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Impact of mother's occupation and duration of breast feeding on nutritional status of children

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Abstract

Objectives: a) To find out the nutritional status of children aged 3-6 years in a village of Nadia district of west Bengal. b) To identify the impact of mother's occupation and duration of exclusive breast feeding on nutritional status of the children.

Subjects: 100 (one hundred) children of Kadampur village in Nadia.

Materials and Method: Mothers of the children were interviewed using an interview schedule to collect information regarding the socio demographic profile, feeding practices etc. Weight of the children was measured by a portable weighing machine, nutritional status among 3-6 years children was assessed by computing weight for age using Indian Academy of pediatrics (IAP) classification. Grading I to IV nutritional grade was taken as undernourished.

Statistical Analytical: Prevalence was expressed in percentage and chi-square test was used to find association with factors.

Results: The prevalence of under-nutrition (<80% of standard weight for age) was 66% and grade I malnourishment was 42%. Nutritional status of children of mothers who were unemployed was better than those whose mothers were working and the difference was found to be statistically significant ($p>0.05$). Duration of exclusive breast feeding had influence on the nutritional status. Prevalence of undernourishment is the lowest in the children who were in exclusive breast feeding for 4-6 months of age.

Conclusion: The findings of the present study revealed widespread prevalence of under nutrition among 3-6 years aged children of kadampur village, Nadia District, West Bengal.

Keywords: nutritional status, rural, sociodemographic profile

1. Introduction

Future of the country depends on the healthy children who are free from hunger and malnutrition. A number of factors have been used successfully for many years to estimate the prevalence of under nutrition among the pre-school children. These are parents' occupation and educational status, type of family, family size, socio-economic status, birth order, time of initiation of breast feeding, duration of exclusive breast feeding and immunization status. These factors are reasonably sensitive indications of the immediate and underlying general cause of nutrition.

Breastfeeding is considered as the first four strategies promoted by UNICEF for improving infant and child survival as reported by Grant (1984) [8]. This may enhance child survival up to 3 years of age even in undernourished children (Briend *et al*, 1988) [5]. It is well known that both developed (Hediger *et al*, 2000) [9] and non-developed countries (Adair *et al*, 1993) [1], breastfeeding provides adequate and appropriate nutrients for infant's growth and development (Dewey *et al*, 1995) [7], reduction in infant mortality and morbidity (Booth, 2001), protects infants against infections and promotes their survival (Ramachandran, 2004) [15]. WHO (2001) [16] considered that exclusive breast feeding for the first 6 months was the most appropriate infant feeding practice but in most of the studied children breast milk was initiated after 24 hours of birth and exclusive breastfeeding stopped before completion of 6 months of age. Therefore, these may be the major causes for high prevalence of malnutrition among preschool children. On the basis of this resolution the traditional practices of breastfeeding was promoted but exclusive breastfeeding up to 6 months and energy dense semi solid supplements are still problematic in South Asian countries like India (Ramachandran, 2004) [15].

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It is widely accepted that the work status of the mother plays an important role in determining the health and nutrition status of her child (Popkin *et al.*, 1976 and Choudhary *et al.*, 1986) [14, 6]. Two separate mechanisms for this effect have been postulated (Mosley *et al.*, 1984) [12]: first. The mother's increased income associated with her employment. and, second, the time taken away from child care when she goes to work. While one of the effects is direct and positive. The other is inverse and negative. Evidence suggests, however, that the nutrition status of their children is negatively affected (Bennett, 1988). It would be of interest to find out whether the well-being of children is affected more by the time constraints of women who perform the dual role of mother and earner, or by the increased income generated by the mother's working. This paper attempts to address some of the gaps in this literature by analysing the main determinants of child nutrition in rural area of West Bengal, focusing on the maternal status and food habits of the children from birth.

2. Materials & Methods

100 (42 girls and 58 boys) of aged 3-6 years were taken from the village of Kadampur in Nadia district of west Bengal. Mothers of the children were interviewed using an interviewed schedule to collect information regarding the

Normal	>80%
Grade I	71-80%
Grade II	61-70%
Grade III	51-60%
Grade IV	<50%

3. Results & Discussion

From Table 1 the nutritional status of the children of Kadampur village is reflected. According to IAP classification prevalence of undernutrition (< 80 percentage of standard weight for age) for this population is 66%. Only 34% of children have normal nutritional status. Among the children 42% are Grade I malnourished who have mild undernutrition, 19% are Grade II or moderate undernutrition. Remaining 5% children are suffering from severe undernutrition, out of which 4% have Grade III or severe, and 1% have Grade IV or very severe undernutrition. In a dietary survey conducted by Narkhedavinod *et al.*, (2011) [13] it was found that 52.23% children were suffering from various grades of malnutrition among whom 32.18% children were in grade I, 16.09% in grade II, 3.46% in grade III and 0.5% in grade IV malnutrition.

Table 2 showed the impact of mother's occupation on their children nutrition. In this population 72% mothers are unemployed, 20% mothers are engaged in unskilled occupation and only 8% mothers are engaged in semi skilled occupation. No one is in skilled occupation. Nutritional status of children of mothers who are unemployed are better than those whose mothers are working and the different is found to be statistically significant ($P>0.05$). Anuradha *et al.* (2014) [2]

socio-demographic profile, feeding practices. Weight of the children was measured using a portable weighing machine. Grading of nutritional status among 3-6 years old children was assessed by computing weight for age according to Indian Academy of Pediatrics classification. Socio-economic status was assessed by the Udai Pareek Socio-economic status scale.

Evaluation of nutritional status: Grading of nutritional status of children was done using the Indian Academy of Pediatrics (IAP) classification. Grade I to IV nutritional grade is taken as undernourishment IAP calculation for grading of under –nutrition is measured by formula: weight/expected weight multiplied by 100.

