

Infant feeding beliefs and practices among tribal mothers in Nashik district, Maharashtra

Reshma R Garje, Sunil Kumar Thitame, Konduri V Somasundaram, Laxmi Gautam, Mahesh S Gite

Center for Social Medicine, Pravara Institute of Medical Science, Loni, Maharashtra, India.

Correspondence to: Reshma R Garje, E-mail: garjereshma@gmail.com

Received December 10, 2015. Accepted April 9, 2016

Abstract

Background: Breast milk is the safest and nutritious food for infant. Colostrum feeding provides nutrients and immunity to the newborn. Early initiations of breastfeeding and exclusive breastfeeding practices are essential for both infants and mothers. Even though breastfeeding is almost universal in India, culture and tradition exhibit great impact in breastfeeding practice.

Objective: To study the beliefs and practice about breastfeeding and identify the impact of selected sociodemographic factors on the infant feeding practices in rural ethnic mothers.

Materials and Methods: A cross-sectional study was conducted from December 2014 to April 2015 among 400 rural ethnic mothers having infants and attending Mobile Medical Unit under NRHM in Nasik, Maharashtra. Interview was done by using predesigned, semi-structured questionnaire.

Result: The average age of respondents was 22.47 ± 2.58 years; most of them (67.3%) were from the age group 21–25 years. Average age at marriage was 17.5 ± 0.81 years, and average age at first pregnancy was 19.04 ± 0.77 years. Almost half (49.3%) of the respondents got married below the age of 18 years, and 75% of them were pregnant with their first baby when they were still at their teenage. Over 55% of the respondent belonged to scheduled tribes category. Majority of the women (42.3%) revealed less than 4 years of schooling, while 13.8% of them never attended school. Majority (61.3%) of the respondents were daily wage laborers. Colostrum feeding was observed in 88.8% study subjects, prelacteal feeding in 17.5%, early initiation of breastfeeding in 70.1%, and exclusive breastfeeding in 83.8%.


Conclusion: Even though knowledge and practice of breastfeeding was better, early marriage and early conception were concerns that require attention.

KEY WORDS: Breastfeeding, tribal mothers, practice of breastfeeding, beliefs of breastfeeding

Introduction

Breastfeeding forms one of the chief causes of child survival, birth interval, and protection against childhood infection. The importance of exclusive breastfeeding and immunological and nutritional values of breast milk have been well-demonstrated.^[1] Breastfeeding is an ancient social

custom with number of benefits because of its nutrients and immunoglobulin. As breast milk is free from contamination, it is the safest food for vulnerable newborn babies, which is the foundation for healthy growth. Breastfeeding is beyond the process of feeding because it is the process to create strong bond between mother and baby with mental satisfaction and feeling of security. Early initiation of breastfeeding helps to improve maternal health by uterine contraction, and exclusive breastfeeding is also a way of natural contraception. The global public health recommendation is that “infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health.”^[2] Factors affecting breastfeeding include socioeconomic status, maternal education and employment, prenatal intention, maternal age, attitude and confidence, ethnicity, residence and type of family, emulating Western lifestyles, the influence of health-care professionals, availability of infant formula, and

Access this article online	
Website: http://www.ijmsph.com	Quick Response Code: 
DOI: 10.5455/ijmsph.2016.10122015443	

International Journal of Medical Science and Public Health Online 2016. © 2016 Reshma R Garje. This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material for any purpose, even commercially, provided the original work is properly cited and states its license.

so on. Breastfeeding, in spite of being a common practice in India, is associated with myths and superstitions such as discarding colostrum, prelacteal feeding, and early initiation of complementary feeding.

