

# Exclusive breastfeeding practices and factors affecting them in urban areas of Uttar Pradesh

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## ABSTRACT

**Background:** Exclusive breastfeeding for the first 6 months is the recommended infant feeding practice, with established benefits. In India, exclusive breastfeeding rates have seen some improvement, but Uttar Pradesh has experienced a decline. Various factors influence breastfeeding practices, such as socio-cultural beliefs, maternal knowledge, and support. Considering urbanization, industrialization, and a significant migrant population, it is crucial to understand the determinants of breastfeeding practices in urban Uttar Pradesh. This study aimed to fill these knowledge gaps by examining factors influencing breastfeeding practices in the region. **Methods:** This cross-sectional study was conducted at Sharda Hospital's Pediatrics Outpatient Department (OPD) in Uttar Pradesh over 1.5 years from January 1, 2019 to June 30, 2020. The minimum sample size of 96 was determined for the study. Study participants included 200 mothers with children aged 6 months to 2 years attending the Pediatrics OPD. Data were collected through a 42-item questionnaire administered by trained interviewers who ensured privacy and comfort. Data analysis was performed using Statistical Package for Social Sciences, including descriptive statistics and the Chi-square test for categorical variables ( $P < 0.05$ ). **Results:** The study involved 200 mothers with children aged 6 months to 2 years attending a Pediatrics OPD in Uttar Pradesh. Mothers aged 21–30 years (78%) were predominant. Among the children, 62.5% were male. Colostrum was given by 86% of mothers, and 40% introduced pre-lacteal feeds. Exclusive breastfeeding was practiced by 60% of mothers. The analysis did not show statistically significant differences based on socio-economic status, maternal education, or occupation ( $P > 0.05$ ). **Conclusion:** In conclusion, the findings from this study provide a comprehensive understanding of feeding practices among mothers in urban areas of Uttar Pradesh. While many mothers adhere to recommended practices, there is room for improvement in reducing pre-lacteal feeding and promoting exclusive breastfeeding.

**Keywords:** Colostrum, feeding practices, infant, maternal, urbanization

## Introduction

Exclusive breastfeeding for the first 6 months of life is widely recognized as the most appropriate infant feeding practice, with its benefits firmly established.<sup>[1]</sup> The World Health Organization (WHO) recommends optimal breastfeeding, including immediate initiation of breastfeeding, exclusive breastfeeding for 6 months, and continued breastfeeding for

2 years with optimal complementary feeding from 6 months onward. Despite these recommendations, there have been variations in exclusive breastfeeding rates across different regions of India.<sup>[2]</sup>

Over the past decade, India has seen a modest increase in the percentage of infants under 6 months of age who are exclusively breastfed, with rates rising from 46.4% to 54.9%.<sup>[3]</sup> However, the state of Uttar Pradesh has experienced a decline in exclusive breastfeeding rates, dropping from 51.3% in 2006 to 41.6% in 2016. Alarming, out of the 26 million babies born in India annually, a staggering 14.5 million do not receive optimal feeding practices during their first year of life.<sup>[3]</sup>

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Several factors have been identified as influencing breastfeeding practices in India, including socio-cultural beliefs, maternal knowledge, occupation, religion, parity, education level, antenatal care, infant gender, and support during delivery and breastfeeding.<sup>[4-6]</sup> Studies have also highlighted the role of antenatal advice, mode of delivery, birth weight, time of breastfeeding initiation, and pre-lacteal feeds in affecting exclusive breastfeeding rates.<sup>[7,8]</sup>

Moreover, latest studies have revealed that mothers' working status, family income, and the introduction of pre-lacteal feeds significantly influenced exclusive breastfeeding rates.<sup>[9,10]</sup> Similarly, studies conducted in Iran demonstrated that socio-economic status and maternal education played pivotal roles in determining the duration of breastfeeding.<sup>[11,12]</sup>

Given the increasing urbanization, industrialization, and a significant migrant population in the study area, coupled with the rise in institutional deliveries, there is a critical need to understand the specific determinants of breastfeeding practices in the urban areas of Uttar Pradesh. This knowledge is essential for developing targeted interventions and policies to enhance breastfeeding rates, reduce child morbidity and mortality, and promote the overall health and well-being of infants in this diverse and dynamic region. As a result, this study was conducted to bridge existing knowledge gaps by investigating the multi-faceted factors influencing breastfeeding practices in urban areas of Uttar Pradesh. By exploring the impact of cultural norms, maternal education, economic factors, and other key determinants, this study sought to contribute valuable insights to the existing body of knowledge on breastfeeding practices in India.

