

Original Research Article

Cross sectional study of knowledge and practices regarding breast feeding amongst mothers belonging to tribal community in Melghat area, Amravati, Maharashtra, India

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ABSTRACT

Background: Delayed breastfeeding initiation, colostrum deprivation, supplementary feeding of breast milk substitutes, early introduction of complementary feeding, and incorrect weaning from breast milk are commonly found practices in tribal communities around the world. Aim of the study was to assess the breast-feeding knowledge and practices among mothers belonging to tribal community and having children less than 1 years of age in Melghat area, Maharashtra, India.

Methods: Present cross-sectional study was conducted in 14 villages of 4 sub centres of Bijudhawadi, Primary Health Centre in Dharni block of Amravati District, Maharashtra, India. Mothers belonging to tribal community having child less than one year and Mothers who were permanent residents of study area were included in study. Interview was planned as per the convenient time of the mother. Finally, 225 study subjects could be contacted during study period.

Results: The mean age of mothers was 22.47 years with SD 3.24 years with range 16 - 35 years. Majority 178 (79.11%) study subjects were having correct knowledge about initiation of breastfeeding. Correct practice of initiation of breastfeeding within 1 hour was seen in 167 (74.22%) study subjects. Significant difference was seen among correct knowledge and practice Colostrum initiation, Pre-lacteals, Period of exclusive breastfeeding.

Conclusions: The present study was an attempt to understand knowledge and practices regarding breastfeeding in the context of tribal mothers in Melghat, Maharashtra, India.

Keywords: Breast feeding, Colostrum, Melghat, Pre-lacteals, Tribal mothers

INTRODUCTION

Melghat is a hilly and forest region of nearly 324 small villages and pockets of hard to reach areas. It is one of the most underdeveloped regions of Maharashtra state. Majority of the population belongs to the Korku tribe, which is primitive and is marginalized from the development processes.¹ They are one of the most backward sections of the society, due to various factors like ignorance, poverty, lack of development in the inaccessible areas, illiteracy and exploitation.² Delayed

breastfeeding initiation, colostrum deprivation, supplementary feeding of breast milk substitutes, early introduction of complementary feeding, and incorrect weaning from breast milk are commonly found practices in tribal communities around the world.³ Even in many tribes, where sweet water or honey is given, it is meant only for the purification of the child.⁴ Some believe pre-lacteals are a necessary substitute for colostrums.⁵

The newspapers keep reporting about the high percentage of severe malnutrition among 1 to 5 years old tribal

children, in Melghat region of Amravati district, which also has the low percentage of children with adequate nutrition.⁶ This region has the high numbers of malnutrition and infant mortality cases.⁷

Despite rapid economic development along with increase in food production in recent decades and several nutritional intervention programmes in operation since last few decades, childhood under-nutrition remains an important public health problem in tribal populations.⁸ Exclusive breast feeding stands as a major public health intervention to reduce the child mortality particularly in the neonates and infants.⁹ It is an established fact that breast feeding practices adopted in terms of duration, frequency and exclusiveness is essential for complete physical, mental and psycho-social development of the child.¹⁰ A lack of exclusive breastfeeding during the first six months of life contributes to over a million avoidable child deaths each year.¹¹ Every day, between 3000 and 4000 infants die in the developing world from diarrhoea and acute respiratory infections because they are not given adequate amounts of breast milk. Infants who are not breastfed have six-fold greater risk of dying from infectious diseases.¹²

The World Health Organization and United Nations International Children's Emergency Fund recommends "breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers. As a global public health recommendation, infants should be exclusively breastfed for the first 6 months of life to achieve optimal growth, development and health.¹³ In ancient societies, breastfeeding practices were often guided by traditions, ancient medical literatures etc. For instance, Ayurveda stipulates the use of breast milk as the sole food for babies until the end of the first year.¹⁴ Breast milk is perfect source of nutrition for the infant. Hence, improper feeding practices and unhygienic and unsafe environment during breastfeeding are the major contributors of morbidity and mortality among children world-wide.¹⁵

In India breast feeding is universal. However, the reasons for existing child malnutrition and mortality may be poor and incorrect practices.¹⁴ Some of the major obstacles to the practice of breastfeeding among tribal communities are ignorance and taboos concerning food and feeding.¹⁶ Poor feeding practices in infancy and early childhood, resulting in malnutrition, contribute to impaired cognitive and social development, poor school performance and reduced productivity in later life.¹⁷ Exploring the factors that determine the initiation and duration of breastfeeding is an important issue for implementation of simple preventive strategy. Unfortunately, there is a gap in knowledge of the current situation regarding initiation and different breastfeeding rates, during the first 1 year of an infant's life. Hence, an effort was made to assess the breast-feeding knowledge and practices among mothers

belonging to tribal community and having children less than 1 years of age in melghat area.