Inadequate infant feeding practices and their related concerns form one of the world's chief difficulties and a severe hindrance to social and economic growth. It is not only a problem of the developing world, but it occurs in many parts of the developed world as well.^[3] The attitudes and practices of breastfeeding vary in various sections of society owing to different culture, taboos, and knowledge and attitude of women folk. The scientifically correct practices need to be adopted.^[5] Understanding of culture and beliefs are important for health-care providers who are challenging to provide culturally sensitive care to diverse populations. Various ethnic groups exhibit dissimilar beliefs, attitudes, and practices in terms of nutrition and breastfeeding although they reside in the same area. However, there is insufficient information about differences in nutritional habits, particularly infant feeding patterns, in Nasik. Considering all these factors, this study was planned to study the beliefs about breastfeeding and identify the impact of selected sociodemographic factors on the infant feeding practices in rural ethnic mothers of Nasik, Maharashtra. This information will be useful to policy-makers for the formulation of interventional programs in the future and will be baseline information to those who require in-depth investigation.

Materials and Methods

This study was a descriptive cross-sectional study conducted in the Tribal area of Trimbak, Igatpuri, Peth, and Surgana taluka of the Nasik district, Maharashtra, India, which were visited by the Mobile Medical Unit under National Rural Health Mission once in a month from December 2014 to April 2015 among the 400 ever married women who possessed child younger than 1 year. This study was mainly based on primary information, although the required secondary information was collected to strengthen the outcome. Semi-structured questionnaire were filled by face-to-face interview. Included villages were socioeconomically backward and geographically far from the main city with little access to the health services from both government and private sectors. All mothers from study area attending the Mobile Medical Unit who had infant were included in the study, but those who were not from study area and those who were not willing to participate were excluded. The villages were selected by probability proportionate random sampling method, and the samples were selected by systematic random sampling technique. Ethical clearance was taken from ethical committee of Centre for Social Medicine, and informed consent was taken during interview. Participation was full voluntarily, and there was the option for not answering any question. Tool validation was done with the help of expert, and pilot study was conducted to validate the tool.

Statistical Analysis

The data coding and editing were done manually on the same day of collection, and entry was done in Microsoft Excel 2007. Data analysis was done by using SPSS software, version 21. Mean and standard deviation were calculated, and χ^2 -test was used to test the statistical association of data.

Result

The average age of respondents was 22.47 ± 2.58 years; most of them (67.3%) were from the age group 21–25 years, followed by 16–20 years (23%). Nearly half (49.3%) of the respondents got married before 18 years of age, while it was as high as 59.7% in Trimbak and as low as 32.2% in Igatpuri talukas. However, 41.3% of them got married at the age of 18 years. Average age at marriage was 17.5 ± 0.81 years. About 75% of the respondents were pregnant with their first baby when they were still at their teenage. Average age at first pregnancy was 19.04 ± 0.77 years [Table 1].

Over 55% of the respondent belonged to scheduled tribes category, followed by 22.3% other backward caste, 19.0% scheduled caste, and 3.5% general category. Majority of the women (42.3%) revealed less than 4 years of schooling. Only 2.5% were undergraduates, while 13.8% of them never attended school. Majority (61.3%) of the respondents were daily wage laborers.

The economic status of the family of respondent's was assessed by collecting the monthly income of the family from all sources: 48% of respondents' family income between Rs. 1,001 and 3,000 per month, followed by Rs. 3,001–5,000 (34.3%). The mean number of living children per women was 1.92. Regarding the gender distribution of living children, girls were more (60.3%) than boys (39.7%). However, the trend was reverse (F: 46.8; M: 53.1) when it comes to the youngest child. The survey revealed that more than 75.3% of the respondent women delivered their last baby at institution/health facility. Most of the home deliveries were conducted by nurses (49.8%), followed by doctors (25.8%), whereas deliveries conducted by untrained birth attendants such as mother, mother-in-law, or neighbors were only 1% [Table 2].

It is heartening to note that most of respondents (88.8%) reported that they had fed the colostrum to their babies. The main benefit that respondents attributed to colostrum feeding was "it provides power, immunity and improve health of the child (45.5%)," followed by "it helps in first stool passage (54.5%)." As many as 42.5% of respondents had acquired the knowledge from doctors and nurses, followed by 34.5% from ASHA, AGW, and DAI. The practice of breastfeeding was almost universal (99.72%) in the study area. Initiation of breastfeeding within 30 min was 45.8% and between 30 min and 1 h was 24.3%, which means delayed breastfeeding was 30%. The most preferable supplemental food for the nursing mother was dink ladoo (40.3%), vegetable seeds such as methi (13.8%), mixture of coconut, vanaspati, and dry fruits (15%), Ayurvedic medicine (6.5%), and so on, which were

