



Impact of Early Initiation of Breastfeeding on Third Stage Labor Outcomes: A Randomized Controlled Trial

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ABSTRACT: “A true experimental study was conducted to evaluate the effectiveness of early initiation of breastfeeding on the outcomes of the third stage of labor among intranatal mothers. The intervention involved initiating breastfeeding within 5 minutes of delivery in the experimental group, aiming to improve third-stage outcomes such as reduced blood loss, decreased symphysis-fundal height, and shortened duration of the third stage of labor. The control group received standard hospital care without early breastfeeding initiation. The results demonstrated statistically significant differences between the experimental and control groups. The calculated 't' values were 3.704 for blood loss, 4.467 for symphysis-fundal height, and 7.013 for the duration of the third stage of labor, indicating highly significant improvements in the experimental group. These findings suggest that early initiation of breastfeeding is a highly effective nursing intervention to enhance maternal outcomes during the third stage of labor.

Keywords: Early initiation of breast feeding, blood loss, involution of uterus

INTRODUCTION : Pregnancy is a unique, exciting, and transformative phase in a woman's life, highlighting her creative and nurturing potential while establishing a bridge to the future. Breastfeeding is the natural method of providing essential nutrients to infants, supporting healthy growth and development. It is also a cost-effective practice, offering vital nourishment to the child with minimal cost to the mother. Moreover, hormones released during breastfeeding contribute to strengthening the maternal-infant bond. According to data published by UNICEF, WHO, and WABA (2007), breastfeeding should be initiated within the first 30 minutes after birth (Thompson, J. F. 2001). When placed on the mother's chest, a newborn can instinctively perform the breast crawl, enabling self-initiation of breastfeeding within 30 to 60 minutes of delivery. Early breastfeeding not only enhances neonatal nutrition but also promotes uterine contraction, which may reduce blood loss during the third stage of labor (Febo, M., 2007). In India, the maternal mortality rate is approximately 7–10 per 10,000 live births, with postpartum hemorrhage due to excessive bleeding being one of the leading causes of maternal deaths. Alarming, breastfeeding is often delayed; 35% of infants are not breastfed even 48 hours after birth (Thompson, J. F. 2001). Early initiation of breastfeeding within the first hour of birth is known to stimulate milk production and improve neonatal outcomes. An estimated two-thirds of the 2.4 million infant deaths occurring annually in India are associated with improper feeding practices (Asha, A., et al., 2024). Effective perinatal care is therefore essential to improve pregnancy outcomes and reduce morbidity and mortality among both mothers and newborns (Aishwarya, R., & Ethirajan, S., 2022). Evidence from the Cochrane Database indicates that active management of the third stage of labor significantly reduces blood loss and the risk of postpartum hemorrhage (Sobhy, S. I., & Mohame, N. A. 2004). Furthermore, early initiation of breastfeeding has been shown to stimulate uterine contractions during this stage, aiding in maternal recovery (Febo, M., 2007). Colostrum, the first milk produced postpartum, plays a critical role in neonatal health. It acts as a natural laxative, helping to clear meconium, remove excess bilirubin, and prevent neonatal jaundice. Despite these benefits, many mothers avoid early breastfeeding due to misconceptions—such as the belief that breast milk does not appear immediately after delivery or is insufficient to meet the newborn's needs—which leads to the neglect of colostrum feeding (Shewasinad, S., et al., 2017). The WHO recommends that all newborns be breastfed and receive colostrum within one hour of birth (Kebede, N., et al. (2023). Although produced in small amounts, colostrum is rich in antibodies and growth factors, and its early intake encourages adequate milk production in the following days.

Given this background, the current study aims to assess the effectiveness of early initiation of breastfeeding on the outcomes of the third stage of labor among intranatal mothers.

MATERIAL AND METHODS: A true experimental post-test only design was adopted to assess the effectiveness of early initiation of breastfeeding on the outcomes of the third stage of labor among intranatal mothers. The study was conducted over a period of four weeks, from January 2024 to March 2024, in the labor ward of the host institution. Ethical clearance was obtained from the Institutional Human Ethics Committee (IHEC) of Sir Ivan Stedeford Hospital prior to commencement of the study. The study population included 30 intranatal mothers aged between 18 and 30 years, all of whom were primigravida and had undergone regular antenatal check-ups. A total of 30 participants were selected using a simple random sampling technique (lottery method), with 15 assigned to the experimental group and 15 to the control group. Data collection was carried out over the four-week study period. After identifying eligible participants, the investigator provided a self-introduction and obtained informed consent. In the experimental group, immediately following delivery, the research assistant provided routine newborn care and initiated breastfeeding within 10 minutes. Concurrently, a calibrated collection bag was placed beneath the perineum to measure postpartum blood loss, while the duration of the third stage of labor and the symphysis-fundal height were also recorded. In the control group, participants received standard hospital care, which included routine immediate newborn care but without early initiation of breastfeeding.

RESULTS

Assessment and Comparison of early initiation of breast feeding among intranatal mother.

