

Effect of IMNCI Training In Urban And Rural Communities On Use Of Commercial Feeding Formula

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Abstracts: Background: Exclusive breastfeeding for the first six months of life is the single most important child survival intervention, the Eleventh Five Year Plan will concentrate on promoting optimal breastfeeding practices among women at home and in health facilities .The present study was, therefore, conducted to assess the use of Commercial Formula and breast Feeding among the rural & urban community of Ahmedabad district.Material and Method: This study was carried out in Urban and Rural communities of Ahmedabad District. Grade I PEM was seen in 138 (45.5%) Grade II in 126 (41.59%) & Grade III in 12 (03.96%) children. In the present study showed that out of total 603 children were studied in the age group of 0-24 months. Result and Discussion: In study group 19.16 % were from 0-6 months while 43.64% of children were of 7-12 months of age. 287 (95.66%) mother said that breast-feeding started immediately after birth. 234 (78.00%) mother said that commercial weaning food are not more nutritious than breast milk. While for rural areas, Almost 262(86.46%) mother had correct knowledge that breast feeding is given up to 4-5 month of age. 293 (96.70%) mother said that breast-feeding started immediately after birth. The difference of the feeding practice of urban rural area was found statically significant. These finding of our study were compared with the findings of District Level Household Survey-3(DLHS3) which shows significant improvement in the immunization in both urban & rural areas. [Chuhan J et al. NJIRM 2011; 2(3) : 81-86]

Key words: IMNCI, Commercial formula, Communities.

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Introduction: Breast-feeding is identified, as one of the four low cost strategies in child survival¹. Breast-feeding is almost universal in India. Protecting, promoting and supporting breast-feed it should be the foremost aim of all communities. Compare the body of lactating mother to a baby food factory and we find that she is far and away the most efficient².

Exclusive breastfeeding for the first six months of life is the single most important child survival intervention. Successful breastfeeding also requires the initiation of breastfeeding within an hour after birth, and avoidance of prelacteals, supplementary water, or top milk. Continued breastfeeding for two years or more, with introduction of appropriate and adequate complementary feeding from the seventh month onwards, further improves child survival rates by a considerable percentage. According to NFHS-3, the proportion of exclusively breast fed infants at 6 months of age was only 46.3%. Only 23.4% of mothers initiated breastfeeding within the desired one hour after birth, as against the Tenth Plan goal of 50%.Therefore, the Eleventh Five Year Plan will

concentrate on promoting optimal breastfeeding practices among women at home and in health facilities. Baby Friendly Hospital Initiative and Breastfeeding Partnership, two programmes involving all the key partners will be encouraged³.

During recent past, deeply rooted pattern of breast-feeding has gradually replaced by artificial feeding immediately or sometime after birth. This increase in trend of providing milk based commercial weaning food has been observed throughout nation, mainly in urban areas. Inadequate data is available regarding the use of Commercial Feeding Formula (CFF).The present study was, therefore, conducted to assess the use of Commercial Formula and breast Feeding among the rural & urban community of Ahmedabad district.

Aims and Objectives: (1) To assess the prevalence of use of commercial feeding formula. (CFF) (2) To study the level of awareness of Rural, Urban mother's regarding breast feeding and CFF practices (Knowledge, Attitude & Practices) (3) To assess the nutritional status of study children.

Material and Methods: Study population: Ahmedabad District was selected for the study. Ahmedabad District has 11 Talukas, Out of 11 Talukas; Ahmedabad City Taluka has four zones, 1. North 2. West 3. South 4. East. Out of four zones North zone was selected randomly for the study. In North zone slum area, Khodiyar nagar and kalidas ni chali of Vasana area was selected randomly for the study. For the rural study Dholera taluka selected, there are 18 villages, 1.Dholera 2.Rojaka 3. Sintoda 4. Bhanghad 5. Mahadevpura 6. Mingalpur 7. Hebatpur 8. Devpura 9. Raika 10. Vasna 11. Chasipana 12. Rajpur 13. Bhimtalav 14. Prachi 15. Shitpur 16. Vanipati 17. Khuna 18. Ratra in Dholera Taluka and population is 28000. Survey done in four villages (Dholera, Rojaka, Sintoda, Bhanghad) of Dholera Taluka under primary health center by random sampling. In both taluka house to house survey was done, and total 603 children were taken for the study. Out of 603 children 300 children were taken from urban area and 303 children were taken from rural area. The study was conducted for one year. Prior to study both area were visited and contact of local leader was done to get correct information from mothers.