METHODS

Present cross-sectional study was conducted in 14 villages of 4 sub centres of Bijudhawadi, Primary Health Centre in Dharni block of Amravati District, Maharashtra, India. This area is well known by the name of "Melghat." It is about 300 km away from Nagpur. The study was conducted to assess knowledge and practices regarding breastfeeding amongst mothers belonging to Tribal Community and to study some factors related with breastfeeding practices. The duration of the study was from March 2015 to December 2015.

Sample size and sampling

For sample size estimation, comprehensive nutritional survey of Maharashtra (CNSM) conducted by International Institute of Population Sciences, Mumbai in 2012, was taken as reference for the study.¹⁸ As per this survey, considering the proportion of exclusively breastfed infants as 63.5% with 10% relative precision and 95% confidence interval, estimated sample size was 221.

Approval from the Institutional Ethics Committee was taken. Permission from District Health Officer Zilha Parishad Amravati, Maharashtra, India was obtained. Amravati district has 13 rural and 1 urban blocks. Out of 13 rural blocks two blocks i.e. Dharni and Chikhaldara were tribal. Dharni block was selected purposefully. There are six Primary health centres (PHC) in Dharni block from which Bijudhawadi PHC was selected by lottery method. There were six sub centres in PHC Bijudhawadi from which four sub centres namely Bijudhawadi, Jutpani, Kusumkot and Zilangpati were selected randomly.

Inclusion criterion

- Mothers belonging to tribal community having child less than one year
- Mothers who are permanent residents of study area.

Exclusion criteria

- Mothers not belonging to tribal community
- Mothers having child with cleft lip and or cleft palate
- Mother having any physical or psychological condition that interferes with breast feeding
- Mothers not willing to participate in the study
- Mothers who were not available at the time of study even after three pre-informed visits.

These 4 sub centres had 14 villages with overall population of 16883. Village wise list of mothers belonging to tribal community and having child less than

one year of age was prepared with the help of Auxiliary Nurse Midwifery (ANM), ASHA and Anganwadi workers. Visit was given to the house containing mother fitting into selection criteria. Prior information was given to the mother one day prior to the visit. Interview was planned as per the convenient time of the mother. Finally, 225 study subjects could be contacted during study period. Informed consent was obtained from mother after explaining the nature and purpose of the study and expected duration of the study. Study subjects were interviewed using a pre-tested, predesigned, semi-structured questionnaire.

Interview was conducted in local (Hindi) language. Information regarding socio-demographic characteristics like age, mother's educational and occupational status, father's educational and occupational status, type of family, socioeconomic status, place of delivery, knowledge and practices regarding breastfeeding were recorded in the questionnaire. A pilot study was carried out in 25 study subjects to know the feasibility of the study and to validate the questionnaire in the study settings. The questionnaire was suitably modified based on the findings of the pilot study.

Statistical analysis

Data was entered and analyzed using statistical software Epi Info 7. Descriptive statistics (percentage, mean, standard deviation, range) were used to summarize baseline characteristics of the study subjects. Association between two categorical variables was analysed by using Chi-square test and p value <0.05 was statistically significant.

RESULTS

Table 1 shows, distribution of study subjects with some socio demographic variables. Maximum study subjects 132 (58.67%) were in the age group of 20 - 24 years. Teenage mothers were 38 (16.89%).

The mean age of mothers was 22.47 years with SD 3.24 years with range 16 - 35 years. Most of study subjects 192 (85.33%) were literate. Very few 12 (5.33%) study subjects had completed their education beyond high school out of which only 1 (0.44%) subject was graduate. Only one study subject was involved in profession as a school teacher.

Majority of study subjects 134 (59.55%) belonged to socio-economic class V. Most of times 199 (88.44%) health care provider was the source of information regarding breastfeeding. Out of 176 institutional deliveries, half 88 (50%) deliveries were conducted at Sub-center followed by 65 (36.93%) deliveries conducted at Primary Health Center. Remaining 15 (8.52%) in Sub-district hospital, 1 (0.57%) in district hospital, 7 (3.98%) in private hospital and 49 (21.78%) study subjects were delivered at home.

