

A study of breastfeeding and associated co morbidities in less than six year children

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Abstract

Background: Maternal milk is considered the best and most important nutritional source for the child during the first six months of life. **Aims and Objectives:** To study Breastfeeding and associated co morbidities in Less than six year children. **Methodology:** This was cross-section sectional study in the less than six year children at immunization OPD of a tertiary health care center during the one year period from January 2015 to January 2016. In one year period total 488 parents were interviewed. The statistical analysis done by Chi-square test calculated by SPSS 19 version of Software. **Result:** Out of 488 faulty breastfeeding practices found in 295 i.e. 60.45%. The Proportion of under nutrition was more in, who has not exclusively breast fed (71.1428.86, $p < 0.001$), who did not received colostrums (89.4110.5, $p < 0.0001$). Who received prelacteal feed (53.55 and 46.45, $p < 0.05$), Breast fed after 1hr of birth. (69.92 and 30.08; $p < 0.0001$). Who has un-hygienic. The majority of the Associated co-morbidities in the children with faulty breast feeding practices were Frequent Diarrheal disorders in Past one year in 62.71%, Frequent ARI and Fever disorders in Past one year 60.34%, Skin infections -41.69%, Delayed milestones -33.22%, Mouth ulcers -28.81%, Chronic ear infection -18.31%, Corneal xerosis- 8.47. **Conclusion:** It can be concluded from our study that faulty breastfeeding practices found in 60.45% and also Proportion of undernutrition was more in, who has not exclusively breast fed, who did not received colostrums, Who received prelacteal feed, Breast fed after 1hr of birth etc. The majority of the Associated co-morbidities in the children with faulty breast feeding practices were Frequent Diarrheal, Frequent ARI in Past one year, Skin infections, Delayed milestones, Mouth ulcers, Chronic ear infection etc.

Key Words: Breastfeeding Practices, associated Co-morbidities, Frequent ARI infections, Frequent Diarrheal infections.

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INTRODUCTION

Maternal milk is considered the best and most important nutritional source for the child during the first six months of life. It is a unique process that in addition to supplying the ideal nutrition for lactating infants, contributes to their healthy growth and development. Among the numerous advantages attributed to this practice, there is the prevention of disease; furthermore, its protective role has

been shown in infectious processes¹, above all in gastroenteritis, respiratory infections, as well as in otitis and urinary infections² and other general infections³. Likewise, it protects against chronic, non-infectious disease, especially those related to the metabolism and immune disorders (e.g., diabetes type I and II diabetes, allergies), as well as sudden infant death, hypertension, and some types of cancer³. Maternal breastfeeding diminishes the risk of malnutrition, including protein-energy malnutrition in low-income populations and overweight and obesity in low- and high-income populations³. It also prevents the risk of dental malocclusion^{4,5}, and diminishes infant morbidity and mortality, promotes the mother's health by reducing the risk of breast and ovarian cancer; and by increasing the interval between pregnancies⁶⁻⁸, it fosters in most women a sense of satisfaction when this practice is successfully carried out because of the mother-child bonding taking place. Bearing in mind the benefits discussed, the International Pediatric Association (IPA) and the World

Health Organization (WHO) have recommended exclusive maternal breastfeeding for at least six months, as well as mixed breastfeeding from the sixth month to two years of age⁷. Although this period was standardized for operational purposes, in this research exclusive breastfeeding is assumed as the act in which the lactating infant is only fed maternal milk and no other liquid or complementary nutrition except for drops or syrups consisting of vitamins, minerals, or medications until the moment the mother engages in breastfeeding. In recent years, multiple studies have shown a gradual loss of the habit of breastfeeding in industrialized and developing nations, above all because of the great diversity of types of milks and their industrial derivations, as well as their mass commercialization, added to the presence of biological and socio-cultural factors that increase the likelihood of abandoning this practice; hence, becoming a social fact of incalculable projections for the future of infant populations⁸⁻¹⁰.

MATERIAL AND METHODS

This was cross-section sectional study in the less than six year children at immunization OPD of a tertiary health care center during the one year period from January 2015 to January 2016. In one year period total 488 parents were interviewed. All the parents were interviewed about the breast-feeding practices like. Exclusive breastfeeding, Colostrum feeding, Prolactal feed, Initiation of breast feeding Immediately (within 1hr of birth)/ After 1hr of birth, Feeding practices; Hygienic or Un-hygienic, Age of initiation of weaning (months) etc. Any of the abnormal of this was termed as faulty breastfeeding practices. The Children were examined anthropometrically and clinically to assess the nutritional status and associated co-morbidities. Diarrheal and ARI infection more than 2 or more episodes per month were termed as Frequent infections. The statistical analysis done by Chi-square test calculated by SPSS 19 version of Software.

RESULT

Out of 488 faulty breastfeeding practices found in 295 i.e. 60.45%.