Also, the study holds significant relevance for primary care physicians, particularly family physicians, as it delves into crucial aspects of maternal and child health. Understanding breastfeeding practices is paramount in primary care as it directly influences the well-being of both mothers and infants. By examining factors such as exclusive breastfeeding rates, the study provides actionable insights for physicians to tailor their guidance and support to new mothers. Addressing cultural influences and familial dynamics affecting breastfeeding decisions, the research contributes to a nuanced understanding that can inform personalized counseling strategies within a primary care setting.

## Materials and Methods

### Study design and setting

This study employed a cross-sectional design and was conducted in the Pediatrics Outpatient Department (OPD) of Sharda Hospital, Uttar Pradesh, after obtaining ethical approval of Institutional Ethical Committee (IEC) [Approval number: SU/SMS and R/76-A/2018/110]. The study spanned one and a half years, commencing on January 1, 2019 and concluding on June 30, 2020.

### Sample size

The minimum sample size for this study was determined using the formula for sample size estimation for a single proportion:  $n = Z^2 \times p \times (1 - p) / E^2$ . With an estimated prevalence of exclusive breastfeeding in Uttar Pradesh set at 50%, a 95% confidence level corresponding to a Z-score of approximately 1.96, and a margin of error (E) of 10%, the minimum sample size was calculated to be 96. But during the defined study period, a total of 200 mothers were enrolled.

### Study participants

The study included a total of 200 mothers of children aged 6 months to 2 years who were attending the Pediatrics OPD. Inclusion criteria consisted of mothers of children with minor illnesses or those visiting for vaccination. Exclusion criteria comprised mothers with a history of pre-term delivery, infants admitted to the neonatal intensive care unit (NICU) following birth, and infants with significant congenital anomalies.

### Data collection

Mothers who met the inclusion criteria were approached and informed about the study objectives, and their informed consent was obtained. For infants who were unwell during their initial visit, the interview was conducted on a subsequent visit when the child was in a stable condition, ensuring that the mothers were not under undue stress while participating in the study. The questionnaire used in this study was carefully designed to cover various aspects of breastfeeding practices and relevant socio-demographic information. It contained a total of 42 items, each serving to gather data on specific factors that could influence breastfeeding practices. The design of the questionnaire aimed to capture both qualitative and quantitative data, ensuring a comprehensive understanding of the participants' experiences and perspectives. Prior to administering the questionnaire to the study participants, a pre-testing phase was conducted. The questionnaire was first tested on a small group of 10 subjects who met the inclusion criteria. The feedback and insights obtained from this pre-test were invaluable in refining the questionnaire. Based on the feedback received, three questions were identified and subsequently removed from the questionnaire to enhance clarity and relevance. During the actual data collection phase, the questionnaire was administered by trained interviewers who ensured that the mothers had the opportunity to answer the questions with full privacy and comfort. The interviews took place within the Pediatrics OPD, a familiar and non-threatening environment for the participants. This setting was selected to establish a sense of ease and familiarity, thus encouraging open and honest responses. The interviews were conducted efficiently, with each session typically lasting between 15 and 20 minutes. This time frame was chosen to respect the participants' time and minimize any potential inconvenience. To accommodate the linguistic diversity in the region, the questionnaire was administered in Hindi, which is commonly spoken and understood by the local population. This choice of language aimed to facilitate effective communication and

ensure that the participants could comprehend the questions and respond comfortably. The socio-economic status (SES) of the participants was determined using the Modified Kuppaswamy Scale 2017, which takes into account factors such as education, occupation, and monthly family income.<sup>[13]</sup> The income data were updated to reflect the economic conditions of January 2018 to ensure the most accurate assessment of SES for each participant.

### Definitions used for breastfeeding practices<sup>[3,4]</sup>

#### Early initiation of breastfeeding

This crucial practice involves initiating breastfeeding within the first hour of a child's birth. It is known to provide the newborn with colostrum, the nutrient-rich and antibody-packed initial milk, which plays a vital role in protecting the infant against infections and supporting their overall health.

