

A DESCRIPTIVE CROSS-SECTIONAL STUDY TO ASSESS PREVALENCE OF MAL-NUTRITION IN CHILDREN UNDER FIVE YEARS AGE IN RURAL COMMUNITY BIKANER, RAJASTHAN

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Abstract

Background: Malnutrition among children below five years continues to be one of India major human development challenges. In spite of tremendous economic progress made in the last two to three decades.

Methods: The study was cross-sectional hospital based study. Under five year children with sample size of 500 was taken for study.

Results: All three parameters of malnutrition i.e. wasting, underweight and stunting were more common in males than females. It was found that there was very significant and highly significant difference with regard to underweight and stunting respectively between male and female children but no significant gender difference was found for wasting

Conclusions: Majority of under five children were malnourished and malnutrition common in males than females.

Keywords: Malnutrition, Wasting, Stunting, Underweight, Children

Introduction

Malnutrition is defined as a pathological state resulting from absolute or relative deficiency or excess of one or more of the nutrients that are considered essential for normal life.¹

Malnutrition among children below five years continues to be one of India major human development challenges. In spite of tremendous economic progress made in the last two to three decades. Malnutrition among children in rural India still claims many lives. However, mounting cases of malnutrition has caught the public eye and so healthcare providers as well as the government are taking the necessary steps to improve the current status of nutrition for children in India.

According to UNICEF to Pneumonia (30%) and Diarrhoea (27%) are directly related to over 50% childhood deaths. 35% of all deaths was caused because child was undernourished.² There is high under five morbidity and mortality in India.³ Protein energy malnutrition is major contributory factor in majority of these childhood morbidities and mortalities. At present 65% under five children are underweight which includes 47% moderate and 18% severe case of malnutrition (UNICEF 2006 state of words children).⁴

Methods

The study was cross-sectional hospital based study. Anthropometric measurements were carried out following standard methods. The data included weight, recumbent length (for children less than 24 months of age) and height (for children more than 24 months of age). Weight was measured to the nearest 0.1 kg and salter weighing machine was used for weight measurement. Height was measured against a non-stretchable tape fixed to a vertical wall with the participant standing on level of surface and it was measured to the nearest 0.5 cm. Recumbent length was measured by using an infant measuring board. Socio-economic status was determined by using modified Prasad scale.⁵

Standard statistical method was used in the analysis of the data with use of MS Excel and Epi-info software

3.4.3. P value was used to examine the relation between variable. Data of the nutritional survey were analysed using WHO Anthro for personal computer, version 3.1.2010.⁶

WHO classification was used for the assessment of malnutrition. Based on age, body weight and height, a number of indices such as height-for-age, weight-for-age and weight-for-height have been suggested.⁷ The children

are classified using three categories: underweight (low weight for age), stunting (low height for age) or wasting (low weight for height). Low anthropometric values are

those more than 2 SD away from the CDC 2000 (centres for disease control and prevention) standards.⁷⁻⁹

Results

Table 1: Occurrence of malnutrition in children by gender.

Age in year	Malnourishment present	Malnourishment absent	total
Male	112	135	247
female	89	164	253
total	201	299	500
χ^2	5.12		
df	1		
P value	<0.05		

All three parameters of malnutrition i.e. wasting, underweight and stunting were more common in males than females. It was found that there was very significant and highly significant difference with regard to underweight and stunting respectively between male and female children but no significant gender difference was found for wasting.

Discussion

Protein calories malnutrition is a widespread nutritional disease in developing countries.¹⁰ As well as mentioned by Gupta *et al.*¹¹ Under five year children are notoriously fraught with the risk of malnutrition and the prevalence of malnutrition varies between 50-80%. Majority of the children in our study were suffering from protein energy malnutrition. A larger proportion of males were suffering malnutrition as compared to females. The same result were found in the study of Zottarelli LK, Mittal *et al.*, and Sengupta *et al.*¹²⁻¹⁴

It was found in study that malnourishment in the form of underweight was most common in the study sample followed by stunting and wasting. similar proportion of wasted children was reported in NFHS-3 (national as well as of Rajasthan) whereas according to NFHS-3, proportion of underweight and stunted children differed nationally as state-wise (43%, 48% in India respectively; 40%, 44% in Rajasthan respectively).

Conclusion

Majority of under five children were malnourished and malnutrition common in males than females.

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