



Original Research Article

Child feeding practices of mothers of rural coastal area of Navsari district

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ABSTRACT

Background: Poor feeding habits are one of the most serious barriers to achieving and preserving health of children under the age of five, as they pose a significant challenge to social and economic growth.

Objectives: To know the socio-demographic profile and to study the prevalence of Infant and young child feeding practices of mothers

Materials and Methods: A cross-sectional study in rural areas of Navsari district, Gujarat, included 243 women, who had one child aged 12 to 23 months preceding data collection. Data were analyzed using statistical software Epi Info 6.

Result: About 32% of the infants had received pre-lacteals feeds, most common feed was Gripe water (44.9%). The colostrum was fed by 90 % mothers. Half of mothers had initiated breast-feeding within 1 hour after delivery. Only 88 mothers (36.2%) had given exclusive breast-feeding for 6 months. About half of children had received complementary feeding during 6–9 months of age. Most of the mothers (96.7%) were washing their hands before each feeding of the child whereas 61.7 % were cooking special meal for the child. Majority of mothers (93.8%) think that breast-feeding should be continued for 1 to 2 years.

Conclusion: Continuing to emphasise nutrition education could go a long way toward empowering mothers to avoid using pre-lacteal feeds, to sustain exclusive breastfeeding for a prescribed period, to incorporate complementary foods at the appropriate time, and to enhance overall child-care through optimum use of community health workers.

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1. Introduction

Malnutrition is responsible for 60 % of the 10.9 million children under the age of five that die each year, either directly or indirectly. During the first year of life, more than two-thirds of these deaths occur which are often linked to improper feeding practises. Just about 35 % of children worldwide are breastfed exclusively for the first four months of their lives; supplemental feeding is often started too

early or too late, and foods are often nutritionally deficient and unhealthy. Malnourished infants who survive are more likely to become ill and suffer from developmental delays for the rest of their lives. Poor feeding habits are one of the most serious barriers to achieving and preserving health that this age group faces, as they pose a significant challenge to social and economic growth.¹

Breastfeeding is one of the most significant factors in a child's longevity, birth spacing, and infection prevention during childhood.^{2,3} The importance of exclusive breastfeeding, as well as the immunological and nutritional

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benefits of breast milk, has long been established.^{4,5} The benefits of breastfeeding vary depending on when it is started, how long it lasts, and when the breastfed child is weaned.⁶ Breast milk should be exclusively fed to all children from birth to six months of age, and then continued until two years of age or beyond, along with consumption of sufficient and adequate complementary foods.^{7,8}

Infant feeding practices play a significant role in deciding a child's nutritional status.⁹ Apart from feeding activities, there are numbers of other child rearing practises that have a significant impact on infant health and are commonly used by families or societies. These include oil massaging the baby before bathing, putting oil in the baby's eyes and ears, burping the baby, putting black carbon in the eye, trimming the nails, and so on. A community health worker's familiarity with these rearing methods is critical. Overall, a significant portion of infant morbidity and mortality can be due to poor new-born care practices, which are influenced by community education, mindset, and practice, as well as other factors such as the availability and accessibility of medical services.¹⁰

2. Objectives

1. To know the socio-demographic profile of mothers.
2. To study the prevalence of infant and young child feeding practices of mothers.

3. Materials and Methods

A cross sectional study was conducted from August 2012 to April 2013 in Gandevi taluka of Navsari district. Mother having one child in the age group of 12-23 months from three randomly selected Primary Health Centers of Gandevi taluka were enrolled in the study.

The sample size was calculated using the percent distribution of mothers who had not received even a single TT vaccine during their previous pregnancy. This was chosen because, of all the variables in this analysis, it had the lowest prevalence. According to DLHS-3 Gujarat, 31.4 percent of mothers did not receive even a single TT vaccine. An allowable error of 20% was taken to calculate the sample size. Considering a 10% of non-response, the sample size came out to be 240; however in the present study 243 children were covered. This was calculated by using formula, $4PQ / L^2$, where, P = prevalence of No TT taken, Q = 1-P and L = allowable error.

From each PHC, we had chosen two sub-centres at random. As a result, we chose 40 mothers at random from each of the sub-centres. Prior to the study, verbal consent of all mothers has taken. Mothers who refused to participate in the study were excluded.

A standardised questionnaire was created and pretested on a group of non-participating mothers, with changes to the questions made as required. The pre-tested questionnaire

was used to gather information from mothers of children aged 12 to 23 months. Data was collected and entered in MS Office XL sheet and analysis was done by using the EPI Info 6 software.