#### Exclusive breastfeeding

In line with the WHO's recommendations, exclusive breastfeeding means that the infant receives only breast milk. This includes no other liquids or solids, except in cases where oral rehydration solutions, vitamins, minerals, or medicines are necessary for the child's well-being.

#### Pre-lacteal feeding

Pre-lacteal feeding is defined as the practice of giving something other than breast milk to an infant within the first 3 days of life. It is important to note this practice as it can potentially disrupt early breastfeeding and introduce substances that may be harmful to the newborn.

#### Partial breastfeeding or mixed feeding

This refers to the practice of providing both breastfeeds and artificial feeds, which can include milk, cereal, other foods, or water. Identifying the extent of mixed feeding is essential for understanding how breastfeeding practices are being compromised in this population.

### Statistical Analysis

The demographic data for all participants were meticulously recorded and entered into a structured Excel spreadsheet to facilitate efficient data management. Subsequently, statistical analysis was performed using the Statistical Package for Social Sciences (SPSS) version 21 on a Windows 10 operating system. Descriptive statistics were employed to represent the demographic details of the participants, which were presented as frequency and percentage. These data were visually depicted through tables, figures, bar diagrams, and pie charts to provide a comprehensive overview of the study population. Continuous variables, such as age and income, were summarized using mean and standard deviation to gain insights into the central tendencies and variations within the study group. To evaluate the differences between categorical variables, the Chi-square test was applied. A *P* value of less than 0.05 was considered statistically significant, indicating associations between variables that could provide

valuable insights into the factors influencing breastfeeding practices in the urban areas of Uttar Pradesh.

### Ethical considerations

This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. Ethical approval was obtained from the Institutional Ethics and Review Board of [Approval number: SU/SMS and R/76-A/2018/110]. Informed consent was obtained from all participants, and their privacy and confidentiality were strictly maintained.

### Results

The study included 200 mothers (aged 21–30 years, mean age 26.8) with children aged 6 months to 2 years at a Pediatrics OPD in Uttar Pradesh. Participants had diverse socio-economic status (43.0% upper middle), education (50.5% graduate or above), and occupation (87.0% housewives). Most were Hindu (86.0%) from nuclear families (51.0%). Co-existing maternal illness was in 15% of cases, and 44.5% were multiparous [Table 1].

Regarding the child's gender, 62.5% were male, and 37.5% were female. Colostrum provision was high (86%), with 40% practicing pre-lacteal feeds. Among those, 60% used breastmilk, 24.5% formula, and smaller percentages honey, cow milk, buffalo milk, Ghutti, or tea. First feed methods varied: 60% initiated breastfeeding, 10% used bottles, and 30% chose cup and spoon. Exclusive breastfeeding for 6 months was observed in 60%, while 5.5% maintained it for 1 month. In a subset analysis, 73% of mothers with a previous child practiced exclusive breastfeeding [Table 2].

Among colostrum-giving mothers, 47% cited awareness of benefits, and 43% were influenced by healthcare professionals. A small percentage (7.5%) considered family input, and a limited group (2.3%) had no specific reason. Colostrum non-givers cited family tradition (42.8%) and relative influence (57.1%). This underscores cultural and familial impacts on maternal feeding practices [Table 3].

Of 200 mothers, 47% practiced exclusive breastfeeding for 6 months or more. Analysis by SES, education, and occupation showed no significant differences. In upper SES, 56.4% practiced, while 54.3% of graduates did. Lower SES had 43.6%, and below-graduate education had 45.7%. Skilled workers had 10.6%, while below skilled workers had 89.4%. The *P* values for SES, education, and occupation were 0.089, 0.317, and 0.445, respectively [Table 4].