The mother of the child of 0 to 24 months age group were interviewed according to the pre-tested proforma. The questionnaire contained two parts, the first part have questioning regarding socio-demographic information and second part contained questions regarding knowledge, attitude & practices about child birth, breast feeding and weaning and anthropometric measurement.

Data thus collected were compiled, tabulated & analyzed. For nutritional assessment of the weight for age & Gomez classification⁴ was used for the height for age. Data was also compared with District level household survey3 (DLHS3)⁵. Suitable statistical tests were applied as and when required.

Result: Table-1. Distributions of studied children of Ahmedabad District according to their Age and Sex.

Age Group (In Month)	Urban		Rural		Total
	Male	Female	Male	Female	
0-3	30	18	29	10	87

	(15.95)	(16.07)	(12.08)	(15.87)	(1.42)
4-6	30 (15.96)	14 (12.50)	58 (24.16)	05 (07.93)	107 (17.74)
7-9	52 (27.66)	34 (30.36)	43 (17.92)	26 (41.26)	155 (25.71)
10-12	24 (12.77)	18 (16.07)	59 (24.58)	07 (11.13)	108 (17.93)
13-15	08 (04.26)	08 (07.15)	13 (05.43)	02 (03.17)	31 (05.14)
16-18	22 (11.70)	10 (08.93)	17 (07.08)	01 (01.58)	50 (08.29)
19-21	02 (10.63)	04 (03.57)	11 (04.58)	07 (11.13)	24 (03.98)
22-24	20 (10.63)	06 (05.36)	10 (04.17)	05 (07.93)	41 (06.79)
Total	188 (100)	112 (100)	240 (100)	63 (100)	603 (100)

*Figures in parenthesis denote percentage.

Table 1 show that a total of 603 children were selected for study out of which 300 were from urban area and 303 were from rural communities. It was found that maximum no. of children were in age group of 7-9 months and 10-12 months i.e. 155(25.71%) and 108(17.93). It was also seen that male and female children were 188 (62%) & 112(38%) respectively in urban as compared to 240(79.2%) and 63 (20.8%) respectively in rural community.

Table-2 Distribution of studied children according to immunization status.

Vaccine Status	2000 study		DLHS-3(2008)	
	Urban	Rural	Urban	Rural
	Immunized			
BCG (%)	57.6	54.3	92.4	86.7
DPT3 (%)	65.4	50.2	74.1	60.3
POLIO3 (%)	67.4	54.2	79.4	69.5
Measles (%)	57.6	45.70	81.3	70.1

Table-2 shows the immunization status of the studied children in Ahmedabad district. It was seen that out of 300 children of urban area, BCG was given to 57.6% children, DPT3 to 65.4% & Polio3 to 67.4% and measles was given 57.6% children as compared to BCG was given to 54.3% children, DPT3 to 50.2% Polio3 to 54.2% and Measles was given 45.7% children in rural area respectively. These finding of our study were compared with the

findings of District Level Household Survey-3(DLHS3) which shows significant improvement in the immunization in both urban & rural areas.

Table-3 Distribution of studied children according to their feeding in first 6 months.

Type of feeding	2000 study		DLHS-3(2008)	
	Urban	Rural	Urban	Rural
Exclusive Breast Feeding	16.0	18.8	25.9	29.6
Children age 6-9 months receiving solid/semi solid food and breast milk	22.6	58.4	58.5	44.9

Table 3 shows that exclusive breast feeding was found in 16.0% and 18.8% in urban & rural areas respectively while breast milk with solid and semi solid food intake was found in 22.6 % in urban and 58.4% in rural areas. We found that breast feeding along with bottle feeding in 28.0% while breast feeding with timely weaning in 22.6%. These finding were compared with DLHS 3 which shows significant improvement in the breast feeding practices in both urban & rural areas.

Table-4 Treatment of childhood diseases (based on last two surviving children born during the reference period).

Type of feeding	2000 study		DLHS-3(2008)	
	Urban (n-300)	Rural (n-303)	Urban	Rural
Children with diarrhoea in the last 2 weeks who received ORS (%)	26.0	20.4	38.9	36.2
Children with diarrhoea in the last 2 weeks who sought advice/ treatment (%)	40.5	38.2	66.0	65.6

Table 4 shows that 26.0% of children from urban and 20.4% from rural areas had received ORS treatment for diarrhoea in last two weeks when it was compared with DLHS3 it shows drastic improvement in the health seeking behavior and ORS utilization.

