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A CROSS SECTIONAL STUDY TO ASSESS THE UTILIZATION OF TAKE HOME RATION PROVIDED TO CHILDREN BELOW THE AGE OF 3 YEARS UNDER ICDS SCHEME.

Community Medicine

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ABSTRACT

Malnutrition is a major public health problem in India. THR is provided under ICDS scheme to supplement nutrition of children and women. This article assesses the proportion of mothers who are compliant with the utilization of THR and studies the factors affecting utilization of THR. A cross-sectional observational study was conducted in children between 6 months and 3 years of age enrolled in anganwadis. Primary caregivers of children were interviewed face to face. Anthropometry was used in children to assess the nutritional status. Utilization was compared against ICDS guidelines. High prevalence of under nutrition (44.64%) was found in participants. THR is under-utilized. THR utilization is not a felt need in majority of mothers and they avoid taking THR. Lack of Community participation, lack of diversity and THR not being child's preference are the main factors leading to under-utilization.

KEYWORDS

Malnutrition, THR, ICDS

Introduction

Integrated Child Development Services (ICDS) scheme is a flagship program of government of India. Supplementary nutrition is one of the important components of ICDS. Micronutrient fortified supplementary nutrition in the form of Take Home Ration (THR) is provided to bridge the gap between Recommended Dietary Allowance (RDA) and Average Daily Intake (ADI) of children, pregnant and lactating women ("Ministry of Women and Child development, Government of India," n.d.). The ICDS program has been successful in many ways, but still faces a number of implementation and operational challenges (Gragnolati, Bredenkamp, Gupta, Lee, & Shekar, 2006). Coverage and utilization determine the effectiveness of any intervention. While coverage demands programmatic correctness, utilization depends on behavior of beneficiaries. Studying the behavior and the reasons behind the same will guide in development of effective strategies in order to obtain desired impact.

Objectives

1) To assess the nutritional status of children below 3 years.
2) To calculate the proportion of mothers who are compliant with the utilization of THR.
3) To study the factors affecting utilization of THR.

Methodology

A cross sectional study was conducted in the field practice area of UHTC under department of Community Medicine, Seth G S Medical College & KEM hospital, located at Malwani, Mumbai. Total study duration was 3 months. Due permission was taken from the concerned authorities. There are 7 anganwadis under UHTC. By simple random sampling 3 anganwadis were selected for the study. List of beneficiaries was obtained from the concerned Anganwadi center. All the children between the ages of 6 months and 3 years whose caregivers consented to participate were included in the study. Total sample size was 103. Primary care givers of the participants were contacted through home visits. Face to face interviews were conducted based on a pre-designed questionnaire. Information regarding demography, feeding practices, use of THR, reasons behind behavior was obtained. Height and weight of children was measured. On being absent at the time of the visit, a maximum of two repeat visits were made. Data was entered using Microsoft Excel version 10. Data was analyzed using SPSS version 22. Malnutrition was assessed from weight for height.

Results-

Table 1: Distribution of participants according to demographic factors

Parameter		Number (n)	Percentage (%)
Sex	Male	49	47.56
	Female	54	52.42
Religion	Hindu	32	32.96
	Muslim	71	73.13
Socio-economic status *	Upper middle	2	2.06
	Lower middle	7	7.21
	Upper lower	94	96.82
* According to modified Kuppaswami classification 2016			

Total 103 participants were part of study. Around half (47.56%) were male. Participants predominantly belonged to Muslim religion and Upper lower socio economic class.

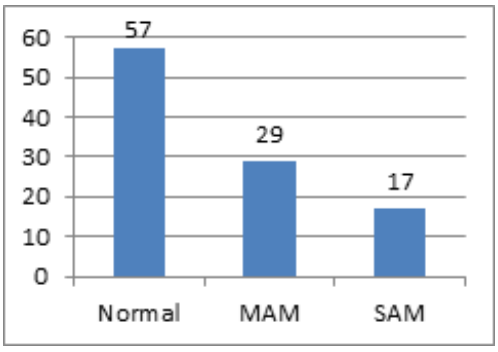
Table 2: Distribution of participants according to factors related to THR

