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NUTRITIONAL STATUS OF UNDER-5 CHILDREN ATTENDING ANGANWADI CENTRES OF RURAL FIELD PRACTICE AREA OF RIMS, RANCHI

Community Medicine

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ABSTRACT

Background: Malnutrition is like an iceberg; most people in the developing countries live under the burden of malnutrition. At present in India 29.4% children under – 5 years are underweight. Malnutrition makes the child more susceptible to infection, recovery is slower & mortality is higher.

Objectives: The present study aims to describe socio-demographic profile and categorisation of children on the basis of malnutrition attending the anganwadi centres (AWCs).

Method: This was a record based descriptive study. Three anganwadi centres (Chakla, Dardag & Jhiri) were randomly selected in field practice area of Rajendra Institute of Medical Sciences, Ranchi. Duration of study was 3 months (May 2017 to July 2017). Total sample size was 196. Templates were generated in MS Excel and data analysis was done using SPSS software.

Result: Out of 196 Under-5 children, 42.8% were found to be malnourished. Moderate malnutrition was present in 39.7% (78) children while severe malnutrition was present in 2 children. Jhiri AWC reported 68.75% (55) moderately malnourished children with highest number despite supply of Take Home Rations (THR). Both severely malnourished child were from Dardag AWC. Most children (67.86%) were male belonging to non-tribal ethnicity. Low birth weight was found to be associated with 30.1 % children. Almost all (97.9%) children were availing government scheme & were fully immunized.

Conclusion: Despite services being provided by the Government for children from rural areas through AWCs, still a large number children were found to be malnourished. So proper growth monitoring and adherence to 'take home rations' should be done regularly by Anganwadi Workers (AWWs).

KEYWORDS

Nutritional status, Under-5 children, Rural

Introduction

Malnutrition among under-five children is a major public health problem in India. This is reflected by the fact that the prevalence of under-weight children in India is among the highest in the world, and is nearly double that of Sub-Saharan Africa[1]. The nutrition problem frequently encountered, particularly among the rural poor and urban slums in India are protein-energy malnutrition and micronutrient deficiencies. The term undernutrition encompasses stunting (chronic malnutrition), wasting (acute malnutrition) and underweight.

Children are more vulnerable to the effects of undernutrition. According to Rapid Survey on Children (RSoC) 2014, about 18.5 per cent of children are born with low birth weight, 29.4 percent are underweight (weight for age < 5 years of age), 38.7 per cent are stunted (height for age < 5 years), 15.1 per cent are wasted (weight for height), and < 1 per cent children under 5 years are having kwashiorkor/ Marasmus[2].

Since there is paucity of studies on under-5 children nutritional status from Jharkhand, present study aims to describe the socio-demographic profile and prevalence of malnutrition among the under 5 children of anganwadi centres of rural field practice area of RIMS, Ranchi.

Material & Methods

This was a record based descriptive study done between May 2017 to July 2017. Out of 17 anganwadi centres, three (namely Chakla, Dardag & Jhiri) were randomly choosen from the Ormanjhi block of field practice area of Rajendra Institute of Medical Sciences, Ranchi. Mid upper arm circumference measurement was used as a tool for assessment of malnutrition with the use of shakirs tape. Following classification of malnutrition was used to assess the children:

Table 1: Classification of malnutrition

Degree of malnutrition	MUAC (in cms)
Satisfactory (Green)	>13.5 cm
Mild to moderate (Yellow)	12.5 – 13.5 cm
Severe (Red)	<12.5cm

Data of under-5 children was collected from the register of all the three AWCs. Total number of children came out to be 196. Templates were generated in MS Excel sheet and data analysis was done using SPSS software (version20.0).

Results

On analysis of 196 Under-5 children it was found that 40.82% (80) children were malnourished. Moderate malnutrition was present in 39.8% (78) children while severe malnutrition was present in two children shown in Table 2. Jhiri AWC reported 68.75% (55) moderately malnourished children with highest number despite supply of THR. Both severely malnourished child were from Dardag AWC. Most children (67.86%) were male belonging to non-tribal ethnicity shown in Table 3. As far as low birth weight was concerned it was found to be associated with 30.1 % (59) children shown in fig 1. Almost all (97.9%) children were availing government scheme & were fully immunized.

Table 2: Distribution of children on the basis of malnutrition

Degree of malnutrition	Frequency (n=196)	Percentage (%)
Satisfactory (Green)	116	59.18%
Mild to moderate (Yellow)	78	39.8%
Severe (Red)	02	1.02%
Total	196	100%

Table 3: Socio-demographic profile of children

Variable		Frequency (n=196)	Percentage (%)
Gender	Male	133	67.86%
	Female	63	32.14%
Ethnicity	Tribal	27	13.78%
	Non tribal	169	86.22%
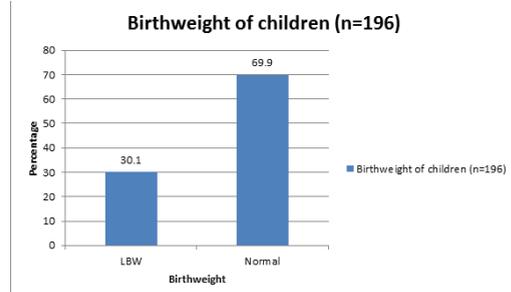
Fig 1: Bar diagram showing birth weight of children

Discussion

In our study we found that higher proportion of malnourished children were male. While in a study conducted in West Bengal, it was found that significantly higher proportion of malnutrition among female children compared to the males were among the higher birth order and those belonging to families with lower per capita income[3].

In our study we found that 39.8% children were having mild to moderate malnutrition and 1.02% children have severe malnutrition. While in a study done at rural and urban Haryana by Sachin Singh Yadav et. it was found that 41.3% children were underweight and 14% were severe underweight. Female children were more nutritionally deprived than males. Among socio-demographic factors maternal educational and working status as well as SES class and rural background of family had greater impact on nutritional status of child[4].

Ngianga-Bakwin Kandala et. al. have done a study and found that although childhood malnutrition was more pronounced in all provinces of the Democratic Republic of the Congo (DRC), after accounting for the location's effects, geographic differences were significant: malnutrition was significantly higher in rural areas compared to urban centres and this difference persisted after multiple adjustments. The findings suggest that models of nutritional intervention must be carefully specified with regard to residential location[5].

In a study done by N N Ambadker, S P Zodpey it was found that the risk factors for a child to be malnourished were Below povert line family, kuchha house, more number of children, working mother, low education, unemployed father, low birth weight child, low frequency of breast feeding etc[6].

There were some limitations in the study, firstly since it was a record based study we could not get the details of socio-demographic profile. Secondly criteria for assessment of malnutrition was MUAC only. Z score was not used for assessment.

Conclusion

Despite services being provided by the Government for children from rural areas through AWCs, still a large number children were found to be malnourished. So proper growth monitoring and adherence to 'take home rations' should be done regularly by Anganwadi Workers (AWWs).

Ethical Approval

Ethical approval for the study was obtained from Institutional Ethics Committee, RIMS, Ranchi.

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