

Original Research Article

# BREASTFEEDING PRACTICES AMONG INSTITUTIONALLY DELIVERED NEWBORNS IN RURAL AREA OF DISTRICT JALAUN : AN OBSERVATIONAL STUDY

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## ABSTRACT

**Background:** With the rise in institutional deliveries, the responsibility of timely initiation and maintaining optimum breastfeeding practices has shifted from families and community health workers to doctors and nursing personnel. According to the National Family Health Survey - 5, there is significant rise in institutional births from 78.9 % to 88.6 % while exclusive breastfeeding (EBF) still ranging around 59.7%. The present study aimed to gain insights into the breastfeeding practices among institutionally delivered newborns, and determine the factors affecting it.

**Materials and Methods:** This study was conducted at secondary healthcare facility at Jalaun & Kalpi. After obtaining written informed consent, 400 postnatal mothers were interviewed within 48 hours of delivery. Simple random technique was used to find the desired sample size.

**Results:** Breastfeeding practices were recorded and analysis was performed to identify the determinants of EIBF and exclusive breastfeeding (EBF). Out of 400 respondents, only 248 mothers (62%) followed EIBF. Pre-lacteal feed was given by 341 mothers (85.3%). EBF was practiced by 208 mothers (52%). Determinants of exclusive breastfeeding observed in this study was health seeking behavior of mothers as reflected through. Minimum number of antenatal clinics(04 as per norms of WHO) attended –14.7%. Mothers educational status – with literacy rate of 62% among participants. Socio-economic profile- with 66.3% belonging to lower socioeconomic class. Parity- 55% females being multipara.

**Conclusion:** The study showed a total prevalence of 52% of EBF as compared to 59.7% of EBF as per NFHS -5 data. Antenatal counselling needs to be strengthened with identified bottlenecks like primiparous women, economically underprivileged mothers.

**Keywords:** Breastfeeding, Newborn, Health surveys.

## INTRODUCTION

Appropriate feeding is crucial for the healthy growth and development of the newborn. Breastmilk is the natural first and complete food for babies. It continues to provide upto half or more of the child's nutritional needs.<sup>[1]</sup> Breast feeding is the safest and best infant feeding method. It has nutritional, immunological, behavioral and economic benefits for newborn and also provide desirable mother infant

bonding. It is now established that the breast feeding practices adopted in terms of duration, frequency and exclusiveness is essential for our understanding of impact of breast feeding on complete physical, mental and psycho-social development of the baby. Despite the benefits of breastfeeding, breastfeeding prevalence is still lower.<sup>[2]</sup> In India, breastfeeding is almost universal yet, the rates of early initiation, exclusive breastfeeding are far from desirable. The beneficial effects of breastfeeding depend on time of

breastfeeding initiation, its duration and the age at which the breastfed child is weaned.<sup>[3]</sup> Breastfeeding practices vary among different regions and communities due to different cultural and other factors. A study of prevalent breast feeding practices is essential before formulation of any need based intervention programme and to outline trends in breastfeeding pattern. According to NFHS -5 data the rate of institutional deliveries has substantially increased but exclusive breastfeeding still accounts for only 59 %. Therefore this study aims to study the factors leading to delay in breastfeeding and associated factors and formulation of need based programme.

#### WHO and UNICEF Guidelines

The World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) recommend the initiation of breastfeeding within the first hour of life as a key strategy to reduce neonatal morbidity and mortality. According to the Global Breastfeeding Collective:

- All newborns should receive breast milk exclusively, without any pre-lacteal feeds (e.g., water, sugar solutions, or formula).
- Exclusive breastfeeding refers to feeding infants only breast milk (including expressed or donor milk) with no other liquids or solids, except for prescribed medicines or supplements.

#### Role in Neonatal Survival

Nutritional and Immunological Importance

- Breastfeeding within the first hour ensures that the newborn receives colostrum, the first milk that is rich in essential nutrients, antibodies, and growth factors.
- The early intake of colostrum strengthens the neonate's immune system, providing passive immunity and protecting against infections such as sepsis, diarrhea, and respiratory illnesses.

#### Reducing Neonatal Mortality

- According to a Lancet 2016 Series on Breastfeeding, early initiation of breastfeeding could prevent up to 22% of all neonatal deaths.
- Delaying breastfeeding beyond the first hour is associated with a higher risk of neonatal mortality. Studies have shown that the risk of neonatal death increases by approximately 33% for every hour of delay in breastfeeding initiation.

