

## PREVALENCE OF EARLY INITIATION OF BREAST FEEDING AND DETERMINANTS OF DELAYED INITIATION OF BREAST FEEDING IN MOTHERS DELIVERED IN TERTIARY CARE CENTRE, JHANSI (UP)

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### Abstract

**Background:** Breastfeeding is the most effective method of promoting the health of infants. Breast milk is God's gift to human beings. Breastfeeding is a most valuable natural resource and is of utmost importance to prevent disease and to promote child survival. Yet, it is not been practiced universally. It leads to infections which causes high mortality and morbidity. It also causes malnutrition and huge economic loss to the country. Early initiation of breastfeeding, within one hour of birth is recommended by WHO. Global estimates are that less than half (42%) of all new-borns are put to the breast within the first hour of birth. **Objective:** To estimate the prevalence of early initiation of breastfeeding (within first one hour of birth) among normal vaginal delivered mothers and to assess the determinants of delayed breast feeding. **Materials and Methods:** A cross sectional study was performed in obstetric ward from April 2020- March 2021 in the MLB medical college Jhansi. **Results:** A total of 400 mothers were studied, most of the mothers were found to be in the age group of 18 - 24 years (42.25 %) and were housewife (93.25 %), were found to be (96 %) literate, and had middle and high school education (43%). (61.5%) were low social class and 51.75% mothers started breastfeeding within an hour after birth. **Conclusion:** There was a significant association between previous information and EIBF. The mothers who were previously informed regarding the practice and benefits of early initiation of breastfeeding were more likely to embrace the practice.

## INTRODUCTION

Early initiation of breastfeeding (EIBF, defined as the provision of only breast milk to the newborn within the first hour of birth) has been well-documented to reduce the risk of neonatal mortality.<sup>[1,2]</sup> The protective effect of EIBF is based on the immunological components of the breast milk.<sup>[3,4]</sup> The improvement in exclusive breastfeeding,<sup>[5,6]</sup> and the avoidance of pre lacteal foods that deprive new-borns of colostrum, rich in nutrients and immunoglobulins needed to fight disease.<sup>[7,8]</sup> Global estimates are that less than half (42%) of all new-borns are put to the breast within the first hour of birth.<sup>[9]</sup>

According to NFHS-4 data, initiation of breastfeeding within one hour of birth in India is only 41.6 per cent even after a tremendous increase in institutional births from 38.7 % (2005-06) to 78.9

per cent (2015-16).<sup>[10]</sup> No country had more than 80% of babies breastfeeding within an hour of birth. When it comes to breastfeeding, timing is everything. New-borns who are put to their mother's breast within the first hour of life are more likely to survive, while those left waiting face life-threatening consequences. Indeed, the longer new-borns wait for the first critical contact with their mother, the greater their risk of death. According to a recent meta-analysis of five studies from four countries, including more than 130,000 breastfed new-borns, those who began breastfeeding between 2 and 23 hours after birth had a 33% greater risk of dying compared with those who began breastfeeding within one hour of birth. Among new-borns who started breastfeeding 24 hours or more after birth, the risk was more than twice as high.<sup>[11]</sup>

The protective effect of early breastfeeding existed independently of whether or not the children were

exclusively breastfed. Children who are not put to the breast within the first hour of life also face a higher risk of common infections. In a study of more than 4,000 children in Tanzania, the delayed initiation of breastfeeding was associated with an increased risk of cough and an almost 50 per cent increased risk of breathing difficulties in the first six months of life, compared with new-borns who began breastfeeding within the first hour of birth.<sup>[12]</sup> In many countries across the world, the practice of giving new born babies substances other than breast milk is a common cultural practice.<sup>[13]</sup>

When the babies are given such fluids, even before lactation has been initiated, it is called pre-lacteal feeding, and the fluids are called pre-lacteal feeds.<sup>[14]</sup> Studies have shown that the effects of pre-lacteal feeding in babies range from lactation failure, shortening of the duration of breast feeding due to the incidence of diarrhoea.<sup>[15]</sup>

