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A study to assess the prevalence of malnutrition among under 5 year children at selected Anganwadi centres of Jaipur district with a view to develop an information booklet for parents

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Abstract
Background: Malnutrition is the greatest single threat to global public health and biggest contributor to child mortality, responsible for nearly half of all deaths of children under 5 years of age as per GLOBAL nutrition report 2016.
Method: A quantitative descriptive research approach was adapted for the study. The research tool develop to collect the data was strictly based on W.H.O growth standard for identification of malnutrition. Total enumeration sampling technique was used to select 100 samples of under 5 year age children at the six selected Anganwadi centers of Jaipur district.
Result: The major findings of the study were that majority of the children i.e. 42% were found to be moderately malnourished whereas 9 % children were severely malnourished. Overall mean prevalence of malnutrition was found to be 51 %.
Interpretation and conclusion: Almost half of under five children were underweight. Gender inequality, socio-economic and cultural backgrounds, number of child births, poor knowledge among the parents had greater impact on nutritional status of child.

Keywords: malnutrition, prevalence, under 5 year age children, WHO growth standards

Introduction
According to joint child malnutrition estimates 2017 (UNCEF-WHO-WORLD BANK) prevalence of underweight is 15 %, stunted is 22.9 %, wasting is 7.7 %, severe wasting is 2.5%, overweight is 6% among under 5 year which shows that malnutrition is a major cause for concern globally [2]. Approximately 60 million children are underweight in India and child malnutrition is responsible for 22% of the country's burden of disease (World Bank 2014) [3].
Anganwadi centres are the Centre stage of the national nutritional strategy. So this study may be a call for planning new strategies and program to address malnutrition.

Objectives of the study
1. To assess the prevalence of malnutrition among under 5 year children registered at selected Anganwadi centers.
2. To find out the association between the grades of malnutrition and selected demographic variables of under 5 year children i.e. age, gender, number of siblings, socioeconomic status of parents.
3. To develop information booklet on prevention and management of malnutrition among under 5 year children for parents.

Methodology
Descriptive research design was adapted on 100 under 5 year age children of six Anganwadi centers at Adarsh Nagar in Jaipur. Total enumeration sampling technique was used. An Interview schedule was developed to assess socio demographic data. Anthropometric measurements were taken by using WHO growth standard manual for identification of malnutrition **[4].** The tools were further validate for their content by the experts and reliability was established through the appropriate measures. Every child of the six selected Anganwadi centers was assessed for their growth and development. Present study was conducted as per guidelines of public health ethics.

Statistical analysis
Data was analysis by using percentage, mean, mean percentage, standard deviation etc. Chi square test was used to find out association between grades of malnutrition and demographic variables.

Results
Findings

Table 1: Prevalence of malnutrition among under 5 year age children

S.N.	Anthropometric parameter	Grades of Malnutrition		Total %
		Moderate Malnutrition %	Severe Malnutrition %	
1.	Weight for age (underweight.)	11	02	13
2.	Weight for Height (stunted)	02	00	02
3.	Weight for Height(Wasted)	01	02	21
4.	& stunted both Underweight & stunted both	18	03	03
5.	Underweight & stunted & wasted also	10	02	12
	Total	42	09	51

Table no. 1 reveals that After anthropometric examination of 100 Anganwadi children, Overall mean prevalence of malnutrition was found to be 51 % out of which moderate and severely malnourished were 42 % & 9 % respectively. 13%, 2%, 21%, 3%, 12% found underweight, stunted, Wasted & stunted both, underweight and stunted both, Underweight-Stunted & Wasted both respectively. Results of study revealed significant association between malnutrition and gender of child, number of siblings, socioeconomic status of parents and non-significant association with age of child at .05 level of significance.

Discussion
The prevalence of stunting, wasting were lower as compared with National family health survey IV 2015-16 (Rajasthan data) 36.7% underweight, 39.1% stunted, 23% wasted and 8.6% severely wasted.[5] The difference might be due to the time gap between studies, difference between sample size and study designs. However similar prevelance of malnutrition is seen in cross sectional study conducted in 3-60 months of age living in ambala by department of community medicine in 2016.[6]

Conclusion
It was found that almost half of under five children were underweight, female children were more nutritionally deprived than males. Gender, socio-economic status, number of siblings were significantly associated with nutritional status of child.

Implication
Study finding will help the health personnel to plan health education programmes for mothers of under five children. The findings can be utilized for conducting research to assess knowledge and practice of malnutrition.

Recommendations
Awareness among parents regarding prevention of malnutrition with effective implementation, monitoring and supervision of ICDS services is required.

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