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BREASTFEEDING PRACTICES AMONG URBAN SLUMS OF A METRO CITY IN MAHARASHTRA

Community Medicine

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ABSTRACT

Background: Proper breastfeeding practices during infancy and childhood are essential for attaining and maintaining proper nutrition and health, and for overall development of infants and children.

Objectives: 1) To find out the prevalence of appropriate breastfeeding practices.2) To evaluate the association of appropriate breastfeeding practices with child's nutritional status.

Methodology: Community based cross sectional study. Children from urban slums were examined. A Simple Random Sampling method was followed. House to house survey was carried out for data collection regarding breast feeding practices with the help of questionnaire in the field. Anthropometric measurements were also taken. Data was analyzed with the help of SPSS ver. 20 and appropriate tests were applied.

Results: Total 400 children were examined, out of which174 were females and 226 were males. Out of 400 children 164 children still continue the breastfeeding; while 236 children had stopped breastfeeding, out of which only 62 children were breastfed for adequate duration while 174 children are inadequately breastfed. Inadequately breastfed children are often fall sick and hospitalised for common diseases such as diarrhoea, vomiting, fever, cough etc. Only 24% mothers initiate breastfeeding on time. Delayed initiation of breastfeeding is prone to develop malnutrition especially underweight with highly significant statistical difference with p value 0.009 ($\chi 2 = 6.8$, OR = 1.91, C.I. = 1.14-3.26).

Conclusions: More than 3/4th of mothers do not initiate breastfeeding on time. Delayed initiation of breastfeeding leads to deprivation of colostrum to baby. Inadequately breastfed baby are more prone to infections due to low immunity.

KEYWORDS

Breastfeeding, Nutrition, Practices, Children

INTRODUCTION:

Infants should be breastfed exclusively on demand until six months old and then continue breastfeeding until at least two years old. Appropriate complementary and solid foods should be introduced at around six months of age in addition to breast-milk.[1]

Proper feeding practices during infancy and childhood are essential for attaining and maintaining proper nutrition and health, and for development of infants and children. The WHO recommends exclusive breastfeeding (EBF) for the first six months of life and continuation of breastfeeding for two years. EBF in the first six months and continued breastfeeding for the next 6-11 months have been estimated to prevent 13% of all under-five deaths in the developing world. Compared to EBF, not breastfeeding is associated with a 14-time higher risk of death due to any cause in 0-5 month (s) old children.[2]

Weaning or complementary feeding after 6 months is extremely important due to high risk of micronutrient deficiencies and malnutrition. Even though babies may thrive on breast milk alone during the first 6 months of life, they become biologically fit to accept semisolids after 6 months of age.

It is essential to prevent growth faltering. Weaning means 'to accustom to' or 'to free from a habit'. It is the process to accustom the baby to semisolids and solids in order to gradually free the baby from the habit of sucking at the breast. Weaning is defined as 'the systematic process of introduction of suitable food at the right time in addition to mother's milk in order to provide needed nutrients to the baby' (UNICEF, 1984). Birth weight doubles by 4 months of age and the nutritional demands gradually increase and the calcium and iron stores get depleted. But the breast milk supply increases till 6 months and then it plateaus off. By five months of age, the weight doubles and becomes around 6 kg and the baby needs 600-700 kcal/day and around 600ml of breast milk can supply only 400 kcal. By four months of age, the baby achieves head control and develops hand mouth coordination and starts enjoying mouthing. Also that the extrusion reflex perishes, intestinal amylase matures and the gut becomes ready to accept cereals and pulses. Gum hardens prior to tooth eruption and the baby enjoys gumming semisolids. Thus the baby is 'biologically ready' to accept semisolids by 6 months of age. Early weaning is often due to ignorance and leads to contamination and infection due to unhygienic preparation. Late weaning leads to growth faltering and malnutrition.

This study will come at certain conclusions and suggest specific recommendations regarding relation between appropriate breastfeeding practices nutritional status of underfive children malnutrition.

MATERIAL AND METHODS

The present study is a community based cross sectional study aimed at primarily assessing malnutrition status among under-five children in urban slums and its association with appropriate breastfeeding practices.

Place of study: Urban slums of Bandra
Period of the study: December 2010 to April 2012
Study population: This study was conducted among under-five children residing in urban slums of Bandra

Study subjects: the following entry criteria determined selection of study subjects from this population;

Inclusion criteria:
Children up to 5 years of age living in the selected slums will be included in the study.

Exclusion criteria:
Children who are not resident of the slum but visiting will be excluded from the study.

Children of more than 5 years of age will be excluded from the study.
A simple Random Sampling method was followed to get the sample size calculated as follows:

Sample size: It is calculated using the formula

$$n = \frac{Z_{1-\alpha/2} \times P\,(1-P)}{d^2}$$

n →sample size
Z →1.96 (at 95 confidence limit)
P →prevalence (40)
d →Absolute precision (5)

$\therefore n = 370$

The total number of study participants were 400.