Table 1: General information

Sociodemographic characteristics of respondents	Total	
	No.	%
Current age (years)		
16–20	92	23.0
21–25	269	67.3
>26	39	9.8
Total	400	100
Age at marriage (years)		
15	4	1.0
16	32	8.0
17	161	40.3
18	165	41.3
19	38	9.5
Total	400	100
Age at first pregnancy (years)		
17	9	2.3
18	75	18.8
19	217	54.3
20	89	22.3
21	10	2.5
Total	400	100
Education		
Illiterate	55	13.8
Primary	169	42.3
Secondary	157	39.3
Higher secondary	9	2.3
Undergraduate	10	2.5
Total	400	100
Occupation		
Farming	134	33.5
Business	21	5.3
Daily wage labor	245	61.3
Total	400	100
Place of delivery		
Home	99	24.8
Institutional	301	75.3
Total	400	100
Birth attendant at home delivery		
Untrained BA	4	1.0
Trained BA	94	23.5
Nurse	199	49.8
Doctor	103	25.8
Total	400	100
Colostrum feeding		
Yes	355	88.8
No	45	11.3
Total	400	100
Benefits of colostrum feeding		
Power, immunity, and improving health	182	45.5
Helps in first stool passage	218	54.5
Total	400	100
Initiation of breastfeeding		
Within 30 min	183	45.8
Between 30 min and 1 h	97	24.3
Between 1 and 36 h	120	30.0
Total	400	100
Knowledge about initiation of complementary food		
3–4 months	2	0.5
4–5 months	140	35.0
5–6 months	193	48.3
Other	65	16.3
Total	400	100

Table 2: Practice of colostrum feeding and sociodemographic characters

Sociodemographic characters	Practice of colostrum feeding					
	Yes	%	No	%	Total	%
Age of mother ($\chi^2 = 5.36$)						
16–20	77	21.7	15	33.3	92	23.0
21–25	240	67.6	29	64.4	269	67.0
>26	38	10.7	1	2.2	39	9.8
Total	355	100	45	100	400	100
Caste ($\chi^2 = 2.82$)						
General	13	3.7	1	2.2	14	3.5
SC	64	18.0	12	26.7	76	19.0
ST	196	55.2	25	55.6	221	55.3
OBC	82	23.1	7	15.6	89	22.3
Total	355	100	45	100	400	100
Education ($\chi^2 = 6.51$)						
Illiterate	46	13.0	9	20.0	55	13.8
Primary	152	42.8	17	37.8	169	42.3
Secondary	141	39.7	16	35.6	157	39.3
Higher secondary	9	2.5	0	0.0	9	2.3
Undergraduate	7	2.0	3	6.7	10	2.5
Total	355	100	45	100	400	100
Occupation ($\chi^2 = 0.071$)						
Farming	119	33.5	15	33.3	134	33.5
Business	19	5.4	2	4.4	21	5.3
Daily wage labor	217	61.1	28	62.2	245	61.3
Total	355	100	45	100	400	100
Monthly income ($\chi^2 = 1.71$)						
Rs. 1001–3000	172	48.5	20	44.4	192	48.0
Rs. 3001–5000	118	33.2	19	42.2	137	34.3
Rs. 5001–7000	39	11.0	4	8.9	43	10.8
>Rs. 7000	26	7.3	2	4.4	28	7.0
Total	355	100	45	100	400	100
Sex of youngest child ($\chi^2 = 0.093$)						
Boy	165	46.5	22	48.9	187	46.8
Girl	190	53.5	23	51.1	213	53.3
Total	355	100	45	100	400	100
Place of delivery ($\chi^2 = 4.62$)						
Home	82	23.1	17	37.8	99	24.8
Institutional	273	76.9	28	62.2	301	75.3
Total	355	100	45	100	400	100
Birth attendant ($\chi^2 = 4.58$)						
Untrained BA	4	1.1	0	0.0	4	1.0
Trained BA	78	22.0	16	35.6	94	23.5
Nurse	179	50.4	20	44.4	199	49.8
Doctor	94	26.5	9	20.0	103	25.8
Total	355	100	45	100	400	100