Table 1: Distribution of study subjects by socio demographic variables.

Variables	Study subjects (n = 225)	
	No.	%
Age of mother in Years		
15-19	38	16.89
20-24	132	58.67
25-29	43	19.11
>30	12	5.33
Educational status of mother		
Professional degree / PhD	0	0.00
Graduate or postgraduate	1	0.44
Intermediate or post high school diploma	11	4.89
High school completion	15	6.67
Middle school completion	92	40.89
Primary school or functional literate	73	32.44
Illiterate	33	14.67
Occupational status of mother		
Profession	1	0.44
Semi profession	0	0.00
Clerk, shop owner, farm owner	1	0.44
Skilled worker	2	0.89
Semi-skilled worker	0	0.00
Unskilled worker	195	86.67
Homemaker	26	11.56
Husband's educational status		
Professional degree / PhD	0	0.00
Graduate or postgraduate	5	2.22
Intermediate or post high school diploma	24	10.67
High school completion	44	19.56
Middle school completion	80	35.55
Primary school or functional literate	53	23.56
Illiterate	19	8.44
Husband's occupational status		
Profession	02	0.89
Semi profession	00	0.00
Clerk, shop owner, farm owner	8	3.56
Skilled worker	06	2.67
Semi-skilled worker	07	3.11
Unskilled worker	199	88.44
Unemployed	03	1.33
Socioeconomic status*		
I	2	0.89
II	2	0.89
III	13	5.78
IV	74	32.89
V	134	59.55
Source of information		
Health care provider	199	88.44
Relatives	52	23.11
Television	03	1.33
Radio	03	1.33
Friends	01	0.44
Neighbor	01	0.44
Poster	01	0.44
Other	03	1.33
Place of delivery		
Home	49	21.78
Hospital	176	78.22

* - Modified Prasad's Classification (Corrected as per current CPI, April 2015 = 809, Base year 1986-1987)

Table 2 gives distribution of children of study subjects by their age and gender. Two study subjects were having twins. So, there were total 227 children. Out of them 121

(53.30%) were male and 106 (46.70 %) were female. Proportion of children in age group of 0 – 5 months and 6 – 11 months was almost equal.

Table 2: Distribution of children of study subjects by age and gender.

Age group (Months)	Children					
	Male		Female		Total	
	Number	%	No.	%	No.	%
0 – 5	55	49.55	56	50.45	111	48.90
6 – 11	66	56.90	50	43.10	116	51.10
Total	121 (53.30)	100.00	106 (46.70)	100.00	227	100.00

Table 3 showing distribution of study subjects by correct knowledge and practice in which Initiation of breastfeeding within 1 hour of birth, Colostrum to be

given, Pre-lacteals not to be given, Period of exclusive breastfeeding first 6 months of life were considered correct for knowledge and practice.

Table 3 Distribution of study subjects by correct knowledge and practice.

Variables	Correct	Study subjects (n = 225)		
		Knowledge		p value
		No. (%)	Practice No. (%)	
Initiation of breastfeeding	Within 1 hour of birth	178 (79.11%)	167 (74.22%)	0.125
Colostrum	To be given	196 (87.11%)	217 (96.44%)	<0.001
Pre-lacteals	Not to be given	213 (94.67%)	194 (86.22%)	0.003
Period of exclusive breastfeeding	First 6 months of life	125 (55.56%)	82 (36.45%)	<0.001

DISCUSSION

WHO recommends exclusive breastfeeding until a baby is six months old and continued breastfeeding with the addition of nutritious complementary foods for up to two years or beyond.¹³ Early breastfeeding within one hour and exclusive breastfeeding for the first six months are the key interventions to achieve MDG 1 and MDG 4, which deal with reduction in child malnutrition and mortality, respectively.¹⁹

Correct knowledge regarding initiation of breastfeeding within 1 hour was seen in 178 (79.11%) of study subjects. Our study finding was higher than other authors like Hajela S found 41.21%, Laxmi A et al 36.29% while Chaudhary RN et al found 10%, while Mohammed ES found 79.76% which was like present study.^{3,20-22} Correct practice of initiation of breastfeeding within 1 hour was seen in 167 (74.22%) study subjects. Wide variation was seen for this finding among authors like Laxmi A et al found 48.14%, Bobhate PS et al 51.67%, Chakrabarty S et al, 39.61%.^{11,16,21} There was no significant association between correct knowledge and practice. Correct knowledge regarding colostrum to be given was seen in 196 (87.11%) of study subjects. our finding seems higher among other authors like Chaudhary RN et al found 25.00%, Hajela S 48.42%, Laxmi A et al 65.23% while