4. Results

As shown in Table 1, mean present age of the mothers was 25.48 (\pm 4.08) years. Mean age of the study population at time of first childbirth was 22.05 (\pm 3.08) years. At the time of first childbirth, 39 (16%) mothers were \leq 19 years. Majority of mothers (60.1%) had joint type of family. The mean household size was 6.37. Among the mother interviewed, 95.5 % mothers were literate. Out of which, 17.7% of mothers had their primary schooling, while 34.6% mothers had secondary schooling. Most of mothers were housewife (88.9%).

Table 1: Distribution according to Socio-demographic characteristics of mothers

Characteristics(N=243)	N	%
Mother's present age		
\leq 19	2	0.8
\geq 20	241	99.2
Mother's age at the time of first child birth		
\leq 19	39	16.0
\geq 20	204	84.0
Family type		
Joint	146	60.1
Nuclear	47	19.3
Three generation	50	20.6
Education		
Illiterate	11	4.5
Primary	43	17.7
Secondary	84	34.6
Higher secondary & above	105	43.2
Occupation		
Labourer	14	5.8
Skilled worker	13	5.3
Housewife	216	88.9

All the participants had received TT immunization during ANC period. About 32% of the infants had received pre-lacteals feeds, most common feed was Gripe water (44.9%), followed by Janam ghutti (26.9%) and Honey (21.8%). The colostrum was fed by 221 mothers (90.9%). Most common reasons for not giving colostrum are milk is not coming out from breast for the first 3-5 days (40.9 %) and low birth weight baby (36.4%). (table 2) Regarding time of initiation of breast-feeding, 137 mothers (56.4%) had initiated breast-feeding within 1 hour after delivery whereas 219 mothers (90.1%) had initiated it within 24 hours of birth. Majority of mothers (93.0%) were giving breast-feeding on demand. Only 88 mothers (36.2%) had given exclusive breast-feeding to their baby for 6 months.

Table 2: Pre-lacteal feeding & colostrum feeding practices

Infant feeding Practices	N	%
Practices of pre-lacteal feeds (N=243)		
Yes	78	32.1
No	165	67.9
Type of pre-lacteal feeds (N=78)		
Honey	17	21.8
Plain/boiled/sugar water	3	3.8
Animal milk	2	2.6
Janam ghutti	21	26.9
Gripe water	35	44.9
Practices of colostrum (N=243)		
Yes	221	90.9
No	22	9.1
Reasons for discarding colostrum (N=22)		
Milk is not coming out of breast for the first 3-5 days	9	40.9
Low birth weight baby	8	36.4
LSCS delivery	2	9.1
Baby was hypothermic & kept in radiant warmer	3	13.6

As shown in Table 3, out of 243 mothers studied only 134 (55.1%) received guidance for breast-feeding during ANC, while only 137 (56.4%) mothers received guidance during PNC. It was found that majority of women (91.8%) received guidance from health professionals followed by relatives/friends (28.4%) during ANC. Most common advice received during ANC period was colostrum must be given (42.5%) and only breast-feeding should be given for first 6 months (35.8%).

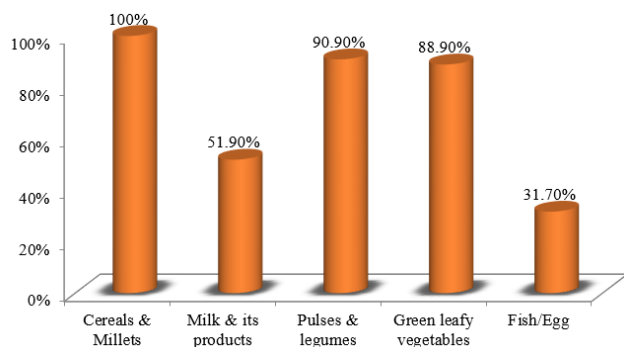


Fig. 1: Food items included in Homemade complementary feeding

About 138 children (56.8%) received complementary feeding during 6-9 months of age and 99 children (40.7%) received the same at the age of 6 months. The commonly used complementary food included homemade complementary food (100.0%) followed by cow/buffalo/goat milk (49.8%) and adult food (38.3%). (Table 4) Homemade complementary food included cereals and millets (100.0%), pulses and legumes (90.9%), green leafy vegetables (88.9%), milk and milk products (51.9%),

Table 3: Distribution of mothers according to type of advice given during ANC & PNC period regarding breast feeding