Expected weight (1-6 years) = (age in years x 2) + 8

Age	Expected weight (kg)
3	14
4	16
5	18
6	20

IAP classification

found that nutritional status of children of mother who were unemployed was better than those whose mothers were working but not statistically significant.

Table 3 showed the association between duration of breast feeding and nutrition status of the children. Here is a statistically significant association between duration of exclusive breast feeding and nutritional status ($p>0.05$). 53% of children took exclusive breast feeding for 4-6 months of age and their undernourishment is the lowest in compare with the other children. Undernourishment is the highest (83%) in the children remaining in exclusively breast feeding after 6 months of age. Kavita *et al.* (2009-10) [10] reported that children deprived of colostrums and exclusive breast feeding also showed significant difference in prevalence of PEM. Mahtab S. Bamji (2000) [11] studied the impact of women's participation in economic activity on nutrition status of the mother and her preschool-age children. Working mothers and their children tended to show higher prevalence of signs of B-complex deficiency than housewives and their children. Seasonal effects on vitamin deficiency signs were seen in children.

4. Tables and Figures

Table 3: IAP classification of nutritional status.

Percentage of standard weight for age	Nutritional grade	Nutritional status	Frequency	Percentage
>80%	Normal	Normal	34	34%
71-80%	Grade 1	Mild under nutrition	42	42%
61-70%	Grade 2	Moderate under nutrition	19	19%
51-60%	Grade 3	Severe under nutrition	4	4%
< 50%	Grade 4	Very severe under nutrition	1	1%
Total (%)			100	100.0%

Table 4: Mother’s Occupation and Nutritional Status.

Mother’s Occupation	Nutritional status		Total (%)
	Normal (%)	Under Nourished (%)	
Semi-Skilled	1 (12.50)	7 (87.50)	8 (8%)
Unskilled	6 (30.0)	14 (70.0)	20 (20%)
Unemployed	27 (37.50)	45 (62.50)	72 (72%)
Total n (%)	34 (34.0)	66 (66.0)	100(100%)

$\chi^2=6.95$, Significant

Table 5: Duration of exclusive breast feeding and Nutritional Status.

Duration of exclusive breast feeding	Nutritional status		Total (%)
	Normal (%)	Under nourished (%)	
No exclusive breast feeding	1(1.0)	0(0.0)	1(1%)
0 -4 months	8(30.77)	18(69.23)	26(26%)
>4 – 6 months	22(41.51)	31(58.49)	53(53%)
>6 months	3(15.0)	17(85.0)	20(20%)
Total (%)	34(34.0)	66(66.0)	100(100%)

$\chi^2 = 6.62$, Significant

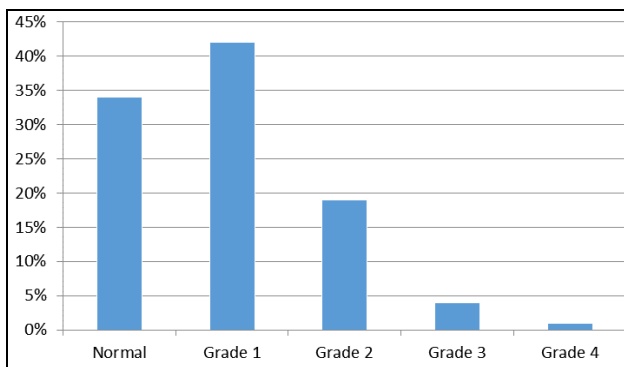


Fig 1: Nutritional status of the children

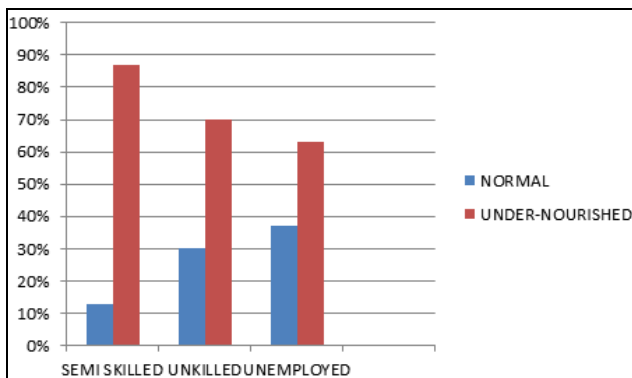


Fig 2: Relationship between mother’s occupation and nutritional Status

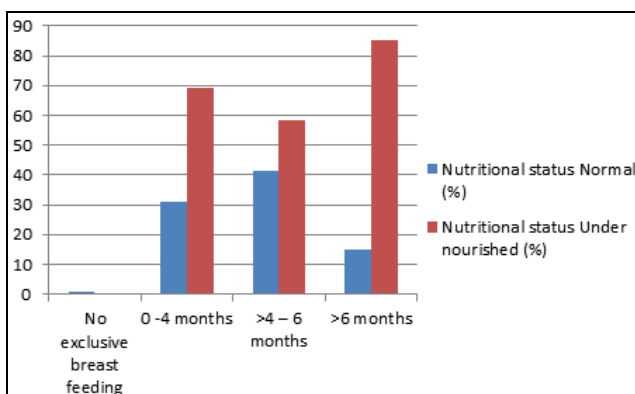


Fig 3: Impact of duration of exclusive breast feeding on nutritional status

5. Conclusion

Community based preventive measures should be taken to alleviate malnutrition. Working mothers should give more

time and concentration on the nutrition of their children. Health education to the mothers on dietary practices like the importance of early and extended breastfeeding, feeding their children with locally available low cost but healthy food along with breast feeding after 6 months should be given.

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