Mohammed ES found 87.56% which was similar to present study.^{3,20-22} Correct practice of colostrum feeding was reported by 217 (96.44%) study subjects. Laxmi A et al found 94.12% which was higher than our finding while Bobhate PS et al 84.78%, Das N et al (76.29%) found lower.^{11,17,21} We found significant difference between correct knowledge and practice. As there were more number of mothers practiced colostrum feeding without having knowledge of it, this may be attributed to effective health education policies or local customs.

The use of colostrum and avoidance of pre-lacteal foods are cornerstones in early infant nutrition and may be prerequisites for the establishment of future exclusive breastfeeding.³ Correct knowledge regarding pre-lacteals not to be given was seen in 213 (94.67%) of study subjects. our finding higher than other studies.²⁰ Correct practice regarding pre-lacteals not to be given was seen in 194 (86.22%) of study subjects. Present finding was higher than study conducted by Chaudhary RN et al 67.00%, Hiregoudar V et al 52.52%, Mohammed ES 57.46%.^{3,22,23}

Correct knowledge regarding Period of exclusive breastfeeding i.e. First 6 months of life was seen in 125 (55.56%) of study subjects. our finding was like DLHS – IV.¹⁸ Other studies, Mohammed ES found (33.59%),

which was lower than present finding.³ Correct practice regarding Period of exclusive breastfeeding was seen in 82 (36.45%) of study subjects. Mohammed ES found 32.25% which was nearly like present study, while Bobhate PS et al found 67.39%, which was higher than our 84.78%.^{3,11} Chaudhary RN et al found 23.54%, lower results than present.²² Women with adequate knowledge about breastfeeding and those who were advised about Exclusive Breast Feeding (EBF) during antenatal period were practicing EBF correctly again pointing towards importance of antenatal counselling about breastfeeding.²²

We had found significant difference between correct knowledge and practice for not to use pre – lacteals and period of exclusive breastfeeding. This area requires improvement. The one of most probable reasons for such findings could be the natural tendency of breastfeeding among women, intensive efforts taken by the healthcare staff of the primary health centre, Bijudhawadi, on information, education and counselling of antenatal women about excusive breastfeeding and its advantages.

Limitation

The main limitation was the cross-sectional nature of the study which limited inferences about causality from the analyses. Also, there are likely risks of recall bias, as data included information over a period of one year. Generalizability of the study findings is limited to the study area. Also, possibility of confounding factors for breastfeeding cannot be ruled out.

Strengths

The main strengths of this study include the use of a comprehensive data on breastfeeding knowledge and practices in tribal mothers residing in melghat, and appropriate sampling design and sample size in the analysis.

CONCLUSION

The present study was an attempt to understand knowledge and practices regarding breastfeeding in the context of tribal mothers in melghat. The maternal knowledge about breast feeding was just satisfactory and there was a significant gap between knowledge and practices. Despite the high proportion of women initiating breastfeeding early after birth, the practice of EBF for 6 months of age was very low. Present study also showed higher percentage of home deliveries. Mothers should be encouraged to deliver in hospitals. Hospital is the place where mothers can be encouraged to start early and exclusive breast feeding.

Recommendation

Strengthening of information, education and counselling for antenatal women with energetic participation of

ASHA / AWW / ANM concerning timely initiation of breastfeeding following delivery, duration of exclusive breastfeeding, and importance of giving colostrum. It will be more useful and scientific to conduct a longitudinal interventional study among antenatal women with follow up in post-natal period to assess their breastfeeding practices. In addition, the findings from this study will help to guide health programmers for improving early initiation of breastfeeding, and exclusive breastfeeding to ensure infants in melghat to receive the full benefits of appropriate breastfeeding practices with reduced morbidity and mortality.

