

NUTRITIONAL STATUS OF PRESCHOOL CHILDREN (3-5 YEARS)**Abha Khetarpal,**

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ABSTRACT

Nutritional status of any population is considered a vital determining factor for its biosocial development including both physical and mental well being .Undernutrition and malnutrition are major health problems among young children in developing countries of the world. Clinical examination provides an overall impression of nutritional health and reveals specific signs of malnutrition. Total 300 preschool children were selected randomly from four villages of Yamunanagar district. The respondents were examined for various signs of nutritional deficiencies like vitamin A deficiency , anaemia, iodine deficiency disorder and others. Data on clinical examination revealed that few clinical deficiency symptoms were present in very few children.

Key words: Nutritional status, malnutrition, undernutrition, pre schoolers, clinical signs

INTRODUCTION

Malnutrition adversely affects the growth potential of a nation and obstructs its development. It is a complex problem due to poverty, ignorance and despair and its eradication requires substantial social and economic reforms (Vazir, 1998). Preschool age is one of the most vulnerable period mainly due to easy susceptibility to malnutrition and infection. Malnutrition during critical phases of early growth can lead not only to the stunting of physical growth, but also to sub-optimal intellectual development. Dietary surveys conducted by Vijayaraghavan and Rao (1998) revealed that about 60 percent of the preschool children were underweight and 62 percent were stunted (long duration malnutrition). About 15 percent of the children of 1-5 years of age suffered from short duration malnutrition (wasting). To overcome the health problem and initiate any programme for improvement in their health status, it becomes necessary to estimate the extent of deficiency diseases. Keeping this in view, the present study was conducted.

MATERIAL AND METHODS

Rural area of Yamunanagar district of Haryana State was selected purposively for the study. Three hundred subjects in the age group of 3-5 years (male 150, female 150) were selected.

Clinical Assessment : Clinical examination is a method for assessing the nutritional status of an individual as well as a community. This method of assessment is based on the recognition of certain physical signs that can be seen or felt in superficial epithelial tissues especially the eyes, skin or organs near the surface of the body.

For clinical examination of the subjects, general appearance, hair condition, face, eyes, lips, tongue, teeth, gums, glands, skin, nails and subcutaneous tissue of the respondents were examined.

Table-1
Socio-personal and economic profile of respondents

Characteristics	Frequency	Percentage
Age		
3-4 Yrs	109	36.33
4-5 yrs	191	6.67
Sex		
Male	150	50.00
Female	150	50.00
Type of Family		
Nuclear	201	67.00
Joint	99	33.00
Size of Family		
Small (1-4 members)	28	9.33
Medium (5-8 members)	160	53.33
Large (Above 8 members)	112	37.33
Education of mother		
Illiterate	166	55.33
Primary	81	27.00

Middle	37	12.33
Matric	16	5.33
Graduate	-	-
Occupation of mother		
Working	32	10.67
Non-working	267	89.33
Occupation of father		
Farming	131	43.67
Service	24	8.00
Business	30	10.00
Labour	115	38.33
Monthly income (Rs)		
1000-5000	147	49.00
5000-8000	83	27.66
Above 8000	70	23.33
Health facilities		
Govt. Hospital	178	59.34
Another (clinics)	122	40.67

RESULTS AND DISCUSSION

Data regarding socio-personal and economic profile of respondents are presented in Table 1. Equal number (150) of males and females were drawn from randomly selected villages. Almost half of subjects were from low income group (LIG) and rest of subjects belonged to middle income group followed by high income group (HIG). Sixty seven per cent of the subjects were from nuclear families. Mothers of almost half of subjects were illiterate and remaining were educated up to primary, middle and matric level. At the time of illness more than 50 per cent of children used to refer to Govt. hospitals and 40.67 per cent subject used to go to private clinics.