The blood loss in the experimental group the mean score was 115.33 with S.D 17.57 whereas in the control group the mean score was 141.0 with S.D 21.28. The calculated 't' value was 3.704 which showed statistically high significant difference at $p < 0.001$ level. With regard to symphysis fundal length among the experimental group the mean score was 12.0 with S.D 1.57 whereas in the control group the mean score was 14.7 with S.D 0.59. The calculated 't' value was 4.467 which was statistically high significant difference at $p < 0.001$ level to the time duration in the experimental group the mean score was 12.0 with S.D 2.17 whereas in the control group the mean score was 17.0 with S.D 1.99. The calculated 't' value was 7.013 which was statistically high significant difference at $p < 0.001$ level.

Table 1: Comparison of post test level on outcome of third stage of labour among the primi mothers in the experimental and control group (where $n = 30(15+15)$)

	Experimental Group		Control Group		't' value
	Mean	S.D	Mean	S.D	
Blood Loss	115.33	17.57	141.0	21.28	$t = 3.704^{***} (S)$
Symphysis Fundal Length	12.0	1.57	14.7	0.59	$t = 4.467^{***} (S)$
Time Duration	12.0	2.17	17.0	1.99	$t = 7.013^{***} (S)$

S---Significant

DISCUSSION: A study was conducted among 30 intranatal primigravida mothers with the objective of investigating the effect of early initiation of breastfeeding on reducing complications during the third stage of labor. Participants were randomly assigned to either the experimental or control group. In the experimental group, breastfeeding was initiated within 10 minutes after delivery as an intervention. The findings of the study indicated that early initiation of breastfeeding had a positive impact on third-stage labor outcomes. Specifically, the experimental group demonstrated effective uterine involution, a shorter duration of the third stage of labor, and a reduced amount of blood loss compared to the control group. These outcomes suggest that early breastfeeding initiation is an effective strategy in managing the third stage of labor. The reduced blood loss observed among mothers in the experimental group is attributed to the early initiation of breastfeeding, which stimulates the release of endogenous oxytocin. The increased oxytocin levels facilitated placental expulsion and enhanced uterine contraction, thereby contributing to effective uterine involution and a shortened third stage of labor.

The findings of this study clearly indicate that early initiation of breastfeeding significantly improves outcomes during the third stage of labor. This is evident from the reduction in blood loss, shorter duration of the third stage, and enhanced uterine involution observed among mothers in the experimental group. One of the key physiological mechanisms behind this improvement is the release of endogenous oxytocin during breastfeeding. When infants begin suckling shortly after birth, the maternal body responds by secreting oxytocin, which strengthens uterine contractions, promotes placental expulsion, and reduces the risk of postpartum hemorrhage (PPH) (Matthiesen, A.S., et al., 2001). This hormonal response is essential for facilitating effective uterine involution and limiting blood loss. Skin-to-skin contact between the mother and newborn immediately after birth also plays a vital role in this process. It not only stabilizes the neonate's temperature and respiration but also stimulates early rooting and suckling behaviors. These reflexes further support early breastfeeding and the physiological changes necessary for the third stage of labor to proceed smoothly (Forster, D. A. 2007). From a global health standpoint, organizations like the World Health Organization (WHO) and UNICEF strongly advocate for initiating breastfeeding within the first hour of life. This practice is considered a key intervention to reduce neonatal mortality and morbidity, particularly in low- and middle-income countries (WHO & UNICEF. 2018). Aligning clinical protocols with these global standards is essential to improving maternal and neonatal outcomes. The presence of social support systems, including trained healthcare personnel and lactation counselors, has been shown to significantly improve the success rate of early initiation. Positive reinforcement

and assistance provided by nurses or birth attendants during the immediate postnatal period can enhance maternal confidence and motivation to initiate breastfeeding early (Gabbe, C. 2009).

Delaying breastfeeding beyond the first hour has been strongly associated with increased neonatal mortality risk. Infants who are not breastfed soon after birth miss out on the protective effects of colostrum and are more vulnerable to infections and complications (Edmond, K., et al., 2006). This underscores the urgency of implementing early initiation practices as a standard part of intrapartum and postpartum care. Cultural misconceptions and knowledge gaps remain significant barriers. Many mothers believe that breast milk does not appear immediately after delivery or that colostrum is harmful or insufficient. Such beliefs often lead to delayed initiation or the introduction of prelacteal feeds. Educational programs must address these myths and promote colostrum feeding as it is rich in antibodies and growth factors essential for newborn immunity (Shewasinad, S., et al. 2017). Moreover, the role of antenatal education and prenatal counseling cannot be overstated. Mothers who receive structured information and guidance during pregnancy are significantly more likely to initiate breastfeeding within the golden hour after birth. Antenatal classes should emphasize the physiological and emotional benefits of early breastfeeding to encourage compliance and dispel fears (Shewasinad, S., et al. (2017)(Edmond, K., et al., 2006).