Table-5 Knowledge and Attitude about Breast feeding and weaning

Beliefs	Positive Response	
	(Urban – n = 300)	(Rural – n = 303)
Breast-feeding should be started immediately after birth	287 (95.66)	293 (96.70)
Breast-feeding is best food up to 4-5 month.	288 (96.66)	262 (86.46)
Weaning should be started for 4-5 month.	214 (71.33)	202 (66.67)
Commercial Weaning Foods are more nutritious than breast milk.	234 (78.00)	168 (55.45)
Katori & Spoon is better than bottle.	185 (61.67)	166(54.78)
Breast feeding should not be stopped even if child having		
a) Fever	92 (30.67)	74 (24.42)
b) Diarrhea	122 (40.66)	86 (28.38)

Table-5 shows knowledge and attitude about breast feeding and weaning in urban mother. Almost 288 (96.00%) mother had correct knowledge that breast feeding is given up to 4-5 month of age. 287 (95.66%) mother said that breast-feeding started immediately after birth. 234 (78.00%) mother said that commercial weaning food are not more nutritious than breast milk. 208 (69.33%) and 178 (59.34%) mother had not correct knowledge about breast-feeding should not be stopped even if child having fever and diarrhea.

While for rural areas, Almost 262(86.46%) mother had correct knowledge that breast feeding is given up to 4-5 month of age. 293 (96.70%) mother said that breast-feeding started immediately after birth. Figure 1: Distribution of studies children for their nutritional status according to their weight for age in Urban & Rural areas.

168 (55.45%) mother said that commercial weaning food are not more nutritious than breast milk. 229 (75.58%) and 217 (71.62%) mother had not correct knowledge about breast-feeding should not be stopped even if child having fever and diarrhea. The nutritional status of the children in urban area as per weight for age classification it was seen that only 44 (14.67%) children were

found to be normal. Grade I PEM was seen in 132 (44%) grade II in 120 (40%) & Grade III in 04 (01.33%) children.

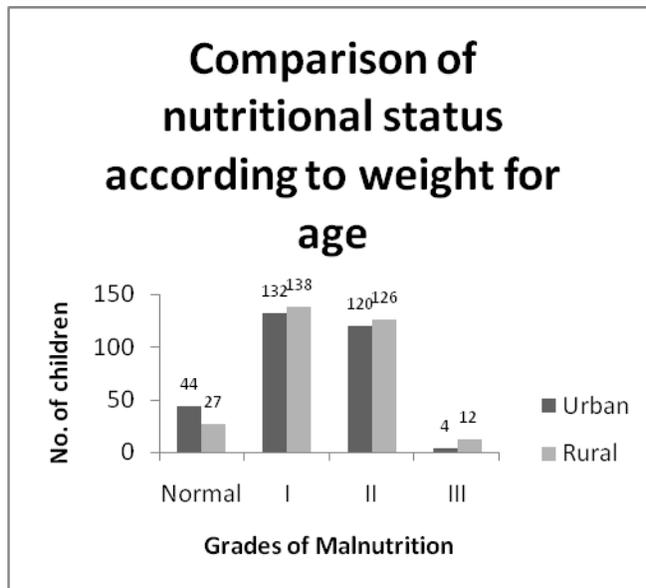
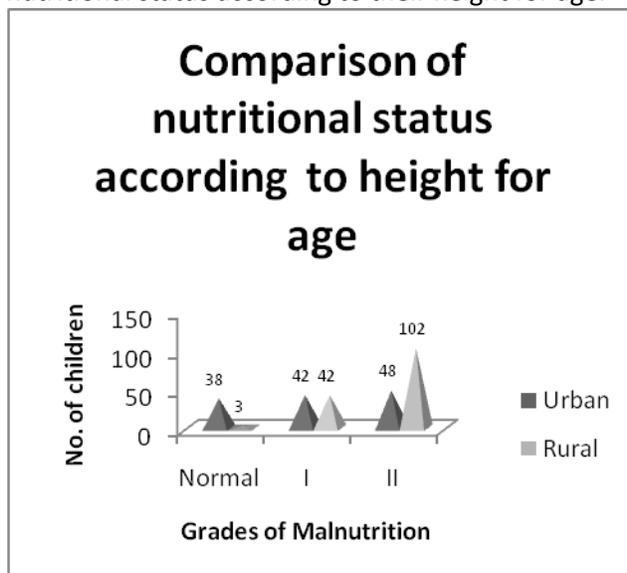


Figure : 2-Distribution of studies children for their nutritional status according to their height for age.