### Discussion

The findings from this study provide a comprehensive overview of various aspects of infant feeding practices among mothers in urban areas of Uttar Pradesh. Understanding these practices is crucial for promoting infant and child health and for developing effective interventions. The results reveal important insights

**Table 1: Sociodemographic characteristics of the mother (n=200)**

Variables	Frequency	%
Mothers age (in years)		
<20	10	5.0
21-25	72	36.0
26-30	84	42.0
>30	34	17.0
Mean age (in years)	26.8 (19-38)	
SES		
Lower	2	1.0
Upper lower	46	23.0
Lower middle	52	26.0
Upper middle	87	43.0
Upper	13	6.0
Educational status		
Illiterate	9	4.5
Primary school	22	11.0
Middle school	14	7.0
High school	17	8.5
Intermediate	37	18.5
Graduate/Professional/Honors	101	50.5
Occupation		
Professional	3	1.5
Semi-professional	6	3.0
Skilled	9	4.5
Semi-skilled	5	2.5
Unskilled	3	1.5
Housewife	174	87.0
Religion		
Hindu	172	86.0
Muslim	27	13.5
Others	1	0.5
Family type		
Nuclear	102	51.0
Joint/Extended	75	37.5
Three generation	23	11.5
Co-existing maternal illness		
Yes	30	15.0
No	170	85.0
Multiparous		
Yes	89	44.5
No	111	55.5

into the gender distribution of children and the adherence to recommended breastfeeding practices, including colostrum feeding, pre-lacteal feeding, and exclusive breastfeeding.

The gender distribution of children in this study showed a slight preponderance of male infants, with 62.5% being male and 37.5% female. Gender disparities in infant feeding practices have been observed in various settings and may be influenced by cultural norms and societal expectations. However, this study did not delve into the potential impact of gender on feeding practices, and further research is needed to explore this aspect in more detail.

Colostrum feeding is a critical component of early infant nutrition, providing essential nutrients and antibodies. The high

**Table 2: Feeding practices of mother and the infant (n=200)**

Variables	Frequency	%
Present Child Gender		
Male	125	62.5
Female	75	37.5
Colostrum given		
Yes	172	86.0
No	28	14.0
Prelacteal feeds given		
Yes	80	40.0
No	120	60.0
Nature of first feed		
Breastmilk	120	60.0
Formula feed	49	24.5
Honey	9	4.5
Cow milk	11	5.5
Buffalo milk	5	2.5
Ghutti	4	2.0
Tea	2	1.0
Method of first feed		
Breastfeed (direct/expressed)	120	60.0
Bottle feed	20	10.0
Cup and spoon	60	30.0
Exclusive breastfeeding		
Partial breast/No breastfeeding	80	40.0
Yes	120	60.0
Till 1 month	11	5.5
Till 2 months	2	1.0
Till 3 months	3	1.5
Till 4 months	6	3.0
Till 5 months	4	2.0
Till 6 months or more	94	47.0
Exclusive breastfeeding in previous child (n=89)		
Yes	65	73.0
No	24	26.9

prevalence of colostrum feeding (86%) among the mothers in this study reflects a positive adherence to recommended practices. This finding is encouraging and suggests that maternal knowledge and awareness of the benefits of colostrum are relatively high. The influence of healthcare professionals, who encouraged colostrum feeding, was significant, underlining the importance of healthcare provider education and support in promoting optimal infant feeding practices. On the other hand, a smaller proportion of mothers cited family tradition as a reason for not giving colostrum, highlighting the enduring impact of cultural and familial influences on maternal choices. Addressing these cultural beliefs through targeted interventions and education can further improve colostrum feeding rates. Similar belief was observed in the studies by Legesse *et al.*, Abie *et al.*, and Eram *et al.*<sup>[14-16]</sup>

Pre-lacteal feeding, though practiced by 40% of mothers, is an area of concern as it can interfere with exclusive breastfeeding. The introduction of pre-lacteal feeds may be influenced by traditional practices and the availability of such feeds in the



**Table 3: Reasons cited by mother for colostrum feeding practices (n=200)**

Reasons	Frequency	%
For giving colostrum		
Knows benefit	81	47.0
Told by doctor/Nurse	74	43.0
Told by family	13	7.5
No particular reason	4	2.3
For not giving colostrum		
Family tradition	12	42.8
Told by relatives	16	57.1

**Table 4: Sociodemographic Factors Influencing Exclusive Breastfeeding**

Variables	Exclusive Breastfeeding till 6 months or more		P
	Yes (n=94)	No (n=106)	
Socioeconomic status			
Upper	53 (56.4)	47 (44.3)	0.089
Lower	41 (43.6)	59 (55.7)	
Mother education			
Graduate or above	51 (54.3)	50 (47.2)	0.317
Below graduate	43 (45.7)	56 (52.8)	
Mother occupation			
Skilled worker or above	10 (10.6)	8 (7.5)	0.445
Below skilled worker	84 (89.4)	98 (92.5)	

household. Promoting awareness about the adverse effects of pre-lacteal feeding and encouraging the practice of exclusive breastfeeding within the first hour of life are vital. A cross-sectional study by Roy *et al.*<sup>[17]</sup> in rural Uttar Pradesh, including 352 recently delivered women, found that 40.1% of mothers gave pre-lacteal feeding to their newborns. A recent study by Das *et al.*<sup>[18]</sup> which included 10,262 children from Bihar, found that 26% children received pre-lacteal feeds.

