseled group ($p < 0.001$), with lower formula use (18% vs. 48%, $p = 0.003$).

Conclusion: Early postpartum counseling significantly improves breastfeeding outcomes. Integrating structured counseling into postnatal care is strongly recommended.

Keywords: Breastfeeding, postpartum counseling, exclusive breastfeeding, maternal knowledge, infant nutrition.

INTRODUCTION

Breastfeeding is universally recognized as the most complete and biologically optimal source of nutrition for infants, offering a wide array of immunological, developmental, and psychological benefits for both the newborn and the mother[1]. It plays a pivotal role in reducing the incidence of neonatal infections, gastrointestinal diseases, and long-term metabolic disorders such as obesity and type 2 diabetes. For mothers, breastfeeding contributes to postpartum recovery, reduces the risk of breast and ovarian cancers, and promotes maternal-infant bonding. The World Health Organization (WHO) and UNICEF recommend the initiation of breastfeeding within the first hour of birth and exclusive breastfeeding for the first six months of life. This practice alone is estimated to prevent over 800,000 under-five deaths annually, primarily in low- and middle-income countries (LMICs) where the burden of infant morbidity and mortality remains unacceptably high[2, 3].

Despite these global endorsements and the well-documented health benefits, adherence to optimal breastfeeding practices remains suboptimal in many parts of the world. According to the Global Breastfeeding Scorecard, only 44% of infants worldwide are exclusively breastfed during the first six months of life, far below the 2030 target of 70% [4]. The situation is particularly concerning in South Asia, where cultural taboos, limited maternal education, early return to work, and systemic deficiencies in postnatal care often hinder early initiation and continuation of breastfeeding. In Pakistan, the national nutrition survey indicates that although breastfeeding initiation rates are relatively high, exclusive breastfeeding drops drastically within the first few weeks due to poor lactation support and misinformation about breast milk adequacy[5].

Among the various interventions proposed to improve breastfeeding indicators, early postpartum counseling has emerged as one of the most promising and modifiable strategies. Providing structured, evidence-based breastfeeding education during the first few hours postpartum can equip new mothers with the skills and confidence necessary for successful breastfeeding initiation and maintenance[6]. It also helps to dispel prevalent myths, reduce maternal anxiety, and address early challenges such as latching difficulties and perceived insufficient milk supply. Numerous international studies from both high- and low-income settings have demonstrated that timely breastfeeding counseling increases early initiation rates, prolongs exclusive breastfeeding duration, and reduces unnecessary reliance on formula supplementation[7].

However, there remains a significant gap in context-specific evidence from Pakistani healthcare settings regarding the implementation and effectiveness of early lactation counseling. Cultural sensitivities, language barriers, shortage of trained staff, and the lack of structured discharge protocols continue to limit the accessibility of lactation support[8]. Many women are discharged within hours of delivery without receiving any counseling on feeding techniques, maternal nutrition, or neonatal hunger cues. This missed opportunity significantly contributes to delayed breastfeeding initiation, early cessation, and suboptimal maternal satisfaction[9].

Recognizing these gaps, the current study was designed to assess the association between early postpartum breastfeeding counseling and subsequent breastfeeding success among women in tertiary care hospital in Pakistan[10]. Current study hypothesize that structured counseling delivered within the first six hours after delivery significantly improves the rate of early initiation, promotes exclusive breastfeeding at six weeks, enhances maternal knowledge and satisfaction, and reduces dependence on formula feeding. By generating evidence tailored to the local context, this study aims to provide actionable insights for healthcare policymakers to integrate structured counseling programs into routine postnatal care services. Such an approach could serve as a cost-effective and scalable model for improving breastfeeding practices, enhancing maternal confidence, and achieving better neonatal health outcomes across Pakistan and similar LMICs[11].

MATERIALS AND METHODS

This cross-sectional study was conducted in the Department of Gynecology and Obstetrics at Civil Hospital (SPH), Quetta,

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Pakistan, over an eight-month period from November 2022 to June 2023. Prior to commencement, ethical clearance was obtained from the institutional review board, and written informed consent was secured from all participants after a full explanation of the study purpose and procedures.

A total of 100 postpartum women were consecutively recruited based on pre-defined eligibility criteria. The inclusion criteria were women aged between 18 and 40 years who had delivered healthy, term (≥37 weeks of gestation) singleton neonates via either spontaneous vaginal delivery or elective cesarean section. Women were excluded if they had medical conditions that contraindicated breastfeeding—such as maternal HIV infection, active tuberculosis, or breast abscess—or if they had delivered preterm infants, multiple gestations, or neonates with severe medical complications requiring intensive neonatal care.

Participants were then allocated into two equal groups according to the postpartum care they received. Group A (n = 50) included women who received structured breastfeeding counseling within six hours of delivery. This counseling was administered by trained lactation consultants or obstetric nursing staff and covered critical components including the benefits of early initiation, breastfeeding techniques, positioning and latch correction, recognition of hunger cues, and troubleshooting common lactation problems. Group B (n = 50), in contrast, received standard postpartum care without any formal or structured breastfeeding counseling during their hospital stay.