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REFERENCES

1. Datta S. A study to explore the determinants of child health in Melghat, Maharashtra. *Heal agenda*. 2013;1(2):36-41.
2. Mondal T, Sarkar A, Shivam S, Thakur R. Assessment of infant and young child feeding practice among tribal women in Bhatar block of Burdwan district in West Bengal, India. *Int J Med Sci Public Heal*. 2014;3(3):324-6.
3. Mohammed ES, Ghazawy ER, Hassan EE. Knowledge, Attitude, and Practices of Breastfeeding and Weaning Among Mothers of Children up to 2 Years Old in a Rural Area in El-Minia Governorate, Egypt. *J Fam Med Prim care*. 2014;3(2):136-40.
4. Narahari S, Narasinga Rao M, Bhaskara Babu S, Aparna A. The porja: A study on pediatric practices. *Anthropologist*. 2009;11(2):147-9.
5. Giridhar L, Lakshmi G. Practices regarding colostrums and pre-lacteals among gadaba and konda dora tribes of vizianagaram district. *IOSR*. 2012;2(5):8-12.
6. Singh R, Singh P. A study on high mortality of children in Melghat region of Amravati (Maharashtra). *Stud tribes tribals*. 2008;6(1):35-43.
7. Birdi TJ, Joshi S, Kotian S, Shah S. Possible causes of malnutrition in Melghat, a tribal region of Maharashtra, India. *Glob J Health Sci*. 2014;6(5):164-73.
8. Meshram II, Arlappa N, Balakrishna N, Mallikharjuna Rao K, Laxmaiah A, Brahmam GNV. Trends in the prevalence of undernutrition, nutrient and food intake and predictors of undernutrition among under five year tribal children in India. *Asia Pac J Clin Nutr*. 2012;21(4):568-76.

9. Patro S, Nanda S, Sahu R. Infant Feeding Practices of Paroja: A Tribal Community of Orissa. *Stud Home Com Sci.* 2012;6(1):21-5.
10. Shaili V, Parul S, Kandpal SD, Jayanti S, Anurag S, Vipul N. A community based study on breastfeeding practices in a rural area of Uttarakhand. *Natl J Community Med.* 2012;3(2):283-7.
11. Bobhate PS, Shrivastava SR. Breastfeeding Practices and Factors Associated with It: A Cross Sectional Study Among Tribal Women in Khardi Primary Health Centre, Thane, India Breastfeeding practices in a tribal area. *Int J Public Heal Res.* 2012;2(1):115-21.
12. Abera K. Infant and Young Child Feeding Practices Among Mothers Living in Harar, Ethiopia. *Harar Bull Heal Sci.* 2012;815(4):66-78.
13. WHO. Infant and young child feeding. 2015.
14. Seidu I, Stade R. Exclusive Breastfeeding and Family Influences in Rural Ghana: a Qualitative Study. 2013:1-62.
15. Paudel DP. Breast feeding practices and associated factors in Bhaktapur District of Nepal: A community based cross-sectional study among lactating mothers. *J Sci c Soc.* 2014;41(2):108-13.
16. Chakrabarty S, Ghosh R BP. Breastfeeding Practices and Nutritional Status of Preschool Children among the Shabar Tribal Community in Orissa , India. *Indian J Pediatr.* 2004;3(7):17-24.
17. Das N, Chattopadhyay D, Chakraborty S, Dasgupta a. Infant and Young Child Feeding Perceptions and Practices among Mothers in a Rural Area of West Bengal, India. *Ann Med Health Sci Res.* 2013;3(3):370-5.
18. International Institute for Population Sciences. District Level Household and Facility Survey -4 State Fact Sheet. 2014;1-8.
19. Wadde SK, Yadav V. Determinants of Exclusive Breast Feeding in a Rural Community of Maharashtra. *Int J Recent Trends Sci Technol.* 2012;4(1):9-13.
20. Hajela S. Knowledge, Attitude and Practice of Mothers about Perinatal Care. *Int J Med Res Rev.* 2014;2(4):300-5.
21. Lakshmi A, Devi S, B VMK. Knowledge, Attitude and Practices of Breast Feeding among Mothers in a Slum Area of Amalapuram , East Godavari District , Andhrapradesh. *Natl J Med Dent Res.* 2014;2(3):15-7.
22. Chaudhary R, Shah T, Raja S. Knowledge and practice of mothers regarding breast feeding: a hospital based study. *Heal Renaiss.* 2011;9(3):194-200.
23. Hiregoudar V, Hemagiri K, Goud TG. Breast feeding practices in Bellary, Karnataka : A hospital based study . *J Pub Heal Med Res.* 2013;1(2):76-80.

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