The method of the first feed varied among mothers, with a majority choosing to initiate breastfeeding directly or through expressed milk. However, a notable proportion opted for bottle feeding (10%), emphasizing the need for interventions that discourage bottle feeding and promote breastfeeding as the ideal method for infant nutrition.

The study's key indicator, exclusive breastfeeding for the first 6 months, showed that 47.0% of mothers adhered to this recommendation, aligning with the WHO's guidelines. This prevalence was slightly lower than the national average in NFHS-4, which stood at 54.9%.<sup>[19]</sup> In a study conducted by Setegn *et al.*, the prevalence of exclusive breastfeeding in Ethiopia for infants aged less than 6 months was 71.3%, as measured by the last 24 hours preceding the survey date recall time.<sup>[20]</sup> In a comparable study carried out by Varshney *et al.*,<sup>[21]</sup> in an urban slum in Gujarat, it was observed that 50.7% of infants received exclusive breastfeeding during the first 6 months. In contrast, another study conducted by Bhandari *et al.*<sup>[22]</sup> in a semi-urban

community in Gujarat reported a higher prevalence of exclusive breastfeeding, which reached 76.6%. In a similar study conducted by Gogoi *et al.*,<sup>[23]</sup> in the slums of Dibrugarh Town, the prevalence of exclusive breastfeeding was reported to be 41%. Additionally, in urban slums in Karnataka, India, a study by Rajesh *et al.*<sup>[24]</sup> found that the prevalence of exclusive breastfeeding was notably lower at 22%.

However, the remaining 40% practiced partial breastfeeding or did not engage in any breastfeeding. The duration of exclusive breastfeeding varied, with only 5.5% continuing it for just 1 month and 47% extending it to 6 months or more. The practice of exclusive breastfeeding is influenced by various factors, including maternal knowledge, support systems, and cultural norms. These findings underscore the importance of continued efforts to raise awareness about the benefits of exclusive breastfeeding and to provide support to mothers to enable them to adhere to this practice.

The analysis of factors influencing exclusive breastfeeding revealed that there were no statistically significant differences based on socio-economic status, mother's education, or mother's occupation. This finding suggests that exclusive breastfeeding is a practice that can be promoted across all socio-economic backgrounds and maternal educational and occupational levels. Studies by Veeranki *et al.*, Gibbs *et al.*, Velusamy *et al.*, Kayode *et al.*, Shitie *et al.*, and Reddy *et al.*, also showed similar factors affecting the exclusive breastfeeding.<sup>[25-30]</sup> In Iran, a similar study by Ajami *et al.* found that middle SES was associated with significantly higher duration of breastfeeding than lower and higher SES. They also found that holders of associated degree, bachelors' degree, and university students are 73% less likely to EBF for 6 months, when compared to illiterate mothers. They did not find any association of family size and father's education to EBF rates.<sup>[31]</sup> Contrary to this, a California study by Heck *et al.*, which included 10,519 mothers, found that women with lower incomes and lower SES, younger women, partners with lower education levels, women who had Cesarean section, third or later child, are more likely to never breastfeed.<sup>[32]</sup>

In the context of primary care, the study's findings hold practical implications for family physicians. The insights into the prevalence of exclusive breastfeeding and the factors influencing it can guide primary care providers in offering targeted interventions. For instance, recognizing the impact of socio-economic status on breastfeeding practices allows physicians to identify high-risk groups and implement tailored education and support programs. Additionally, the study's exploration of reasons for not giving colostrum sheds light on cultural factors, enabling primary care physicians to engage in culturally sensitive conversations with mothers, fostering a supportive and effective healthcare environment.

However, further research is needed to explore the nuances of these factors and to identify specific barriers that may affect exclusive breastfeeding practices.