Table 3: Practice of early initiation of breastfeeding and sociodemographic characters

Sociodemographic characters	Practice of early initiation of breastfeeding							
	Within 30 min		Between 30 min and 1 h		Between 1 and 36 h		Total %	
	No.	%	No.	%	No.	%	No.	%
Age of mother ($\chi^2 = 13.20$)								
16–20	35	19.1	22	22.7	35	29.2	92	23.5
21–25	136	74.3	57	58.8	76	63.3	269	67.3
>26	12	6.6	18	18.5	9	7.5	39	9.3
Total	183	100	97	100	120	100	400	100
Caste ($\chi^2 = 20.14$)								
General	9	4.9	3	3.1	2	1.7	14	3.5
SC	41	22.4	13	13.4	22	18.3	76	19.0
ST	98	53.6	67	69.1	56	46.7	221	55.3
OBC	35	19.1	14	14.4	40	33.3	89	22.3
Total	183	100	97	100	120	100	400	100
Education ($\chi^2 = 14.29$)								
Illiterate	17	9.3	17	17.5	21	17.5	55	13.8
Primary	82	44.8	43	44.3	44	36.7	169	42.3
Secondary	75	41.0	33	34.0	49	40.8	157	39.3
Higher secondary	7	3.8	0	0	2	1.7	9	2.3
Undergraduate	2	1.1	4	4.1	4	3.3	10	2.5
Total	183	100	97	100	120	100	400	100
Occupation ($\chi^2 = 2.33$)								
Farming	63	34.4	29	29.9	42	35.0	134	33.5
Business	11	6.0	3	3.1	7	5.8	21	5.3
Daily wage labor	109	59.6	65	67.0	71	59.2	245	61.3
Total	183	100	97	100	120	100	400	100
Monthly income ($\chi^2 = 10.64$)								
Rs. 1001–3000	84	45.9	48	49.5	60	50.0	192	48.0
Rs. 3001–5000	59	32.2	35	36.1	43	35.8	137	34.3
Rs. 5001–7000	26	14.2	4	4.1	13	10.8	43	10.8
>Rs. 7000	14	7.7	10	10.3	4	3.3	28	7.0
Total	183	100	97	100	120	100	400	100
Sex of youngest child ($\chi^2 = 1.03$)								
Boy	88	48.1	41	42.3	58	48.3	187	46.8
Girl	95	51.9	56	57.7	62	51.7	213	53.3
Total	183	100	97	100	120	100	400	100
Place of delivery ($\chi^2 = 3.89$)								
Home	43	23.5	31	32.0	25	20.8	99	24.8
Institutional	140	76.5	66	68.0	95	79.2	301	75.3
Total	183	100	97	100	120	100	400	100
Birth attendant ($\chi^2 = 12.12$)								
Untrained BA	3	1.6	1	1.0	0	0.0	4	1.0
Trained BA	39	21.3	30	30.9	25	20.8	94	23.5
Nurse	93	50.8	51	52.6	55	45.8	199	49.8
Doctor	48	26.2	15	15.5	40	33.3	103	25.8
Total	183	100	97	100	120	100	400	100

locally available. However, only 5.8% of women were given milk. The common food avoided owing to food taboos were fruits (papaya and custard apple), sour food items, cold substances, brinjal, pumpkin, and so on. Almost all respondents (99.7%) thought that “supportive diet should be started to the child after 6 months and early breastfeeding is good for the baby” [Table 3].