## MATERIALS AND METHODS

This cross-sectional study was conducted from April 2020- March 2021 among Females who had delivered full term live baby in performed in conducted in the tertiary care centre of Department of obstetrics and Gynae, MLB Medical College Jhansi UP. The calculated sample size was 400 and all full term normal vaginal delivered mother were included and the mothers who were critically ill mother, critically ill baby, premature baby less than 34week, baby delivered by caesarean section and those who were not willing to participate were excluded from the study. Sampling was done by simple random sampling method. The study was done in postpartum ward of MLB medical college Jhansi after taking institutional ethical clearance. Mothers were selected by systematic random sampling technique and interviewed using a

predesigned and pretested, semi structured interview schedule was used as a tool.

**Sample size:** As per the NFHS-4 data, the of prevalence of early initiation of breastfeeding within first one hour is 41.6% in India. And it is considered for calculation of sample size at 95% CI (Z=1.96) and the limit of accuracy is kept at 5%.

### Data Entry and Analysis

EPIINFO, SPSS Free trial version 14 and Microsoft excel software were used to analyse the data. Following the descriptive analysis, for comparison among categorical variables Chi-square test was used. A “p” value of less than 0.05 was considered to be statistically significant for any given measure. Data was entered & analysed on standard statistical software (SPSS) and appropriate statistical analysis were applied.

Each selected respondent were explained about the purpose and possible benefits of the study and assurance of the confidentiality. Written informed consent was obtained from each subject after an oral explanation of the study as per the WHO guidelines.

## RESULTS

Four hundred women, fulfilling the study criteria, were enrolled during the study. Most of the mothers in our study were found to be in the age group of 18 - 24 years (42.25 %) and were housewife (93.25 %), and had middle and high school education (43%). The practice of early initiation of breastfeeding was seen among 207 (51.75%) mothers out of a total of 400 in this study.

In our study we found the occupation status of father, majority of father semiskilled (35.25%), 92.25% were literate and 7.75% were illiterate and majority of mother were (93.25%) house wives as depicted in [Table 1].

**Table 1: Socio demographic profile of study participants**

Sociodemographic variables	Categories for variables	Frequency (%)
Age (in years)	18-24	169(42.25)
	25-29	121(30.25)
	>30	110(27.5)
Occupation of mother	Unemployed (housewife)	373(93)
	Employed	27 (7)
Occupation of father	Unemployed	14(3.5)
	Unskilled worker	139(34.75)
	Semiskilled	145(36.25)
	Skilled	68(17)
	Clerk/shop owner Semiprofessional	28(7) 6(1.5)
Education of father	Primary	53(13.25)
	Middle/high	74(18.5)
	Secondary	147(36.75)
	Graduate and above Illiterate	95(23.75) 31(7.75)
Education of mother	Primary	68(17)
	Middle/high	172(43)
	Secondary	82(20)
	Graduate and above Illiterate	62(16) 16(4)

Mothers educated till graduation or above were more likely to practice EIBF. However, children whose fathers had higher education were less likely to receive breastfeeding early. Mothers who were previously informed about the practice of breastfeeding by doctor, adhered to the practice more often.

**Table 2: Association of determinants with EIBF**

	Sociodemographic variable	Up to 1 hour	More than 1 hour	Statistical Test, P-value
<b>Age group</b>	18-24 years(169)	71	98	Chi- square=16.4 P=.0026
	25-29 years (121)	80	41	
	>30 years (110)	56	54	
<b>BPL</b>	YES (246)	143	103	Chi- square=10.4 P=.0012
	NO (154)	64	90	
<b>Religion</b>	Hindu (311)	161	150	Chi-square=0.57 P=.74
	Muslim (83)	42	41	
	Other (6)	4	2	
<b>Mother education</b>	Primary (68)	32	36	Chi-square=14.9 P=0.004
	Middle/high (178)	82	90	
	Secondary (82)	40	42	
	Graduate and above (62)	46	16	
	Illiterate (16)	7	9	
<b>Socioeconomic status</b>	Upper (21)	9	12	Chi-square=12.8 P = .11
	Upper middle (50)	21	29	
	Lower middle (176)	88	88	
	Upper lower (135)	84	51	
	Lower (18)	5	13	
<b>Counselling of mother</b>	Yes (311)	183	128	Chi-square=28.15 P = .00001
	No (89)	24	65	
<b>Sex of infants</b>	Male (185)	98	87	Chi-square=0.20 P=.64
	Female(215)	109	106	
<b>Parity</b>	Primiparous(232)	101	131	Chi-square=8.53 P = .003
	Multiparous (168)	98	70	