## Limitations

This study has notable limitations. Generalizability to other urban areas in Uttar Pradesh or diverse Indian regions may be constrained by local cultural, socio-economic, and healthcare variations. The cross-sectional design offers a snapshot, lacking causal insights or temporal tracking; longitudinal studies would enhance understanding. Recall bias and social desirability bias may affect data accuracy. The small sample size (200 participants) might limit detecting significant associations. Unmeasured variables influencing breastfeeding practices and the absence of recorded child nutritional status could impact the analysis. The urban setting may not fully represent broader community contexts.

## Conclusion

In conclusion, the findings from this study provide a comprehensive understanding of feeding practices among mothers in urban areas of Uttar Pradesh. While many mothers adhere to recommended practices, there is room for improvement in reducing pre-lacteal feeding and promoting exclusive breastfeeding. Targeted interventions, culturally sensitive education, and healthcare provider support are essential components in achieving optimal infant feeding practices and enhancing the health and well-being of infants in this region. Further research is needed to explore the influence of gender on feeding practices and to identify specific barriers to exclusive breastfeeding in different socio-economic and educational contexts.

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## Conflicts of interest

There are no conflicts of interest.

## References

- Jones G, Steketee RW, Black RE, Bhutta ZA, Morris SS; Bellagio Child Survival Study Group. How many child deaths can we prevent this year? *Lancet*. 2003;362:65-71.
- Ip S, Chung M, Raman G, Trikalinos TA, Lau J. A summary of the Agency for Healthcare Research and Quality's evidence report on breastfeeding in developed countries. *Breastfeed Med* 2009;4(Suppl 1):S17-30.
- Menon P, Nguyen PH, Mani S, Kohli N, Avula R, Tran L. Trends in nutrition outcomes, determinants, and interventions in India (2006-2016). POSHAN Report 10. New Delhi, India: International Food Policy Research Institute (IFPRI); 2017. Available from: <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/131341>. [Last accessed on 2021 Dec 22].
- Kramer MS, Guo T, Platt RW, Sevkovskaya Z, Dzidkovich I, Collet JP, *et al.* Infant growth and health outcomes associated with 3 compared with 6 months of exclusive breastfeeding. *Am J Clin Nutr* 2003;78:291-5.
- Sinhababu A, Mukhopadhyay DK, Panja TK, Saren AB, Mandal NK, Biswas AB. Infant and young child-feeding practices in Bankura district, West Bengal, India. *J Health Popul Nutr* 2010;28:294-9.
- Vijayalakshmi P, Susheela T, Mythili D. Knowledge, attitudes, and breastfeeding practices of postnatal mothers: A cross-sectional survey. *Int J Health Sci (Qassim)* 2015;9:364-74.
- Joshi PC, Angdembe MR, Das SK, Ahmed S, Faruque ASG, Ahmed T. Prevalence of exclusive breastfeeding and associated factors among mothers in rural Bangladesh: A cross-sectional study. *Int Breastfeed J* 2014;9:7.
- Agampodi SB, Agampodi TC, Piyaseeli UK. Breastfeeding practices in a public health field practice area in Sri Lanka: A survival analysis. *Int Breastfeed J* 2007;2:13.
- Majra JP, Silan VK. Barriers to early initiation and continuation of breastfeeding in a tertiary care institute of Haryana: A qualitative study in nursing care providers. *J Clin Diagn Res* 2016;10:LC16-20.
- Madhavi N, Manikyamba D. Evaluation of factors responsible for failure of exclusive breast feeding for first 6 months-hospital based study. *Int J Contemp Res* 2016;3:1701-4.
- Wanjohi M, Griffiths P, Wekesah F, Muriuki P, Muhia N, Musoke RN, *et al.* Sociocultural factors influencing breastfeeding practices in two slums in Nairobi, Kenya. *Int Breastfeed J*. 2016;12:5.
- Dungy CI, Losch M, Russell D. Maternal attitudes as predictors of infant feeding decisions. *J Assoc Acad Minor Phys* 1994;5:159-64.
- Singh T, Sharma S, Nagesh S. Socio-economic status scales updated for 2017. *Int J Res Med Sci* 2017;5:3264-7.
- Legesse Liben M, Abuhay T, Haile Y. The role of colostrum feeding on the nutritional status of preschool children in Afambo District, Northeast Ethiopia: Descriptive cross sectional study. *Eur J Clin Biomed Sci* 2016;2:87-91.
- Abie BM, Goshu YA. Early initiation of breastfeeding and colostrum feeding among mothers of children aged less than 24 months in Debre Tabor, northwest Ethiopia: A cross-sectional study. *BMC Res Notes* 2019;12:65-9.
- Eram U. A review article: Myths, beliefs and malpractices relating to breastfeeding and complementary feeding practices. *Int J Pharm Sci Invent* 2017;6:14-6.
- Roy MP, Mohan U, Singh SK, Singh VK, Srivastava AK. Determinants of prelacteal feeding in rural northern India. *Int J Prev Med* 2014;5:658-63.
- Das A, Sai Mala G, Singh RS, Majumdar A, Chatterjee R, Chaudhuri I, *et al.* Prelacteal feeding practice and maintenance of exclusive breast feeding in Bihar, India - identifying key demographic sections for childhood nutrition interventions: A cross-sectional study. *Gates Open Res* 2019;3:1.
- District Level Household and Facility survey-4 State Fact Sheet, Uttar Pradesh (2012-13). New Delhi, India: Ministry of Health and Family Welfare; 2013. Available from: [http://rchiips.org/nfhs/pdf/NFHS4/UP\\_FactSheet.pdf](http://rchiips.org/nfhs/pdf/NFHS4/UP_FactSheet.pdf). [Last accessed on 2021 Dec 22].
- Setegn T, Belachew T, Gerbaba M, Deribe K, Deribew A, Biadgilign S. Factors associated with exclusive breastfeeding practices among mothers in Goba district, south east Ethiopia: A cross-sectional study. *Int Breastfeed J* 2012;7:17.
- Varshney AM, Kumar D, Patel M, Singh US. Determinants of breastfeeding practices in urban slums of a taluka headquarters of district Anand, Gujarat. *Natl J Community*