Discussion

Breastfeeding is the customary way of offering new born babies with the nutrients, which are essential for proper growth and development. Socioeconomic and demographic background, culture and tradition, maternal knowledge and attitudes together with maternal and child's health condition are influencing factors of proper breastfeeding. In this study, among the 400 ever married women who had infants, more than two-third was from the age group of 21–25 years, which was similar to the study conducted by Bobhate and Shrivastava,^[5] which revealed that majority (63.6%) of the study participants were from 20 to 25 years age group. Another study by Dutta et al.^[6] found that 85% were from the similar age group. Age at marriage exhibit a profound impact on child bearing and subsequent breastfeeding practices because women who marry early show more chance of repeated pregnancies and more number of babies. Early marriages are very common in India [over 58% married below 18 years as per National Family Health Survey (NFHS)-3].^[7] Nearly half (49.3%) of the women interviewed got married below 18 years of age. Similarly, in the study conducted by Dutta et al.,^[6] almost half (47.5%) of the respondents were married at and before the age of 18 years. About 75% of the respondents were pregnant with their first baby when they were still at their teenage, which was much higher than the report of NFHS-3, which revealed that 16% of women, aged 15–19 years, had already started childbearing. In developed regions, teenage mothers tend to be unmarried, and adolescent pregnancy is seen as a social issue, whereas, in developing countries, such pregnancies mostly occur in married teenagers, and their pregnancy is most often welcomed by family and society.^[6]

Education is one of the most important socioeconomic factors exhibiting significant influence in individual's behavior and attitudes. Majority of the women (42.3%) revealed less than 4 years of schooling, and nearly 13.8% of women never attended school; majority (61.3%) of the respondent women were daily wage laborers, followed by 33.5% farmers, which was slightly different from the study conducted by Kar et al.,^[8] which revealed that mothers without formal education were 40.6% and with up to 4 years of schooling were 8.2%. Regarding occupation, there were 77.2% household workers and 19.3% laborers, which may be owing to the sociogeographical variation.

Some studies revealed that mothers who experience good economic support are able to maintain a good nutritional status, which helps them to continuously breastfeed^[9]; in contrary,

some studies found that economically affluent families could afford to buy powdered milk and other baby formulas. High family income is one of the reasons for a shorter duration of breastfeeding.^[10] However, in this study, almost half of the respondents' (48%) family income was between Rs. 1,001 and 3,000 per month, which mean that most of them were from poor family, but still, breastfeeding practice was good.

Regarding the total living children among respondent women and their gender, the mean number of living children per women was fewer (1.92) than the all India level (2.52) by NFHS-3. In case of gender distribution, female children proportion was higher (60.3%) than male children (39.7%). Bobhate and Shrivastava^[5] also revealed that female children (51.8%) were more than the male children (48.2%). However, the trend was reverse (F: 46.8% and M: 53.1%) when it comes to the youngest child.

Another important factor that may influence the breastfeeding practices is institutional deliveries. Majority of the respondents (75.3%) delivered their last baby at health facility, compared with more than 20% at all Maharashtra rural level (DLHS-3). A study by Bhardwaj et al.^[11] also showed similar finding that 78.5% of the respondents experienced hospital delivery. Most of the home deliveries were conducted by trained persons. This may be owing to the attraction of women toward the facility and incentives provided by government, especially for tribal women, if the delivery was conducted by trained person.

The first breast milk (colostrum) is highly nutritious and possesses antibodies that protect the newborn from many diseases. Late initiation of breastfeeding deprives the child from valuable components of colostrum, and prelacteal feeding may cause adverse health effect. Exclusive breastfeeding reduce the vulnerability of the infants. With inclusive of the finding of this study, breastfeeding seems almost universal in India.^[8,12,13] It is heartening to note that majority of respondents from this study (88.8%) reported that they had fed the colostrum to their babies, which was ranging from 33.5% to 87.18% in different studies.^[5,11–15] Regarding the prelacteal feeding, it was 17.5% in this study and was ranging from 23.5%^[5] to 61.8%^[15] in other studies. In case of early initiation of breastfeeding, it was 70.1% in this study. Similar studies revealed the result as low as 20.9% to as high as 45.5%.^[5,8,11,13–15] Exclusive breastfeeding was also well practiced in this study (83.8%), but case was not similar in other studies. It was ranging from 5.13% to 93.15%, especially in India.^[5,8,11,13,14] Different studies show different results; this variation may be owing to huge cultural diversity of India. This study showed better indicators than other studies, which may be because of presence of greater awareness regarding breastfeeding in the study area owing to greater effort of government and local health workers. Even though this study found out the changes in breastfeeding knowledge and practices among tribal women, it was conducted at NRHM MMU unit; therefore, caution needs to be taken to generalize the findings. A gap still exists between respondents who enroll their names in NRHM unit and other health facilities.