**BPL- Below poverty line**

## DISCUSSION

According to the WHO rating on early initiation of breastfeeding; 0–29% is considered poor, 30–49% as fair, 50–89% as good and 90–100% as very good.<sup>[16]</sup> The prevalence of early initiation of breastfeeding in the present study is good. The prevalence of early initiation of breastfeeding in my study is 51.7%. This is much higher the state prevalence (23.9%) as per NFHS-5 data, still it is way behind the national target of 80%.

In the present study the early initiations of breastfeeding to their infant were found in 51.7% and more than 1 hour 48.3%. Sharma A et al 2016 done a study,<sup>[17]</sup> they found that EIBF within one hour 38.6%, but 73.3% mothers were initiated breast feeding within first 24 hour of birth.<sup>[18]</sup> Gupta et al. reported that 40% of their respondent initiated breast-feeding within one hour of birth.<sup>[19]</sup> The study by Fotedar R *et al* showed that 20% women initiated breastfeeding within 1hr, while 30% women initiated breastfeeding their baby after 24 h.

The goal of this study was to identify the risk factor associated with delayed breastfeeding and we found that there was a significant association between mother's education and EIBF. The mothers who were educated up to graduation or above, were more likely to adopt the practice of early initiation of

breastfeeding (74%) as compared to Mothers with low education (43% among illiterates and 47 % in primary and middle class) showed a delay in early initiation of breast feeding. Illiterate mothers had a delay in breast feeding in this study, which was also similar to study done by Bagul AS and Supare MS *et al* in urban slums of Nagpur.<sup>[20]</sup>

This indicates that education may be a driver to the adoption of healthier practices due to greater understanding of health-related information.

Present study also showed that there was no relation between gender of the baby with the initiation of breastfeeding. It was observed that in male babies, in (52.97) cases and girl babies, in (50.69%) cases breastfeeding was initiated in first hour. Similar results were also shown in the study done by Orun et Al.<sup>[21]</sup>

It was observed that 58.84% of counselled mother and 26.96% not counselled mothers-initiated breastfeeding in first hour. Thus, it was revealed that data was statistically highly significant and relation between counselling of mother and initiation of breastfeeding was found. There was a significant association between previous information and EIBF. The mothers who were previously informed regarding the practice and benefits of early initiation of breastfeeding were more likely to embrace the practice. This was similar to the findings of Bagul and Supare et al.<sup>[22]</sup>

## CONCLUSION

The education of the mother age, multiparity, awareness about early EIBF and counselling for early initiation and low family income has a significant impact on early initiation OF EIBF. There was no statistical significance observed between religion of mother, socioeconomic class, sex of baby, socioeconomic status. There was a significant delay in the breast feeding in primigravida mothers, mothers with younger age group and mothers with low education status.

### Limitation

Since the study was conducted in tertiary care centre its generalizability is limited.

Only full term normal vaginal delivered mothers were included.