CONCLUSION: Early initiation of breastfeeding is a multifaceted intervention that combines physiological, psychological, and social elements to improve third-stage labor outcomes. These findings are consistent with international literature and reinforce the importance of integrating early breastfeeding into routine maternity care. Future interventions should aim to incorporate structured breastfeeding support, address cultural barriers, and strengthen antenatal education to maximize maternal and neonatal health outcomes. The present study assessed the effectiveness of early initiation of breast feeding on outcome of third stage of labor among intra natal mothers. The findings of the study reveal that the effect of early initiation of breast feeding on outcome of third stage of labor was found effective. It could be promoted by health care professionals in day to day caring the mothers in hospital.

RECOMMENDATIONS:

1. The nursing education curriculum should incorporate lactation counseling as a distinct and essential component.
2. Community health workers should be provided with a dedicated lactation counseling program to enhance their effectiveness.
3. Expectant mothers should receive lactation counseling as part of their childbirth education classes.
4. All healthcare providers, including nursing and medical staff, should be well-informed about the benefits and significance of early initiation of breastfeeding.

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REFERENCES

1. Aishwarya, R., & Ethirajan, S. (2022). Gestational age at booking for antenatal care in a tertiary healthcare facility: A glance. *International Journal of Infertility & Fetal Medicine*, 13(3), 91–95.
2. Ann-Sofi Matthiesen, Ransjpo-Arvidson, A.-B., Nissen, E., & Uvnas-Moberg, K. (2001). Post-partum maternal oxytocin release by newborn: Effects of infant hand massage over the breast and sucking. *Nightingale Nursing Times*, 4(7), 49–50.
3. Asha, A., Balakrishnan, R. K., Sahayam, P. V., & Kumutha, J. (2024). Knowledge and awareness about breastfeeding among postnatal mothers in a private medical college. *South Eastern European Journal of Public Health*, 94–100.
4. Bellad, M. B. (2000). Breastfeeding. *The Japanese Journal of Neonatal Care*, 10(9), 10–17.
5. Caroline Deason. (2005). Supporting women in labor. *European Journal of Nursing*, 85(2), 23–24.
6. Deepeshwara. (2002). Determinant of early initiation of breastfeeding in a tertiary neonatal unit. *Journal of Nepal Pediatric Society*, 29(2), 74–78.
7. Della Forster, D. A. (2007). Benefits of uninterrupted skin-to-skin contact between mother and baby. *Journal of Psychosomatic Obstetrics and Gynecology*, 56(4), 65–68.
8. Dordevic, G., et al. (2004). Early contact with baby – Benefits for the mother. *American Journal of Nursing*, 8(3), 120–123.
9. Edmond, K., Zandoh, C., Quigley, M. A., Amenga-Etego, S., Owusu-Agyei, S., & Kirkwood, B. R. (2006). Delayed breastfeeding initiation increases risk of neonatal mortality. *American Journal of Pediatrics*, 11(7), 380–386.
10. Elizabeth Eden. (2005). Timely initiation of breastfeeding among mothers of healthy full-term babies. *Nigerian Journal of Clinical Practice*, 9(1), 57–64.
11. Erickson. (2000). Duration of breastfeeding after an early initiation and frequent feeding. *Journal of Perinatology*, 97(2), 1141–1143.
12. Gabbe, C. (2009). Social support during childbirth as a catalyst for early breastfeeding initiation for first time in Nepal. *International Breastfeeding Journal*, 4(6), 4–16.
13. Jane F. Thompson. (2001). Initial management of breastfeeding.

14. Kebede, N., Alemu, G., & Cherie, N. (2023). Colostrum feeding practice and its associated factors among postnatal mothers who attend at health facility, Ethiopia. *Journal of Neonatal Nursing*, 29(6), 875–880.
15. Marcelo Febo, et al. (2007). Early initiation of breastfeeding and its benefit in rural Egypt. *International Breastfeeding Journal*, 104(1), 3–4.
16. Shewasinad, S., Manjura, M., Bolesh, A., Sisay, D., & Negash, S. (2017). Assessment of knowledge, attitude and practice towards colostrum feeding among antenatal care attendant pregnant mothers in Mizan Tepi University Teaching Hospital, Bench Maji Zone, SNNPR, South West Ethiopia, 2016/2017 GC. *Journal of Pregnancy and Child Health*, 4(5), 1–8.
17. Sobhy, S. I., & Mohame, N. A. (2004). The effect of early initiation of breastfeeding on the amount of vaginal blood loss during the fourth stage of labor. *Journal of the Egyptian Public Health Association*, 79(1–2), 1–12.
18. World Health Organization. (2006). *Maternal and newborn health safe motherhood: Essential newborn care* (Report of a Technical Working Group 72.4, pp. 32–34).
19. World Health Organization & UNICEF. (2018). *WHO and UNICEF issue new guidance to promote breastfeeding in health facilities globally*. <https://www.who.int/news/item/11-04-2018-who-and-unicef-issue-new-guidance-to-promote-breastfeeding-in-health-facilities-globally>

