

CLINICAL ASSESSMENT OF RURAL SCHOOL GOING CHILDREN IN RURAL AREA OF BHILWARA DISTRICT (RAJASTHAN)

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ABSTRACT

The present study was conducted with an objective to clinically assess rural school going children in the Rural Area of Bhilwara District. The study was conducted in village Hurda of Hurdapanchayatsamiti in Bhilwara district of Rajasthan. A total of 120 school going children (15 girls and 15 boys from each school) were selected. In the Clinical assessment, respondents revealed, an equal number of respondents was in normal and poor appearance (41.66%). Diffused pigmentation in children were (25%), lack of luster were (16.66%), pale conjunctiva were (23.33) and Cheilosis (19.16).

KEYWORDS: Children, Equal Number of Respondents

INTRODUCTION

Children are the backbone of a nation and the development of a nation depends on the health and well-being of its child population. India has the second largest child population in the world, numbering over 2.2 billion worldwide, and 263.9 million in India (Census, 2011). School age is the active growing phase of childhood, it represents a dynamic period of physical growth as well as of mental development of the child. Better the nutritional status of the children, more they will be able to contribute to vital human potential and impart strength to the national economy and development. Nutrition is a fundamental pillar of human life, health and development across the entire life span. Good nutrition – an adequate, well balanced diet combined with regular physical activity- is a cornerstone of good health. A child's entire life is determined in large measures by the food given to him during his early childhood years. The school age period is nutritionally significant, as this is the prime time to build up body stores of nutrients in preparation for rapid growth of adolescence. Thus, health and nutrition in the early stages of human life determine, to a great extent, the physical and mental well-being of a person. On the other hand, inadequacies in one or more of the three main preconditions for good nutrition: food, care and health leads to Malnutrition. Globally, malnutrition among school age children is becoming a major public health concern. More than 200 million school age children are stunted and underweight and, if no action is taken, about one billion school children will be growing up by 2020 with impaired physical and mental development. (Mitra et al. 2007). Developing countries like India, accounts for about 40 percent of undernourished children in the world and it is largely due to result of dietary inadequacy in relation to their needs. This may be due to insufficient intake, increased loss, increased demand or a condition or disease that decreases the body's ability to digest and absorb nutrients from available food. Many factors can cause under nutrition, most of which relate to poor diet or severe and repeated infections, particularly in underprivileged populations. Nutritional status is a sensitive indicator of the child's health and nutrition is an input to and foundation for health and development. Thus, the assessment of nutritional status plays an important role. It is widely accepted that for practical purposes anthropometry is the most useful tool for assessing the nutritional status of children. Of the various

parameters, weight for age, weight for height, arm circumference and height for age, either singly or in combination are extensively used for this purpose. The present scenario of health and nutritional status of the school-age children in India is very unsatisfactory. Also, most of the research work that has been conducted on nutritional status of children is limited to infants and preschool children only. There is a dearth of information on nutritional status of school going children particularly from rural areas. Therefore, it is imperative that dietary patterns of school going children are thoroughly assessed, which can help in imbibing simple changes in their daily diet, thus improving their nutritional status, and the nutritional status of children is also associated with the nutritional knowledge of the mothers. Keeping this parameter in mind, the present study attempts to assess the nutritional status of rural primary school children (7-9 year) of government school of Bhilwara district and the knowledge of the mothers, regarding various aspects of nutrition. The present study has been carried out with following objective: to ascertain the clinical symptoms of the rural school going children.

METHODOLOGY

The study was conducted in Bhilwara district of Rajasthan panchayatsamiti, Hurda was selected from this PanchayatSamiti. Hurda village was selected, as it is the largest among the villages of HurdaPanchayatSamiti in terms of area and population. Four Government schools were selected randomly. After the selection of schools, the investigator contacted the school authorities to get the list of enrolled students in the school in the age range of 7-9 years. Total of 60 girls and 60 boys in the age group of 7-9 years enrolled in government schools were selected by Systematic Random Sampling.

Clinical assessment

Clinical assessment was carried out with the assistance of doctors from Primary Health Centre, for the examination of clinical symptoms of nutritional deficiencies and presence of infections and others illness.

RESULTS AND DISCUSSIONS

Clinical assessment

Clinical assessment is important for assessing the levels of health of individuals as influenced by the diet consumed. Clinical deficiency signs relate directly to the inadequate nutrition that can be seen or felt in superficial epithelial tissues, especially skin, eyes, hair and buccal mucosa. (Jellife, 1966).

Table 1: Clinical assessment of school going children (N=120)

Characteristics	Frequency	Percentage
General appearance		
Good	50	41.66
Fair	50	41.66
Poor	20	16.66
Very Poor	—	0
Hair		
Normal	58	48.33
Lack of luster	20	16.66
Flag sign	12	10
Thinness and sparseness	21	17.5

Table 1: Contd.,		
Premature whitening	6	5
Easy pluck ability	3	2.5
Face		
Normal	90	75
Diffused pigmentation	30	25
Moon face	–	
Eyes		
Normal	80	66.66
Night blindness	–	-
Pale conjunctiva	28	23.33
Xerophthalmia	–	
Bitot spot	12	10
Lips		
Normal	60	50
Angular stomatitis	10	8.33
Angular scars	7	5.83
Cheilosis	23	19.16
Gums		
Normal	96	80
Spongy gums & bleeding	24	20
Skin Appearance		
Normal	70	58.33
Xerosis	30	25
Follicular hyperkeratosis	20	16.66
Teeth		
Good	80	66.66
Mottled & discolored	16	13.33
Caries	24	20
Tongue		
Normal	90	75
Oedema	10	8.33
Scarlet and raw tongue	6	5
Magenta tongue	4	3.33
Atrophic papillae	–	
Glossitis	10	8.33
Gland		
Normal	120	100
Thyroid enlargement	–	
Parotid enlargement	–	
Nails		
Normal	110	91.66
Koilonychia	10	8.33
Subcutaneous Tissue		
Oedema	–	
Normal	120	100

