



IMPACT OF NUTRITIONAL INTERVENTIONAL MEASURES IN CHILDREN AT MALNUTRITION TREATMENT CENTRE OF RANCHI DISTRICT, JHARKHAND

Medical Science

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ABSTRACT

MALNUTRITION TREATMENT CENTRE has been set up with the intention to improve the quality of care being provided to children with Severe Acute Malnutrition (SAM) and to reduce child mortality.

Aims and Objectives- To determine the impact of nutritional interventional measures undertaken at MTC to improve the nutritional status of admitted children.

METHODOLOGY- This was a Descriptive Prospective Study done in Malnutrition Treatment Centre of Mandar, Community Health Centre (CHC) and State Dispensary Doranda (SDD) of Ranchi district of Jharkhand.

RESULT- 145 cases of SAM child were enrolled in this study of which the final result was obtained from 120 admitted SAM children in MTC of Ranchi District. Most of children up to age group 13-18 months 43(35.8%) followed by 25-60 months 33(27.5%). Mean age of the children was about 18.82 ± 11.339 months. 74 (61.66%) were female and male were 46 (38.33%) belonging to 13 – 18 months of age group (34.16%). We found that 73.3% were tribal and 26.70 % children were non-tribal. 60% (72) coming from joint family, 38.3% (46) from nuclear family and 1.7% (2) were from broken family. 5% (6) class II, 14.2% (17) class III, 35% (42) class IV and 45.8% (55) of children belong to class V according revised Prasad's classification (2016). 61.7% (74) had WFH and 38.3% (46) had WFH+MUAC was Criteria of admission. 82.5% (99) and 17.5% (21) children for 14-28 days for 7-13 days respectively stay in MTC, to achieve target weight.

CONCLUSION- Present study reflected that Malnutrition Treatment Centers have been playing a key role to cope with malnutrition as demonstrated by high recovery rate.

KEYWORDS

Malnutrition, Anthropometric measurement

INTRODUCTION

India is home to 40 percent of the world 'malnourished children and 35 percent of the developing world low-birth-weight infants; every year 2.5 million children die in India, accounting for one in five deaths in the world. Across states and socio-economic groups with girls, rural areas, the poorest people, and scheduled tribes and castes being the worst affected. Six states- Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Rajasthan, and Uttar Pradesh-account for over half of India's malnutrition cases among children'. The proportion of underweight among children <5 years in Jharkhand is 57.1% which is alarmingly high. The severity of hunger index for the state is 28.67 which are again under alarming category'. Malnutrition is a preventable condition and more than half of malnutrition deaths among children could be prevented if children were well nourished. Therefore, under National Health Mission, Nutrition Rehabilitation Centre (**MALNUTRITION TREATMENT CENTRE**) has been set up with the intention to improve the quality of care being provided to children with Severe Acute Malnutrition (SAM) and to reduce child mortality. The present work analyzed the efficiency of the MTCs in improving the health and nutritional status of severe malnourished children admitted at the centers.

Aims and Objectives-

- To determine the impact of nutritional interventional measures undertaken at MTC to improve the nutritional status of admitted children.

Materials and Methods:

This was a Descriptive Prospective Study done in Malnutrition Treatment Centre of Mandar, Community Health Centre (CHC) and State Dispensary Doranda (SDD) of Ranchi district of Jharkhand. Total period of study was 28 months (July 2014 to September 2016). There are four MTC centers in Ranchi district which are situated in CHC Mandar, Bundu (CHC), CHC Bero and State Dispensary Doranda (SDD) among which MTC of Doranda and Mandar in Ranchi district were selected by simple random method (using cards for random selection). Keeping the research question in mind a semistructured interview schedule was developed. Anthropometric measurement was carried out at the time of admission, discharge and during the period of follow up. After discharge, four Follow-up visits were conducted at every 15 days. Admission criteria were - WFH > -3 SD / MUAC > 11.5 cm with or without pedal oedema. Discharge criteria for all infants and children was 15 % weight gain and no signs

of illness. Socio-demographic data of all children was included. Mothers of the children were interviewed on breast feeding, food habits and hygiene practices of SAM children at the MTCs by using a predesigned and pretested interview schedule. Anthropometric parameters: MUAC = mid-upper arm circumference; SD = standard deviation, WFH = weight for height. Anthropometric tools: Digital weight machine for weight measurement and Shakir tape was used for mid arm circumference measurement. Exclusion criteria: All defaulters who discontinue his/her treatment due to any reason (LAMA/Referred to higher center). The data was entered into Microsoft excel spreadsheet. Data entered was then imported into SPSS version 20 and descriptive analysis was done. Frequency table of Socio-demographic profile, anthropometric measurement, information regarding breast feeding, food habits and hygiene practices of SAM children entered in the study. In Statistical test Mean and Standard deviation were used. Ethical approval was obtained from the Institutional Ethics Committee of Rajendra Institute of Medical Science (RIMS), Ranchi. The participants were instructed to have right to refuse to answer any questions without further explanation. Their answers were handled confidentially. All forms were coded with numbers. The patient did not receive any compensation for participating in the study. The patient's medical treatment was not affected, regardless of whether the patient chose to take part in the study or not. Informed consent was obtained from the parents of all admitted children

RESULT

145 cases of SAM child were enrolled in this study of which the final result was obtained from 120 admitted SAM children in MTC of Ranchi District rest of 25 children were excluded according to exclusion criteria.

Socio demographic profile of family of the admitted children

Most of children up to age group 13-18 months 43(35.8%) followed by 25-60 months 33(27.5%). Mean age of the children was about 18.82 ± 11.339 months. 74 (61.66%) were female and male were 46 (38.33%) belonging to 13 – 18 months of age group (34.16%). We found that 73.3% were tribal and 26.70 % children were non-tribal. Most of parents of children were educated up to 6th to 10th standard. We found that 80.8% (97) mothers of children were house wives followed by skilled labour 12 (10%). 60% (72) coming from joint family, 38.3% (46) from nuclear family and 1.7% (2) were from broken family. 5% (6) class II, 14.2% (17) class III, 35% (42) class IV and 45.8% (55) of

children belong to class V according revised Prasad's classification (2016).

61.7% (74) had WFH and 38.3% (46) had WFH+MUAC was Criteria of admission. 82.5% (99) and 17.5% (21) children for 14-28days for 7-13 days respectively stay in MTC_s to achieve target weight.

DISCUSSION

Mean weight at the time of admission 6.430083 ± 1.4908198 grams and at the time of discharge 7.503417 ± 1.7360060 grams. In Bhimani NR et al [31] study overall mean weight at admission was found 8.30 kg with standard deviation of 2.09 kg and the mean weight at the time of discharge was 8.97 kg with standard deviation of 2.16 kg. Maximum duration of stay was 14-28days. Taneja et al [11] found that median duration of stay at the centers was 14 days. Present study reflected that Malnutrition Treatment Centers have been playing a key role to cope with malnutrition as demonstrated by high recovery rate.

LIMITATION

The study was conducted in a limited group of subjects and was restricted to a single district of the state. Studies with bigger sample size selected from MTC_s across the state of Jharkhand will give a more composite view of the actual effect of the MTC_s. The study is prone to recall bias.

Table 5.17 - Duration of stay at MTC to achieve target weight (N=120)

Duration of stay at MTC	No. of children (%)
Less than 7 days	0 (0%)
7-13 days	21 (17.5%)
14-28 days	99(82.5%)
More than 28 days	0 (0%)

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