Data collection was conducted using a pre-tested, structured questionnaire and hospital records. Demographic variables recorded included maternal age (in years), parity status (primiparous or multiparous), educational level (categorized as illiterate, primary, secondary, or higher), monthly household income (in Pakistani Rupees), occupation (housewife or employed), and mode of delivery (vaginal or cesarean). Biological variables collected included the birth weight of the neonate (in grams), maternal hemoglobin concentration (in g/dL), presence of postpartum anemia (defined as hemoglobin <11 g/dL), and Apgar scores of the neonate at one- and five-minutes post-birth.

The primary outcome measures included time to initiation of breastfeeding, which was categorized as within the first hour or after the first hour postpartum, and the rate of exclusive breastfeeding at six weeks postpartum. Secondary outcomes assessed were maternal knowledge regarding breastfeeding practices, scored on a validated 10-point scale; maternal satisfaction with the breastfeeding experience, rated on a 5-point Likert scale; and the incidence of formula supplementation during the first six weeks postpartum. Initial data were collected within 24 hours of delivery through face-to-face interviews, while follow-up assessments were conducted at six weeks postpartum either via in-person outpatient visits or structured telephone interviews.

Statistical analysis was performed using IBM SPSS Statistics for Windows, Version 25.0 (IBM Corp., Armonk, NY, USA). Continuous variables were reported as mean ± standard deviation (SD), and comparisons between the two groups were made using independent samples t-tests. Categorical variables were expressed as frequencies and percentages and analyzed using Chi-square tests. A two-tailed p-value of less than 0.05 was considered statistically significant for all analyses.

RESULTS

The study included 100 postpartum women, equally divided into two groups: those who received early postpartum breastfeeding counseling (Group A, n = 50) and those who did not (Group B, n = 50). Baseline demographic and biological characteristics were comparable between the two groups. Table-1 presents the baseline demographic and biological characteristics of the study participants. Both groups were comparable in terms of maternal age, parity, education level, income, mode of delivery, neonatal birth weight, and maternal hemoglobin levels, with no statistically significant differences observed ($p > 0.05$). This ensures that any variation in breastfeeding outcomes between the groups can be attributed to the counseling intervention rather than baseline disparities.

Table 1: Demographic and Biological Characteristics of Study Participants

Parameter	Group A (Counseled) n = 50	Group B (Non-Counseled) n = 50	p-value
Maternal Age (years, mean ± SD)	27.3 ± 4.1	27.9 ± 4.6	0.453
Parity (Primiparous %)	60%	58%	0.837
Education ≥ Secondary (%)	66%	62%	0.680
Monthly Income > PKR 30,000 (%)	48%	46%	0.841
Cesarean Delivery (%)	38%	42%	0.678
Birth Weight (g, mean ± SD)	3124 ± 355	3086 ± 376	0.622
Maternal Hb (g/dL, mean ± SD)	11.2 ± 1.4	10.9 ± 1.5	0.238
Postpartum Anemia (%)	36%	42%	0.522

There were no statistically significant differences in demographic or biological parameters between the two groups, confirming baseline comparability.

Table- 2 summarizes the breastfeeding outcomes at six weeks postpartum. Women who received early postpartum counseling showed significantly higher rates of early breastfeeding initiation (86% vs. 52%) and exclusive breastfeeding (76% vs. 44%) compared to those who did not receive counseling. They also had lower rates of formula supplementation, higher maternal knowledge scores, and greater overall satisfaction with breastfeeding (all $p < 0.05$). These results highlight the positive impact of timely, structured counseling on improving breastfeeding success and maternal confidence.

Table 2: Breastfeeding Outcomes at 6 Weeks Postpartum

Outcome Parameter	Group A (Counseled) n = 50	Group B (Non-Counseled) n = 50	p-value
Initiation within 1 hour (%)	86%	52%	0.001*
Exclusive Breastfeeding at 6 Weeks (%)	76%	44%	0.002*
Formula Supplementation (%)	18%	48%	0.003*
Maternal Knowledge Score (mean ± SD, /10)	8.4 ± 1.1	5.6 ± 1.8	<0.001*
Maternal Satisfaction (mean Likert score /5)	4.3 ± 0.6	3.2 ± 0.7	<0.001*