Table reveals that regarding general appearance, out of total sample of 120 children, similar percentage 41.66 per cent were having good and fair general appearance and 16.66 per cent children were poor in appearance. From the data produced in the Table it can be observed that 48.33 per cent children were having normal hair, whereas 16.66 per cent, 10 per cent, 17.5 per cent and 5, 2.5 per cent children showed lack of luster, thinness and sparseness and easy pluck ability, respectively due to protein deficiency. It was found that the eyes of majority of the children (66.66%) were normal,

whereas 23.33 per cent and 10 per cent children had pale conjunctiva and bitot spot, respectively, due to Vitamin A deficiency. Diffused pigmentation in skin was observed in only 25 per cent of children while the rest were found to have normal face and skin. Deficiencies due to B- complex vitamins like angular stomatitis, angular scars and cheilosis of lips were found in 8.3, 5.83 and 19.16 per cent of the school children respectively, whereas 5 per cent, 3.3 per cent and 8.3 per cent showed the signs like scarlet and raw tongue, magenta tongue and glossitis. The data indicate that 66.66 per cent children were having normal teeth while 13.33 and 20 per cent children had mottled, discolored teeth and caries, respectively. Majority of the (80%) children were having normal gums whereas 20 per cent children suffered from spongy and bleeding gums due to Vitamin C deficiency. Majority of children showed normal gland without any kind of thyroid enlargement. The data showed that 58.33 per cent children were having good skin whereas 25 per cent children had xerosis in the skin. It was found that 8.33 per cent children had spoon shaped nails i.e.koilonychia, which is the sign of severe iron deficiency. All children were found to have normal subcutaneous tissue without any signs of oedema.

The results are in conformity with the study of Gain (2007) conducted in children of slum area of Gorakhpur (India). It revealed that prevalence of xerophthalmia was 10.9 and 8.9 per cent, night blindness was 0.58 and 0.29 per cent, conjunctivalxerosis was 9.18 and 7.21 per cent.

Findings of the study are also in line with study of Shivaprakash and Joseph (2014) on 484 children, which reported that the overall prevalence of underweight was 30.3 per cent (147) and stunting was 27.9 per cent (135). Pallor was noted in 123 (25.4%). Hair changes were seen in 19 children (3.9%). Eye changes noted in the form of conjunctivalxerosis in 100 (20.7%) and bitot's spots in 10 children (2.1%). Teeth changes were noted in the form of dental caries in 137 (28.3%) and enamel mottling in 19 children (3.9%). Skeletal changes were noted in 7 (1.4%) children. Flat nails or koilonychia were noted in 57 children (11.8%).

CONCLUSIONS

It is clear that the problem of malnutrition in India is of alarming magnitude. A major part of this problem is contributed by rural population. Tackling malnutrition in rural area requires a holistic approach, especially when targeting populations of school children. From the finding of the present study, it can be concluded that, the health and nutritional standards of school going children in this study were found to be unsatisfactory. The above results show that majority of the respondents were lying in category of under nutrition.

REFERENCES

1. Census, 2011.Population of Rajasthan.Internet link: Retrieved from<http://www.indiaonlinepages.com/population/rajasthan-population.html> Dated 21-9-2014.
2. Gomez, F., Galvan, R.R. Cravioto, J., Frenk. S. 1955. Malnutrition in infancy and childhood, with special reference to kwashiorkor. *Advances in Pediatr.*7: 131-169
3. Joshi, H.S., Gupta, R., Joshi, M. C., Mahajan, V. 2011. Determinants of Nutritional Status of School Children. *National Journal of Integrated Research in Medicine.*3:10-15.

4. MICM and DHS, 2008. Preliminary report on the multiple indicator cluster survey, Instituto Nacional De Estatística. Retrieved from [http:// www.unicef.org/mozambique / MICS _ Summary _ English_201009.pdf](http://www.unicef.org/mozambique/MICS_Summary_English_201009.pdf). Dated on- 12 April 2015.
5. Mitra, M., Kumar, P.V., Chakrabarty, S., Bharati, P. 2007. Nutritional status of Kamar tribal children in Chhatisgarh. *Indian journal of Pediatrics*.74 : 381-384.
6. National Family Health Survey-3. 2007. NFHS 2005-2006 report: Fact sheet Haryana key indicator for Haryana.
7. Sakka, M., 2014. Relationship between Mothers' Nutritional Knowledge in Childcare Practices and the Growth of Children Living in Impoverished Rural Communities. *Journal Health Popullation Nutrition*. 32: 237–248.
8. Waterlow, J.C. Classification and definition of protein-calorie, malnutrition. *British Med J*. 1972; 3: 566-569.
9. WHO. 2006. WHO child growth standards: Training course on child growth assessment, interpreting growth indicators. World health Organization, Geneva.
10. Yabanc, N., Kısaç, I., Karakuş, S.S., Yabancı, N., *et al.* 2014. The effects of mother's nutritional knowledge on attitudes and behaviors of children about nutrition Procedia. *Social and Behavioral Sciences*.116:4477 – 4481. Retrieved from [http://ac.els-cdn.com/S1877042814009872/1-s2.0-S1877042814009872-main. pdf? _tid](http://ac.els-cdn.com/S1877042814009872/1-s2.0-S1877042814009872-main.pdf?_tid). Dated on 1 december.