Data collection:
Data collection was done in the field by going house to house in 13 different slum areas in Bandra (Ashapura, Bandra Terminus, Behrampada, Bharat nagar, Dnyaneshwar nagar, Gandhi nagar, Gautam nagar, Jayhind nagar, Kherwadi, Maharashtra nagar, Shastri nagar, Siddharth nagar and Subhash nagar).

Research instrument:
Actual questionnaire administration and physical examination was done by researcher alone. Informed consent was obtained by parents and other care takers.

RESULTS

Total 400 children were examined, range from 4 days to 5 years, out of which174 (43.5%) were females and 226 (56.5%) were males. Maximum children belonging to Hindu religion (74.7%) followed by Muslim (20.5%) & Buddhist religion (4.8%). Out of 400 children 164 children still continue the breastfeeding; remaining 236 children had stopped breastfeeding. Out of these 236 children only 62 children were breastfed for adequate duration while 174 children are inadequately breastfed. Out of these inadequately breastfed children 100 were hospitalised for, diarrhoea, fever, cough, or vomiting and 123 children fall ill on and off.

Table 1: Age distribution of children

Age groups (Months)	Number	Percentages
<12	126	31.5
12-23	69	17.2
24-35	84	21
36-47	59	14.8
48-59	62	15.5
Total	400	100

Figure 1: Initiation of Breastfeeding

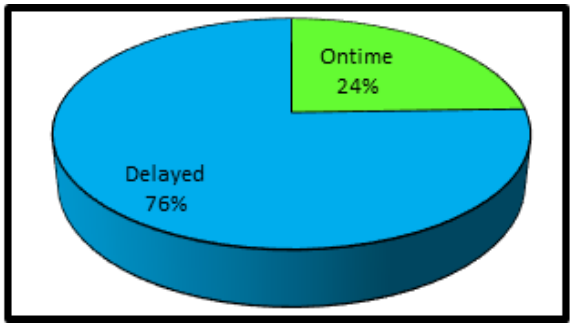

Table 2: Initiation of breastfeeding and malnutrition status of children

Breast Feeding	Number of children	Z score system	
		Underweight	
		N	M
On Time	98	70 (71.4%)	28 (28.6%)
Delayed	302	171 (56.6%)	131 (43.4%)
Total	400	241 (60.25%)	159 (39.75%)
p value		0.009 (HS)	
$\chi 2$ value		6.8	
OR (CI)		1.91 (1.14-3.26)	

DISCUSSION

In the current study, delayed initiation of breast feeding practices was common in severely malnourished children. Underweight was significantly associated (p=0.009). Severe grades of undernutrition were less observed in those children who were weaned on time (i.e. at 6 months), except wasting, but statistical difference was not significant (p>0.5). Overall malnutrition of children was less those who are weaned on time except wasting. Wasting was found to be more in children who were not adequately breastfed. Surprisingly severe malnutrition as per IAP and stunting were observed in those children who were adequately breastfed. Severe underweight and wasting observed in those children who were not adequately breastfed.

Recent studies have shown that starting breastfeeding within one hour of birth can help reduce the risk of neonatal mortality by almost a third. Universal coverage of exclusive breastfeeding upto six months of age can save 13-15% of all under-five deaths, i.e. more than 3.5 lakh children each year for India. [3]

Paramita Sengupta et al, revealed that the highest prevalence of underweight children was found in those who were not given supplementary feeding even after 6 months followed by those in whom weaning was started before 4 months of age (p=0.021). Hence, starting supplementation too early (before 4 months of age) or too late (later than 6 months of age) both carry a higher risk of malnutrition.[4]

A study in Delhi found a significant relationship (p<0.05) between those who were not exclusively breast-fed for the first 4 months of life and the malnourished. [5]

Tamoghna Biswas et al, [2011] assessed that not practicing exclusive breastfeeding was significantly associated with child malnutrition (p=0.007). [6]

The findings of the study on the influence of infant feeding practices on nutritional status of under-five children in selected four Anganwadi areas of urban Allahabad showed that among all under-five children surveyed, 36.4% underweight, 51.6% stunted and 10.6% wasted. The result also revealed that initiation of breast feeding after six hours of birth, deprivation from colostrums and improper complementary feeding were found significant (P<0.05) risk factor for underweight.[7]

CONCLUSIONS

The protective effects of breastfeeding on children's nutritional status observed in this study suggest that breastfeeding is an important part of child care. Delayed initiation of breastfeeding leads to deprivation of colostrum to baby. Inadequately breastfed baby are more prone to infections due to low immunity. However, there is need to educate mothers on safe breastfeeding and timely introduction of complementary foods because poor breastfeeding practices such as prolonged breastfeeding or failure to introduce adequate complementary foods may places children at risk for undernutrition.

RECOMMENDATION

Delayed initiation of breast-feeding, early or late initiation of weaning and inadequate duration of breast-feeding are risk factors for undernutrition among under-five children. Hence, optimal infant-feeding practices should be promoted and protected to improve nutritional status of under-five children.

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