Shows the nutritional status of the children in rural area as per weight for age classification it was seen that only 27(8.91) children were found to be normal. Grade I PEM was seen in 138 (45.5%) Grade II in 126 (41.59%) & Grade III in 12 (03.96%) children.

Discussion: In the present study showed that out of total 603 children were studied in the age group

of 0-24 months, out of this 19.16 % were from 0-6 months while 43.64% of children were of 7-12 months of age. According the study done by Nitin.N.Ambedakar et al.⁶ 14.0% were form 0-6 months and 22.67% were in 7-12 months of age.

Some of the factors like modernization, urbanization, cultural image of mothers and motherhood ignorance have been blamed for decline in breast feeding.⁷

Every child deserves the best start in life, & therefore has to be breast-feeding for at least 1.5 years. Mama also benefits from breast-feeding her child, breast-feeding = losing adipose fat. When she breast feeds, the body produces different hormones increasing transformation of adipose fat into mother's milk of all mammals contains a precisely balanced cocktail of hormones, growth factors and other 'messenger's-peptides to stimulate optimum development of the young. Logically, formulated babies do not get all the substances they need for optimum brain development.⁸

R.R. Kasla et al⁹ reported that breast-feeding was associated with lower morbidity in the first sixth months of age was 3.1 episodes / child / year for exclusively breast feed babies, 8.1 for mixed feed and 9.9 for totally artificially fed babies.

Shanti Ghosh¹⁰ reported that susceptibility to diarrhoea is also high in young children, prevalence being highest between 6 and 11 months of age. The diet is further reduced and made more watery, and contact with health services delayed due to lack of awareness and constraint of time.

Raj Rani Mitra et al¹¹ reported that the main objection to bottle infection. In our opinion we should put more stress on teaching mothers/nurses on proper sterilization of bottles by heat or chemical means. Perhaps some device by which bottles can be sterilized by solar heat may be marketed in the future. Lakshmi Ramhmathullah¹² reported that working mothers, whether working at home or a wage earner, introduced top feeds at 30 days as she often started work 45 days after delivery.

A. Ghuliani et al¹³ reported that children of the tropical countries and developing world when being weaned, experience one billion episodes of acute diarrhea diseases annually and 0.5% of these have a fatal outcome¹⁴ he also Reported that 80 % history of diarrhoea during exclusive breast-feeding and 73.27 % history of diarrhea after starting weaning food.

Food contamination is believed to be a major source of infection¹⁵. In study done by. S.Mudgal et al¹⁵ reported that 87.70% children were weaned between 4-7 months, 11% were weaned at 7-9 months and only 1.3% children started weaning at the age of 10-12 months.

In another study done by B.S. Karnavat et al³ reported that 50% of the doctor's children weaned at the age of 7-12 months, 58.60 % nurse's children weaned at the 7-12 months, 70% auxiliary children weaned at the 7-12 months and 64.20% class IV children weaned at 7-12 months.

While majority of Anganwadi Workers had correct knowledge that breast feeding should not be stopped during diarrhea, only 52% agreed that breast feeding should be continued during fever and tuberculosis.

In the present study 79.28% were hospital deliveries and 20.72% were home deliveries. 5.33% children were born in home delivery in urban area and 35.97% were born at home delivery in rural area. This highlights the delivery place in both urban and rural area. The difference was found statistically highly significant.

In the present study 57.6% & 54.3% children were immunized for BCG in urban & rural area respectively. 65.4% children were immunized for DPT3 in urban area as compared to 50.2% in rural area. 57.6 % children were completely immunized with measles in urban area as compared to 45.7 % in rural area. None of them were left without polio vaccination.

The difference of the feeding practice of urban rural area was found statically significant. In use of commercial weaning formula food in urban area out of ten children, six children taken Horlick's

powder and four children taken Malt ova powder, two teaspoonful once a day with milk every morning.

In the present study the nutritional status of the children as per weight for age, 14.67 % children were found to be normal in urban slum area as compared to 8.91% children in rural area. Only 1.33 % of children were in grade III malnutrition in urban slum as compared to 3.96% in rural area.

In the present study the nutritional status of the children as per height for age, 12.67% children were found to be normal in urban slum area as compared to 00.99 % children in rural area. Children were found to be grade -III malnutrition in urban slum as compared to 51.48% in rural area.

Conclusion: Present study shows that only 23.4% infants get breast-milk within an hour of birth in our country. Only 46.3% infants are exclusively breast-fed for first six months in India. Only 39% infants are breast-feed up to two years.

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