- Med 2012;3:534-7.
22. Bhandari D, Choudhary S. A community-based study of feeding and weaning practices in under-five children in a semi-urban community of Gujarat. *Natl J Community Med* 2011;2:277-83.
  23. Gogoi I, Mahanta TG, Barua A. Prevalence of exclusive breastfeeding in slums of Dibrugarh Town and factors affecting the breastfeeding practice. *Clin Epidemiol Global Heal* 2015;3:S58-62.
  24. Rajesh D, Bhavana D. A study on infant feeding practices in the urban slums: A cross-sectional study. *Int J Contemp Pediatr* 2016;3:350-3.
  25. Veeranki SP, Nishimura H, Krupp K, Gowda S, Arun A, Madhivanan P. Suboptimal breastfeeding practices among women in rural and low-resource settings: A study of women in rural Mysore, India. *Ann Glob Heal* 2017;83:577-83.
  26. Gibbs BG, Forste R. Socioeconomic status, infant feeding practices and early childhood obesity. *Pediatr Obes* 2014;9:135-46.
  27. Velusamy V, Premkumar PS, Kang G. Exclusive breastfeeding practices among mothers in urban slum settlements: Pooled analysis from three prospective birth cohort studies in South India. *Int Breastfeed J* 2017;12:35-42.
  28. Kayode OO, Oyedele AS, Alabi OK. Factors affecting exclusive breastfeeding practices among working-class women in Osun State, Nigeria. *J Public Health Afr* 2023;14:2191.
  29. Shitie A, Tilahun A, Olijira L. Exclusive breastfeeding practice and associated factors among mothers of infants age 6 to 12 months in Somali region of Ethiopia. *Sci Rep* 2022;12:19102.
  30. Reddy NS, Dharmaraj A, Jacob J, Sindhu KN. Exclusive breastfeeding practices and its determinants in Indian infants: Findings from the National Family Health Surveys-4 and 5. *Int Breastfeed J* 2023;18:69.
  31. Ajami M, Abdollahi M, Salehi F, Oldewage-Theron W, Jamshidi-Naeini Y. The association between household socioeconomic status, breastfeeding, and infants anthropometric indices. *Int J Prev Med* 2018;9:89-95.
  32. Heck KE, Braveman P, Cubbin C, Chávez GF, Kiely JL. Socioeconomic status and breastfeeding initiation among California mothers. *Public Health Rep* 2006;121:51-9.