Presence of deficiency signs among preschool children

As depicted in Table 2, most of the subjects i.e. sixty two per cent of subject were having good general appearance whereas 3 percent were falling in 'fair' category of general appearance. Presence of clinical sign of various nutrient deficiencies was observed only in few

children. Eight per cent of total children surveyed had lack of lustre in hair, 3.33 per cent had thinness and sparseness in hair. A large number of children were having clear skin. Ten per cent of the total respondents showed signs of pale conjunctiva, one per cent were having xerosis conjunctiva. Vitamin B-complex deficiency symptoms like angular stomatitis were observed in 1.67 per cent of total respondents. Five respondents showed mottled enamel which indicated the presence of symptoms of fluorosis. Only one per cent of respondents had spongy bleeding gums and thyroid enlargement. Out of the total 300 respondents, only five respondents were having xerosis of skin.

Table-2: Presence of signs of deficiency among preschool children

Symptoms	Frequency	Percentage
Appearance		
Good	187	62.33
Fair	113	37.67
Poor	-	-
Very Poor	-	-
Hair		
Lack of lustre	26	8.67
Thinness & sparseness	10	3.33
Good	264	88.00
Face		
Diffuse depigmentation	-	-
Moon face	-	-
Good	300	100.00
Eye		
Night blindness	-	-
Pale conjunctiva	10	3.33
Xerosis conjunctiva	3	1.00
Corneal xerosis	-	-
Xerophthalmia	-	-
Bitot's spots	-	-
Good	287	95.67
Lips		
Angular stomatitis	5	1.67
Angular scars	-	-
Cheilosis	-	-

Good	295	98.33
Tongue		
Oedema	-	-
Scarlet & raw tongue	-	-
Magenta tongue	-	-
Atropic papillae	-	-
Glossitis	-	-
Good	300	100.00
Teeth		
Mottled enamel	5	1.67
Caries	-	-
Good	295	98.33
Gums		
Spongy bleeding gums	2	0.67
Good	298	99.33
Glands		
Thyroid enlargement	2	0.67
Parotid enlargement	-	-
Good	298	99.33
Skin		
Xerosis	5	1.67
Follicular hyperkeratosis	-	-
Good	295	98.33
Nails		
Koilonychia	-	-
Good	300	100.00
Subcutaneous tissue		
Oedema	-	-
Good	300	100.00

Vijayaraghavan and Rao (1998) reported a clear cut decline in the prevalence of clinical forms of protein energy malnutrition among the preschoolers from 1.7 per cent in 1975-79 to 0.2 per cent in 1996-97. Harris *et al* (2001) clinically assessed 2078 children (0-84 months) and found that stunting in children was associated with clinical conditions such as rickets, abdominal distension, hair depigmentation, skin lesions and hereditary history of hepatitis or goiter.

Randhawa and Kaur (1997) studied the nutritional status of fifty pre-school children under the age group of 1-5 years from the crèches of labour colonies of Chandigarh. Clinical examination showed that 30 per cent of subjects had hyperkeratosis of the skin, 8 per cent of the subjects had dermatitis and 4 per cent subjects had pigmentation of the skin.

A nutrition survey was conducted on seventy six preschool children aged 1 to 4 years belonging to low income families of urban slum areas of Ludhiana, Punjab. Pale conjunctiva and spoon shaped nails were observed in almost all subjects. The average haemoglobin of the subjects was below the normal level indicating that all subjects were anaemic (Khosla *et al.*, 2000).

Mahapatra *et al.* (2000) recorded clinical signs of all forms of protein energy malnutrition in 4.5 per cent of total 554 children aged 1-5 years. Prevalence of protein energy malnutrition in the form of marasmus was found in 0.7 per cent of children and Kwashiorkor was not recorded. Thompson *et al.* (2000) observed higher level of vitamin A deficiency in children aged 1.5 to 4.5 years in U.K.

CONCLUSION

The study indicated that there were negligible number of children having deficiency symptoms. However, some were affected due to deficiency of one or more nutrients in diet. Inclusion of more food stuffs especially fruits, vegetables, milk and milk products, whole cereals and pulses in the daily diet is recommended for improving their nutritional status. Nutrition counseling and education to the mothers should be an important component on health services which could help to decrease the effect of ignorance and faulty cooking or dietary practices.

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