Variables	Breast-feeding guidance given			
	During ANC period		During PNC period	
	N	%	n	%
Advice given(N=243)				
Yes	134	55.1	137	56.4
No	109	44.9	106	43.6
Advice given by*				
Health professionals	123	91.8	135	98.5
Relatives/Friends	38	28.4	40	29.2
Type of advice given				
BF must be given	14	10.5	0	0
Only BF should be given for 6 months	48	35.8	115	83.9
BF should be continued for 2 years	4	3.0	4	2.9
BF should be given 2 hourly	11	8.2	17	12.5
Colostrum must be given	57	42.5	0	0
Breasts should be kept clean	0	0	1	0.7
Total	134	100	137	100

*multiple response

Table 4: Complementary feeding practices

Complementary feeding Practices(N=243)	N	%
Time of introduction of complementary feeding		
6 months	99	40.7
< 6 months	6	2.5
> 6 months	138	56.8
Type of complementary food*		
Cow/Buffalo/Goat milk	121	49.8
Homemade semisolid/solid food	243	100
Commercial baby food	4	1.6
Adult food	93	38.3
Frequency of feeding (per day)		
1-2 times	18	7.4
≥ 3 times	225	92.6

*multiple response

and fish/egg (31.7%). (Figure 1) Most of the mothers (96.7%) were washing their hands before each feeding of the child whereas 150 mothers (61.7%) were cooking special meal for the child. Majority of mothers (93.8%) think that breast-feeding should be continued for 1 to 2 years. As shown in table 5, when asked about Anganwadi, 207 mothers (85.2%) were taking the child to Anganwadi for growth monitoring. Among the 91 mothers who go out for work, 85 children (93.4%) were taken care of by family members. Majority of mothers (82.3%) were visiting

Table 5: Child growth monitoring & treatment seeking practices

Variables	n	%
Visiting Anganwadi (N=243)		
Yes	207	85.2
No	36	14.8
Mother go out for work (N=243)		
Yes	91	37.4
No	152	62.6
Who take care of child when mother go out for work (N=91)		
Family members	85	93.4
Care taker	1	1.1
Take baby with her	5	5.5
Choice of treatment (N=243)		
Govt. institute	43	17.7
Private clinic	200	82.3
Child's feeding changed during illness (N=243)		
Yes	65	26.7
No	178	73.3
Type of change in feeding (N=65)		
Baby is taking only BF during illness	29	44.6
Feeding is reduced during illness	35	53.8
Only fruits given during illness	1	1.6

private clinic when their child getting ill.

5. Discussion

In this study, 16 % of the mothers interviewed were teenagers at the time of their first childbirth. According to the Gujarat NFHS-3 report (2005-06), 13 % of young women aged 15 to 19 have already begun childbearing. Even though few women aged 15 to 19 have begun childbearing, more than a quarter (28%) of women aged 19 were either mothers or pregnant.¹¹ In present study, mothers belonged to joint family were 60.1% while mothers belonged to three generation and nuclear family were 20.6% and 19.3% respectively. Similar finding of 52% joint families were observed by Rao S et al in their study in coastal area of south India.¹²

According to the current study, 32 % of infants received pre-lacteals feeds, with Gripe water (44.9 %) being the most common, followed by Janam ghutti (26.9%) and Honey (21.8 %). In a research conducted in the Rural Health Training Centre of a Medical College in Tamil Nadu, Southern India, H. Gladius Jennifer et al (2012) discovered similar results. They discovered that 29.1% of the children had been given pre-lacteal feeds.¹³ In the NFHS-3 study for India (2005-06), 59.8% of children in rural areas were given pre-lacteal feeds. Milk other than breast milk is the most popular pre-lacteal liquid. Honey (often provided as part of a blessing ceremony), sugar or glucose water, and plain water are all popular pre-lacteal liquids.

Breast-feeding was started by 56.4 % mothers of 12-23-month-old children within one hour of birth, and 90.1 % within one day of birth, according to this study. As per NFHS-3 report for Gujarat (2005-06), 30.0 % mothers of children under the age of five started breastfeeding within one hour of birth, and 58.0 % started breastfeeding within one day of birth.¹¹ Around 55.1 % mothers in the current study were given advice on breast-feeding during ANC. In contrast to this research, Saxena D. (2004) discovered in a study of infants in 30 Anganwadis in Surat city that only 27% of mothers who went for an antenatal checkup received advice on breast-feeding, whereas 60% mothers have received advice from health professionals.