*p < 0.05 considered statistically significant

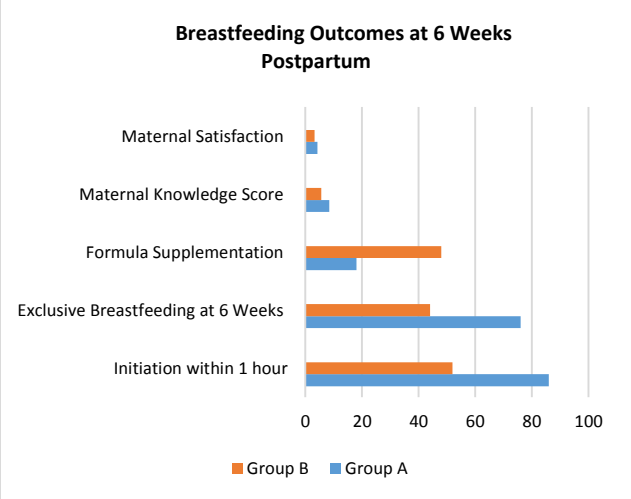

Fig-1: Comparison of breastfeeding outcomes at 6 weeks postpartum between counseled (Group A) and non-counseled (Group B) mothers.

This bar chart in fig 1 illustrates that Group A showed significantly better outcomes across all parameters. Early initiation within 1 hour (86% vs. 52%), exclusive breastfeeding at 6 weeks (76% vs. 44%), and maternal satisfaction were notably higher in the counseled group, while formula supplementation was lower

(18% vs. 48%). Maternal knowledge scores were also superior in Group A, highlighting the effectiveness of early postpartum counseling.

Participants who received early postpartum counseling (Group A) demonstrated significantly better outcomes across all breastfeeding parameters. The rate of early initiation of breastfeeding was markedly higher in the counseled group (86% vs. 52%, p = 0.001). A greater proportion of women in Group A practiced exclusive breastfeeding at 6 weeks (76% vs. 44%, p = 0.002), and fewer required formula supplementation (18% vs. 48%, p = 0.003). Furthermore, counseled mothers had higher breastfeeding knowledge scores and reported significantly greater satisfaction with their breastfeeding experience (p < 0.001 for both). These findings indicate a strong positive association between early postpartum counseling and breastfeeding success.

DISCUSSION

This prospective observational study provided robust evidence supporting the beneficial role of early postpartum counseling in enhancing breastfeeding practices among postpartum women in a tertiary care setting in Pakistan[12]. The findings clearly demonstrate that women who received structured lactation counseling within the first six hours after delivery exhibited significantly higher rates of early breastfeeding initiation, exclusive breastfeeding at six weeks, and overall maternal satisfaction. These results are consistent with existing global literature, which emphasizes that timely, targeted breastfeeding support is a critical determinant of successful lactation outcomes, particularly in resource-limited settings where routine postnatal guidance is often insufficient or absent[13].

The significantly higher early initiation rate observed in the counseled group (86%) aligns with WHO and UNICEF recommendations advocating breastfeeding within the first hour of life to reduce neonatal mortality and promote immunological benefits[14]. In contrast, delayed initiation in the non-counseled group suggests a missed opportunity for maternal education during the immediate postpartum window a period often underutilized in conventional clinical workflows. Furthermore, the increased exclusivity of breastfeeding in the counseled group at six weeks indicates that early education not only impacts initial behavior but also fosters sustained breastfeeding adherence, which has been shown to protect against malnutrition, gastrointestinal infections, and long-term metabolic disorders[15].

The maternal knowledge scores observed in this study serve as a surrogate marker for informed decision-making and confidence in lactation. Women who received counseling scored significantly higher, suggesting that structured communication improves maternal understanding and may counteract prevalent cultural myths or misinformation surrounding breastfeeding[16]. Higher satisfaction scores further underscore the psychosocial benefit of early education, fostering maternal empowerment and potentially reducing stress and postpartum depressive symptoms factors known to influence breastfeeding continuation. An equally important observation was the reduced reliance on formula supplementation in the counseled group, which has practical implications for public health. In LMICs like Pakistan, where formula feeding is often initiated due to misconceptions, lack of support, or aggressive marketing practices, reinforcing exclusive breastfeeding through counseling can mitigate unnecessary economic burdens on families and health risks to infants[17].

Importantly, the biological parameters such as neonatal birth weight and maternal hemoglobin were comparable between the groups, reinforcing the conclusion that improved breastfeeding outcomes were directly associated with the counseling intervention rather than confounding physiological factors. This study added to the limited body of regional evidence and provides a strong rationale for integrating structured breastfeeding counseling into routine postpartum care pathways[18]. It supports the implementation of low-cost, scalable models such as early nurse-led or peer-based lactation education programs that can be adapted across public and private health sectors in Pakistan. Furthermore, the intervention's effectiveness within just six hours postpartum highlights the importance of timing and structured delivery key elements that should be embedded into obstetric discharge protocols and maternal health policies[19, 20].

CONCLUSION

Early postpartum breastfeeding counseling significantly improves the initiation and exclusivity of breastfeeding, enhances maternal knowledge and satisfaction, and reduces the need for formula feeding. These findings underscore the need for integrating structured counseling programs into standard maternal care protocols to promote breastfeeding success and improve neonatal health outcomes in Pakistan and similar LMIC settings.

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