Table 1: Distribution as per the Breast-feeding practices and Nutritional Status Less than six Year Children

Study Character	Undernutrition		Normal		χ^2 , p Value
	No.	Percentage (%)	No.	Percentage (%)	
1). Exclusive breastfeeding					
Yes	104	42.98	138	57.02	$\chi^2=42.97$, p<0.001.
No	175	71.14	71	28.86	
2) Colostrum feeding					
Given	70	27.56	184	72.44	$\chi^2= 201.7$, p<0.0001
Not given	211	89.41	25	10.59	
3). Prolactal feed					
Given	217	91.95	19	8.05	$\chi^2=7.51$, p<0.05
Not given	219	53.55	190	46.45	
4). Initiation of breast feeding					
Immediately (within 1hr of birth)	105	43.75	135	56.25	$\chi^2= 48.96$, p<0.0001
After 1hr of birth	172	69.92	74	30.08	
5) Feeding practices					
Hygienic	91	50.00	91	50.00	$\chi^2= 7.85$, p<0.05
Un-hygienic	190	62.09	116	37.91	
6) Age of initiation of weaning (months)					
4- 6	77	44.25	97	55.75	$\chi^2=12.29$, p<0.001
> 6	205	66.78	102	33.22	

The Proportion of undernutrition was more in, who has not exclusively breast fed (71.14 28.86, p<0.001), who did not received colostrums (89.41 10.5, p<0.0001). Who received prolactal feed (53.55 and 46.45, p<0.05), Breast fed after 1hr of birth. (69.92 and 30.08; p<0.0001). Who has un-hygienic feeding practices (63.33% and 50.57% p<0.05). Who weaned after 6 months of age (62.09 37.91; p<0.001).

Table 2: Distribution of the Patients as per the Faulty Breastfeeding Practices and Associated co-morbidities

Associated co-morbidities	No. (N=295)	Percentage (%)
Frequent Diarrheal disorders in Past one year	185	62.71
Frequent ARI and Fever disorders in Past one year	178	60.34
Skin infections	123	41.69
Delayed milestones	98	33.22
Mouth ulcers	85	28.81
Chronic ear infection	54	18.31
Corneal xerosis	25	8.47

The majority of the Associated co-morbidities in the children with faulty breast feeding practices were Frequent Diarrheal disorders in Past one year in 62.71%, Frequent ARI and Fever disorders in Past one year 60.34%, Skin infections -41.69%, Delayed milestones -33.22%, Mouth ulcers -28.81%, Chronic ear infection -18.31%, Corneal xerosis- 8.47.

DISCUSSION

Compared with breastfed infants, formula-fed infants face higher risks of infectious morbidity in the first year of life. These differences in health outcomes can be explained, in part, by specific and innate immune factors present in human milk.¹¹ Plasma cells in the mother's bronchial tree and intestine migrate to the mammary epithelium and produce IgA antibodies specific to antigens in the mother/infant dyad's immediate surroundings, providing specific protection against pathogens in the mother's environment.¹² In addition, innate immune factors in milk provide protection against infection. Oligosaccharides prevent attachment of common respiratory pathogens, such as *Haemophilus influenzae* and *Streptococcus pneumoniae*, to respiratory epithelium, and glycoproteins prevent binding of intestinal pathogens such as *Vibrio cholerae*, *Escherichia coli*, and rotavirus.¹³ Glycosaminoglycans in milk prevent binding of HIV gp120 to the CD4 receptor, reducing risk of transmission, and human milk lipids contribute to innate immunity, with activity against *Giardia lamblia*, *H influenzae*, group B streptococci, *S epidermidis*, respiratory syncytial virus (RSV), and herpes simplex virus type 1 (HSV-1).¹⁴ Approximately 44% of infants will have at least 1 episode of otitis media in the first year of life, and the risk among formula-fed infants is doubled (95% confidence interval [CI], 1.4–2.8) compared with infants who are exclusively breastfed for more than 3 months.¹ In a meta-analysis of 7 cohort studies of healthy term infants in affluent regions, Bachrach and associates¹⁵ Multiple studies suggest that formula-fed infants face an increased risk of gastroenteritis and diarrhea. In a meta-analysis of 14 cohort studies,

Chien and Howie¹⁶ Multiple authors have examined associations between infant feeding and cognitive development, with mixed results.¹⁷ In our study we have found that Out of 488 faulty breastfeeding practices found in 295 i.e. 60.45%. The Proportion of undernutrition was more in, who has not exclusively breast fed (71.1428.86, $p < 0.001$), who did not received colostrums (89.4110.5, $p < 0.0001$). Who received prelacteal feed (53.55 and 46.45, $p < 0.05$), Breast fed after 1hr of birth. (69.92 and 30.08; $p < 0.0001$). Who has un-hygienic. The majority of the Associated co-morbidities in the children with faulty breast feeding practices were Frequent Diarrheal disorders in Past one year in 62.71%, Frequent ARI and Fever disorders in Past one year 60.34%, Skin infections - 41.69%, Delayed milestones -33.22%, Mouth ulcers - 28.81%, Chronic ear infection -18.31%, Corneal xerosis- 8.47. These findings are in confirmation with Anita Khokhar *et al* (2003)¹⁸, Sahibzada Syed Masood-us-Syed *et al* (2011)¹⁹.

CONCLUSION

It can be concluded from our study that faulty breastfeeding practices found in 60.45% and also Proportion of undernutrition was more in, who has not exclusively breast fed, who did not received colostrums, Who received prelacteal feed, Breast fed after 1hr of birth etc. The majority of the Associated co-morbidities in the children with faulty breast feeding practices were Frequent Diarrheal, Frequent ARI in Past one year, Skin infections, Delayed milestones, Mouth ulcers, Chronic ear infection etc.

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