#### Stimulation of Maternal and Neonatal Bonding

- Early breastfeeding promotes skin-to-skin contact, which helps regulate the newborn's body temperature, heart rate, and breathing.

- It fosters emotional bonding between the mother and the infant, contributing to the newborn's long-term psychosocial well-being.

**Hormonal Benefits to the mother:** Suckling stimulates the release of oxytocin in the mother, which facilitates uterine contractions, reduces postpartum bleeding, and helps expel the placenta.

**Global Nutrition Targets 2025:** WHO aims to increase the rate of exclusive breastfeeding in the first six months to at least 50% by 2025. Early initiation within the first hour is pivotal to achieving this goal. The challenges faced by mothers in rural areas regarding early initiation of breastfeeding are multifaceted, involving social, cultural, traditional, and structural barriers. Addressing these challenges requires community-based interventions, improved healthcare access, and education programs that emphasize the benefits of breastfeeding and provide practical support to mothers in rural settings. By overcoming these barriers, neonatal health can be significantly improved in rural populations, contributing to the reduction of neonatal mortality and morbidity.

## MATERIALS AND METHODS

The present cross-sectional study was conducted amongst mothers having children between 0-7 days of age group in the field practice area of community health centres (CHC's) of Jalaun and Kalpi, Uttar Pradesh. This centre is situated at about 22-30 kms from the Medical College A total of 400 mothers were included. A hospital based survey was conducted and the researcher herself filled the pre-tested closed ended structured questionnaire. Written consent was taken from each of the participants. The related information regarding appropriate breastfeeding practices was taken for example, initiation & frequency of breastfeeding, colostrum feeding, exclusive breastfeeding. Structured questionnaire required 20 min. to half an hour. The study was carried out for a period of 6 months i.e. April 2025 till Sep 2025. Ethical approval was taken from the institute ethics committee (Ref. No.07/ethics/RMCJalaun/2024). Birth register at every centre was referred for making a list of postnatal mothers delivered during the study period. The information thus obtained were compiled, tabulated and analyzed statistically to draw out observations and meaningful conclusions.

## RESULTS

**Table 1: Knowledge and Practices about Breastfeeding (N = 400)**

Variable	Category	Frequency (n)	Percent (%)
First Breastfeed Time	Within 1 hour	248	62.0
	>1 hour	60	15.0
	Not feeding yet	92	23.0
Colostrum Knowledge	Yes	250	62.5
	No	150	37.5
Fed Colostrum	Yes	250	62.5

	No	150	50.0
Handwashing Knowledge Before Feeding	Yes	200	86.5
	No	200	50.0
Handwashing Practice Before Feeding	Yes	100	25.0
	No	300	75.0
EBF Duration (months)	6 months	208	52.0
	9 months	72	18.0
	1 year	120	30.0
Weaning Age	6 months	171	42.8
	9 months	54	13.5
	1 year	175	43.8
Sucking Pattern	Effective	374	93.5
	Not effective	26	6.5
Breastfeeding During Illness	Yes	247	61.8
	No	153	38.3
Breastfeeding Frequency	≥8 times/day (8 + >8)	258	64.5
	<8 times/day	50	12.5
	Not feeding	92	23.0
Prelacteal Feed Given	Yes	341	85.3
	No	59	14.7
Prelacteal Feed Type	Honey	150	37.5
	Ghutti	100	25.0
	Water	91	22.75
	None	59	14.75
Top Feed Given	Yes	26	6.5
	No	374	93.5
Top Feed Type	Formula feed	11	2.8
	Cow milk	15	3.8
	None	374	93.5
Burping Knowledge	Yes	315	78.8
	No	85	21.3
Breastfeeding Attachment Positioning	Good Positioning	209	52.2
	Poor Positioning	191	47.8

[Table 1] presents the knowledge and practices related to breastfeeding among the study participants. Only 62% of mothers-initiated breastfeeding within the first hour after birth, while 15% delayed beyond one hour, and a substantial 23% had not initiated breastfeeding at all. Awareness about colostrum was present in 62.5% of mothers, and the same proportion actually fed it to their infants, while 37.5% lacked this knowledge and practice.