Majority of mothers (96.7 %) washed their hands before each feeding of the infant, while 61.7 % were preparing special meal for the child. Breast-feeding should be continued for 1 to 2 years, according to majority of mothers (93.8 %). I.I. Meshram et al. (2012) found similar results in their research in a district of Andhra Pradesh, India, where he discovered that majority of children aged 12-36 months received complementary feeding in addition to breast milk (80.6 %), while 19 % received only complementary feeding. Most mothers (89%–93%) cleaned their hands before feeding.¹⁴

Despite the higher rates of early breastfeeding initiation and exclusive breastfeeding, there was little understanding of the benefits of exclusive breastfeeding. Many of the participants began complementary feeding before the age of six months. Around half of the mothers did not receive breastfeeding advice. This emphasises the importance of raising consciousness about proper infant feeding and newborn care practises. Educating grass-roots workers about the benefits of exclusive breastfeeding would reinforce and promote this traditional practise in rural communities, avoiding the early adoption of complementary foods for socio-cultural purposes.

6. Conclusion

Continuing to emphasise nutrition education before the child is born, throughout prenatal and antenatal visits, during growth-monitoring visits, and during illness could go a long way toward empowering mothers to avoid using pre-lacteal feeds, to sustain exclusive breastfeeding for a prescribed period, to incorporate complementary foods at the appropriate time, and to enhance overall child-care through optimum use of community health workers.

Furthermore, nutrition and hygiene education messages that are clearly understood and conveyed in a way that maximises the probability of implementation are needed for mothers, caregivers, and others who influence their decisions. Community-based health workers play an important role in eradicating unsafe childcare practices and sustaining healthy ones, as well as serving as a connection between families and the health system.

7. Conflict of Interest

There are no conflicts of interest in this article.

8. Source of Funding

None.

References

1. WHO. Global strategy for infant and young child feeding. Geneva:WHO; 2003.
2. Iskandar M, Costello C, Nasution Y. Initiation and duration of breast feeding in Indonesia. *Asia Pac Popul J*. 1990;5(1):89–112.
3. Bautista LE. Factors associated with initiation of breast feeding in the Dominican Republic. *Rev Panam Salud Publica*. 1997;1(3):200–7.
4. Arifeen S, Black R, Antelman G, Baqui A, Caulfield L, Becker S, et al. Exclusive breast-feeding reduces acute respiratory infection and diarrhea deaths among infants in Dhaka slums. *Pediatrics*. 2001;108(E67):E67. doi:10.1542/peds.108.4.e67.
5. Dewey KG, Cohen RJ, Brown KH, Rivera LL. Effects of exclusive breastfeeding for four versus six months on maternal nutritional status and infant motor development: results of two randomized trials in Honduras. *J Nutr*. 2001;131(2):262–7. doi:10.1093/jn/131.2.262.
6. Victora CG, Smith PG, Vaughan JP, Nobre LC, Lombardi C, Teixeira AM, et al. Evidence for protection against infant deaths from infectious diseases in Brazil. *Lancet*. 1987;2(8554):319–22. doi:10.1016/s0140-6736(87)90902-0.
7. Britton C, McCormick F, Renfrew M, Wade A, King S. Support for breast feeding mothers. *Cochrane Database Syst Rev*. 2007;24(1):CD001141. doi:10.1002/14651858.CD001141.
8. WHO/UNICEF. Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding, Florence, Italy, 1 August 1990. New York: UNICEF; 1990. WHO/UNICEF meeting on Breastfeeding in the 1990s; a global initiative; 1990.
9. Betrán A, De Onís M, Lauer J, Villar J. Ecological study of effect of breast feeding on infant mortality in Latin America. *BMJ*. 2001;323(7308):303–6. doi:10.1136/bmj.323.7308.303.
10. National Institute Of Health and Family Welfare. Reproductive and ChildHealth Module for Health Worker Female. New Delhi; 2000.
11. National Family Health Survey (NFHS-3) for India, Indian Institute for Population Sciences. Mumbai; 2005-06. Available from: <https://dhsprogram.com/pubs/pdf/frind3/frind3-vol1andvol2.pdf>.
12. Rao S, Swathi P, Unnikrishnan B, Hegde A. Study of complementary feeding practices among mothers of children aged six months to two years - A study from coastal south India. *Australas Med J*. 2011;4(5):252–7. doi:10.4066/AMJ.2011.607.
13. Jennifer HG, Muthukumar K. A Cross-sectional Descriptive Study was to Estimate the Prevalence of the Early Initiation of and Exclusive Breast Feeding in the Rural Health Training Centre of a Medical College in Tamilnadu, South India. *J Clin Diagn Res*. 2012;6(9):1514–7. doi:10.7860/JCDR/2012/4430.2546.
14. Meshram II, Laxmaiah A, Venkaiah K. 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. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/23278776>.

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