Conclusion

It is concluded that most of the respondents were aware about the importance of breastfeeding and practice properly. However, there is still a gap in between knowledge and practices. Still, unhygienic practice of giving prelacteal feeds was observed in 17.5% subjects. Age at marriage and first pregnancy for the girls seem to be the biggest social issues, because almost half of the respondents were married below the legal age of marriage (<18 years) and 21% of them got pregnant at their teenage. Special attention from all related sectors is an immediate requirement to improve the health of mothers together with their children.

References

1. Madhu K, Chowdary S, Masthi R. Breast feeding practices and newborn care in rural areas: a descriptive cross-sectional study. *Indian J Community Med* 2009;34(3):243–6.
2. Meshram LL, Laxmaiah A, Venkaiah K, Brahmam GN. Impact of feeding and breastfeeding practices on the nutritional status of infants in a district of Andhra Pradesh, India. *Natl Med J India* 2012;25(4):201–6.
3. Das R, Mukherjee M. Knowledge, attitude and practices of infant feeding practices among rural women in eastern India. *J Evol Med Dent Sci* 2014;3(2):506–12.
4. Mittal H, Mishra R, Mathura HN. Assessment of breastfeeding practices in Udaipur city and adjoining rural area. *Int J Curr Res Rev* 2013;5(13):64–8.
5. Bobhate PK, Shrivastava SR. Breastfeeding practice and factors associated with it: a cross sectional study among tribal women in Khardi primary health centre, Thane, India. *Int J Public Health Res* 2012;2(1):115–21.
6. Dutta I, Jha N, Dutta DK. Teenage pregnancy—a socio-demographic study at a rural medical college hospital in southern India. *Asian J Med Sci* 2014;5(4):29–33.
7. *National Family Health Survey 2005-2006 (NFHS-3)*. Mumbai: International Institute of Population Sciences. Available at: <http://www.nfhsindia.org>.
8. Kar S, Bhattacharjee S, Samantaray PC, Biswal S. Infant and young child feeding practices among marginalized populations of Odisha, state in India. *J Epidemiol Res* 2016;2(1):39–46.
9. Giashuddin MS, Kabir M, Rahman A, Hannan MA. Exclusive breastfeeding and nutritional status in Bangladesh. *Indian J Pediatr* 2003;70:471–5.
10. Giashuddin MS, Kabir M. Duration of breast-feeding in Bangladesh. *Indian J Med Res* 2004;119:267–72.
11. Bhardwaj SL, Rathore MS, Paliwal A. A study of breast feeding and neonatal care practices in some ethnic communities in periurban slums at Jaipur, Rajasthan. *Anthropologist* 2012;14(5):459–65.
12. Suryamani P, Nanda S, Sahu R. Infant feeding practices of Paroja: a tribal community of Orissa. *Stud Home Com Sci* 2012;6(1):21–5.
13. Vyas S, Sharma P, Kandpal SD, Semwal J, Srivastava A, Nautiyal V. A community based study on breastfeeding practices in a rural area of Uttarakhand. *Natl J Community Med* 2012;13(2):283–7.
14. Onah S, Ignatius D, Osuorah C, Ebenebe J, Ezechukwu C, Ekwochi U, et al. Infant feeding practices and maternal socio-demographic factors that influence practice of exclusive breastfeeding among mothers in Nnewi south-east Nigeria: a cross sectional and analytical study. *Int Breastfeed J* 2014;9(6):1–10.
15. Giridhar L, Lakshmi G. Practices regarding colostrums and pre-lacteals among Gadaba and Konda Dora tribes of Vizianagaram district. *IOSR J Pharm* 2012;2(5):8–12.

How to cite this article: Garje RR, Thitame SK, Somasundaram KV, Gautam L, Gite MS. Infant feeding beliefs and practices among tribal mothers in Nashik district, Maharashtra. *Int J Med Sci Public Health* 2016;5:2203-2208

Source of Support: Nil, **Conflict of Interest:** None declared.