## REFERENCES

1. Garcia CR, Mullany LC, Rahmthullah L, Katz J, Thulasiraj RD, Sheeladevi S, et al. Breast-feeding initiation time and neonatal mortality risk among newborns in South India. *J Perinatol* 2011;31(6):397–403. Epub 2010/12/18. doi: <https://doi.org/10.1038/jp.2010.138>. PubMed PMID: 21164424.
2. Debes AK, Kohli A, Walker N, Edmond K, Mullany LC. Time to initiation of breastfeeding and neonatal mortality and morbidity: a systematic review. *BMC Public Health*. 2013;13 Suppl 3:S19. Epub 2014/02/26. doi: <https://doi.org/10.1186/1471-2458-13-S3-S19>. PubMed PMID: 24564770; PubMed Central PMCID: PMC3847227. 79
3. Turfkruyer M, Verhasselt V. Breast milk and its impact on maturation of the neonatal immune system. *Curr Opin Infect Dis*. 2015;28(3):199–206.
4. Wang H, Bhutta AZ, Coates MM, Coggeshall M, Dandona L, Diallo K, et al. Global, regional, national, and selected subnational levels of stillbirths, neonatal, infant, and under-5 mortality during 1980-2015: a systematic analysis for the global burden of disease study 2015. *Lancet*. 2016;388:1725–74.
5. NEOVITA Study Group. Timing of initiation, patterns of breastfeeding, and infant survival: prospective analysis of pooled data from three randomised trials. *Lancet Glob Health*. 2016;4(4):e266–e75.
6. Victora CG, Bahl R, Barros AJ, França GV, Horton S, Krusevic J, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet*. 2016;387(10017):475–90.
7. Ogbo FA, Agho K, Ogeleka P, Woolfenden S, Page A, Eastwood J. Infant feeding practices and diarrhoea in sub-Saharan African countries with high diarrhoea mortality. *PLoS One*. 2017;12(2):e0171792
8. Agho KE, Ogeleka P, Ogbo FA, Ezech OK, Eastwood J, Page A. Trends and predictors of prelacteal feeding practices in Nigeria (2003–2013). *Nutrients*. 2016;8(8):462.
9. Health in 2015: from MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals. Geneva: World Health Organization; 2015.
10. Government of India. Ministry of Health and Family Welfare. National Family Health Survey-4, 2015-2016. Available from: <http://rchiips.org/nfhs/pdf/NFHS4/India.pdf>. Accessed July 24, 2017.
11. Smith Emily R, et al. 'Delayed breastfeeding initiation and infant survival: A systematic review and meta-analysis.' *PLoS ONE*, vol, 12, no. 7, 25 July 2017.
12. Smith, Emily R et al. 'Delayed Breastfeeding Initiation Is Associated with Infant Morbidity', *Journal of Pediatrics*, vol.191, pp.:57-62, 2017.
13. Goswami A. Analytical study of prevalent and traditional Prelacteal feeding practices and their relevance. *Indian J Preventive Social Med*. 2009;40(3):218- 24.
14. Sadagopal M. Her Healing Heritage: Study conducted in 7 states of India through LPSS & CHETNA, Ahmedabad; 1986.
15. Punia S, Chhikara S, Sangawan S. Infant feeding and weaning practices in selected cultural zones of Haryana. *Ind J Nutr Dietet*. 1997;34:102-5.
16. World Health Organization. Infant and young child feeding: a tool for assessing national practices, policies and programmes. Geneva: World Health Organization; 2003. Available from: <http://www.who.int/iris/handle/10665/42794>. Accessed 10 May 2018
17. Arvind Sharma1 \*, Pritesh Singh Thakur2 , Rajesh Tiwari1 , Pradeep Kumar Kasar1 , Richa Sharma3 , Vikrant Kabirpanthi4, Factors associated with early initiation of breastfeeding among mothers of tribal area of Madhya Pradesh, India: a community based cross sectional study *Int J Community Med Public Health*. 2016 Jan;3(1):194-199 <http://www.ijcmph.com>
18. Gupta A, Dadhich JP, Faridi MMA. Breast feeding and complementary feeding as a public health intervention for child survival in India. *Ind J Pediatr*. 2010;7(4):412-7.
19. Ranjana F, Lakshminarayana J, Ramnath T, Singh Madhu B. Health and nutritional status infant feeding practices of working women in Jodhpur city. *Ann Arid Zone*. 2002;41:183-9.
20. Bagul AS, Supare MS. The infant feeding practices in an urban slum of Nagpur, India. *J Clin Diagn Res* 2012;6(9):1525-1527.
21. Amin T, Hablas H, Al Qader AA. Determinants of initiation and exclusivity of breastfeeding in Al Hassa, Saudi Arabia. *breastfeed med*. 2011;6(2):59- 68.
22. Bagul AS, Supare MS. The infant feeding practices in an urban slum of Nagpur, India. *J Clin Diagn Res* 2012;6(9):1525-1527.