Knowledge of handwashing before breastfeeding was reported by 50% of mothers, but actual practice was lower, with only 25% adhering to it, highlighting a major gap between awareness and action. Exclusive breastfeeding for the recommended six months was practiced by 52% of mothers, while 18% continued for nine months, and 30% extended up to one year. In terms of weaning, 42.8% initiated at six months, 13.5% at nine months, and 43.8% at one year.

Most mothers (93.5%) reported effective sucking patterns, and 61.8% continued breastfeeding even during illness. Breastfeeding frequency was optimal in 64.5% of participants who fed eight or more times daily, while 12.5% fed less frequently, and 23% were not breastfeeding. Prelacteal feeding was common, reported by 85.3% of mothers, with honey (37.5%), ghutti (25%), and water (22.8%) being the most frequent substances used.

Top feeding was less common, seen in only 6.5% of participants, with cow's milk (3.8%) and formula (2.8%) being the main options. Awareness about burping was reported by 78.8% of mothers. Regarding breastfeeding positioning, 52.2% demonstrated good attachment, whereas 47.8% showed poor positioning, indicating a significant need for counseling on correct technique.

**Table 2: Socio-Demographic Profile of Participants (Categorical Variables, N = 400)**

Variable	Category	Frequency	Percentage (%)
Religion	Hindu	330	82.5
	Muslim	70	17.5
Residence	Jalaun	200	50.0
	Kalpi	200	50.0
Family Type	Joint	400	100.0
Education Status	Illiterate	3	0.8
	Literate	15	3.8
	Primary	107	26.8
	Middle School	45	11.3
	High School	82	20.5
	Higher Secondary	104	26.0
Occupation	Graduation	44	11.0
	Housewife	280	70.0
	Job	120	30.0

Socioeconomic Class	Lower	267	66.8
	Lower Middle	113	28.2
	Middle	20	5.0

[Table 2] illustrates the socio-demographic profile of the participants. The majority of mothers (82.5%) were from the Hindu religion, while 17.5% were Muslim. Half of the participants (50%) were from Jalaun and the other half (50%) from Kalpi. All participants lived in joint families. Educational attainment varied, with the largest proportions having completed primary education (26.8%) and higher secondary education (26.0%), followed by high school (20.5%). Only 0.8% were illiterate, while

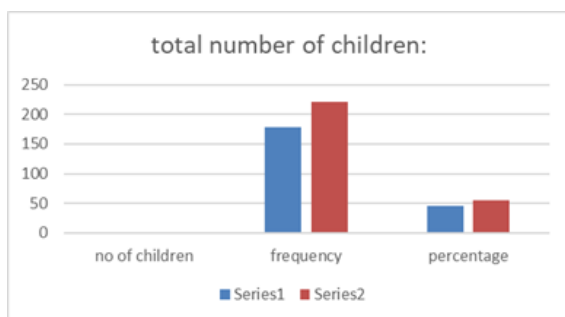
3.8% were literate without formal schooling. A small proportion had completed graduation (11.0%). In terms of occupation, most mothers were housewives (70.0%), while 30.0% were engaged in jobs. Regarding socioeconomic status, the majority belonged to the lower class (66.8%), followed by the lower-middle class (28.2%) and middle class (5.0%), indicating a predominantly economically weaker section of society.

**Table 3: table showing the parity of women under study(n= 400)**

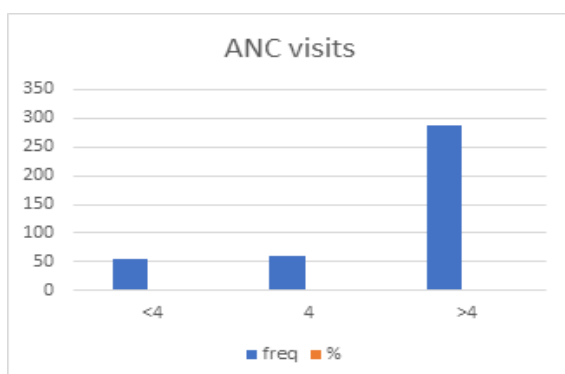
Total number of children	frequency	percentage
1	179	44.7%
2 or >2	221	55%

**Table 4: descriptive analysis showing total ANC visits taken by participants**

Total number of ANC visit	frequency	percentage
<4	54	13.5
4	59	14.7
>4	287	71.7



[Table 4] depicts that 14.7% of the mothers took four antenatal visits as suggested by the norms of WHO while 71.7% took more than 4 visits which indicating a good number of women visiting healthcare facility giving more chances for their educational and behavioural counselling.



## DISCUSSION

The present study assessed breastfeeding practices among institutionally delivered newborns in the rural areas of district Jalaun, Uttar Pradesh. Despite

institutional deliveries ensuring medical supervision and opportunities for early breastfeeding counselling, the findings indicate that optimal breastfeeding practices remain suboptimal. Only 62% of mothers initiated breastfeeding within the first hour of birth, which, although higher than the national average reported in NFHS-5 (42%), still reflects a considerable delay for nearly two-fifths of neonates. Delayed initiation deprives infants of the immunological and nutritional advantages of colostrum and increases their risk of infection and malnutrition in the early neonatal period.<sup>[4-6]</sup>

Prelacteal feeding was prevalent among 85.3% of mothers, with honey, ghutti, and water being the most common. This practice persists due to strong cultural and traditional beliefs, despite institutional delivery and healthcare counselling. The use of prelacteal feeds displaces colostrum intake and may predispose neonates to gastrointestinal infections. Similar findings have been reported in studies conducted in rural regions of Madhya Pradesh and Bihar, emphasizing the persistent influence of sociocultural norms on infant feeding behaviour.<sup>[7]</sup>

Exclusive breastfeeding (EBF) for the recommended six months was practiced by only 52% of mothers, consistent with NFHS-5 national data (59%). While awareness about colostrum and breastfeeding benefits was moderately high, the study highlights a major gap between knowledge and practice—particularly evident in handwashing, proper positioning, and feeding frequency. Only 25% of mothers practiced hand hygiene before feeding, and nearly half demonstrated poor breastfeeding attachment. These findings underline the need for targeted, hands-on counselling sessions by healthcare providers during antenatal and postnatal visits.<sup>[8]</sup>

Maternal nutrition emerged as a crucial determinant influencing breastfeeding adequacy and quality. Nutritional counselling for mothers—especially in rural and low-income settings—is often neglected. A balanced maternal diet rich in calories, proteins, vitamins, and minerals is essential not only to maintain lactation but also to ensure adequate milk volume and nutrient content. According to WHO guidelines, lactating mothers require an additional 500 kcal/day and 15–20 g of protein/day above their pre-pregnancy intake. Locally available, affordable protein sources such as pulses, lentils, milk, curd, eggs, and soy products should be promoted through dietary education programs. Iron, calcium, and folate supplementation must be emphasized to prevent maternal anemia and fatigue, both of which adversely affect milk output and feeding consistency.<sup>[9]</sup>

In the present study, most mothers (66.8%) belonged to the lower socioeconomic strata, and 70% were housewives, indicating limited access to dietary diversity and health information. Therefore, interventional strategies should integrate breastfeeding promotion with maternal nutrition support—through community health workers, village health and nutrition days (VHNDs), and self-help groups. Incorporating nutrition education into routine ANC and PNC counselling can substantially improve both maternal and neonatal outcomes.<sup>[10-12]</sup>

The study also found that only 33% of mothers had more than four antenatal visits, which is below the WHO recommendation. Regular antenatal care offers an ideal opportunity for repeated reinforcement of breastfeeding messages, demonstration of correct techniques, and addressing maternal dietary inadequacies. Thus, strengthening ANC coverage and counselling quality remains a critical public health priority.<sup>[13]</sup>

## CONCLUSION

Breastfeeding is a cornerstone of neonatal survival and maternal well-being. The findings of this study reveal that although institutional delivery rates have improved in rural Jalaun, optimal breastfeeding practices—particularly early initiation, exclusive breastfeeding, and avoidance of prelacteal feeds—remain inadequate. Cultural practices, low maternal education, poor hygiene habits, and suboptimal nutritional intake are key barriers.

To achieve the global nutrition targets for 2025, a comprehensive, community-based intervention is needed—linking breastfeeding education with maternal dietary support. Health workers should emphasize the importance of a balanced maternal diet

providing sufficient calories ( $\approx 2,500$ – $2,800$  kcal/day) and protein ( $\approx 70$  g/day), hydration, and micronutrients. Nutrition-specific counselling during antenatal and postnatal visits, along with practical demonstrations of correct breastfeeding techniques, can help bridge the knowledge-practice gap.

Empowering mothers through health education, improving access to affordable nutritious food, and reinforcing evidence-based breastfeeding practices will collectively enhance neonatal health outcomes and contribute significantly to the reduction of infant morbidity and mortality in rural India.

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