Parameter		Number (n)	Percentage (%)
Awareness about THR	No	91	88.34
	Yes	12	11.65
Age of starting Supplementary feeding	< 6 months	9	8.74
	at 6 months	39	37.86
	> 6 months	55	53.4
Quantity of procurement / Month	Do not receive	11	10.67
	1 Packet	87	84.47
	2 Packets	5	4.85
Quantity of feed	Do not feed	31	30.09
	1-2 tea spoons	46	44.66
	3-4 tea spoons	23	22.33
	≥ 1 Cup	3	2.91
Frequency of feed	Do not feed	31	30.09
	Rarely	32	31.07
	1-3 times a week	23	22.33
	every day	17	16.5

Majority (91%) of care givers were aware about availability of THR. More than half of the participants (53.4%) informed to have started supplementary feeding after 6 months of age. While around 84% of participants received only one packet of THR per month, around 11% informed to have not received any THR. Quantity of feed varied between participants and majority were feeding only 1-2 tea spoons

per day. Only 16.5 % of participants feed THR every day.

Figure 1: Distribution of Participants according to nutritional status



44.44% participants were found to be malnourished. Of these, 28.57% were Moderate acute malnourished and 15.87% were Severe acute malnourished.

No statistically significant association is found between awareness of THR and status of nourishment (p value- 0.55).

Table 3: Distribution of participants according to reasons for not using THR

Reason	Number (n) **	Percentage (%)
Bad Quality	10	9.7
My Child does not like	60	58.25
Bad taste	38	36.89
Do not receive THR	11	10.68
Vomiting or Diarrhea	10	9.71
DO not know how to cook	2	1.94

** Multiple responses

Most mentioned reason for not using THR was dislike of child. Other reasons mentioned were bad taste of THR, bad quality of THR. 9.71% of participants had episodes of vomiting or diarrhea following THR intake previously and quoted that as reason.

Table 4: Distribution of participants according to disposal of THR

Method of disposal	Number (n) **	Percentage (%)
Throw it	20	19
Feed to cattle	5	4.8
Sell to others	5	4.8
Just store it	13	12.62
shared with other family members	31	30.1
Avoid taking	51	49.7

** Multiple responses

Majority of participants (49.7%) were avoiding taking THR in the subsequent months. 30.1% informed that other family members share THR while target child is deprived of the same.

Discussion-

Total of 103 children were assessed. There was no significant difference in sex wise distribution of participants. There is disparity between the level of awareness about THR and actual utilization. Though majority of participants have knowledge about THR availability, they lack knowledge about advantages of THR and its role in comprehensive development of the child. The age of start of THR is delayed in majority of participants. It may indicate lack of active beneficiary finding and the motivation from providers. Majority of participants obtain only one packet of THR per month as against 2 packets as per the guidelines. Most of mothers do not know that they are entitled for two packets. The frequency of feed and quantity of feed vary broadly and in most of the cases it is sub optimal.

There is high prevalence of Under Nutrition in participants. While there are provisions for nutritional rehabilitation for under nourished children under the scheme, most of the participants are not using them. In a study by Chudasama et al,(Chudasama et al., 2016) A total of 14.9% children were underweight including 13.5% moderately and 1.4% severely malnourished children. Two-third (66.2%) children were covered by supplementary nutrition.

Most mentioned reason for not using THR was preference of child. Lack of variety may be one of the reasons for the dislike of THR by the child. Taste of the THR as interpreted by the mother was next most mentioned reason. Lack of knowledge regarding preparation of THR and history of vomiting and diarrhea indicate need of more quality checks and training.

Majority of mothers avoiding subsequent procurement is a missed opportunity in child nutritional rehabilitation. This may be because of gaps in assessing felt needs. Sharing of THR by other family members decreases the target child's share of THR. There is need for behavioral change communication in the community regarding the correct and optimum use of THR.

In a study conducted by Leyvraz et.al,(Leyvraz et al., 2016) insufficient or depleted stocks at the AWC and intra-household sharing of the product, the target children consumed smaller amounts than intended and the belief that the product caused diarrhea or vomiting in the child were found to be the barriers for utilization of THR. Taste of the product, fact that it is good for the children, and it being free of cost were significant drivers to coverage

Conclusions-

1. There is high prevalence of Under Nutrition (44.64%) in the participants.
2. THR supply is irregular and in adequate.
3. There is disparity between knowledge about THR and its utilization. It is under-utilized compared to guidelines.
4. THR utilization is not a felt need in majority of mothers and they avoid taking THR.
5. Lack of Community participation, lack of diversity and THR not being child's preference are the main factors leading to Under Utilization.
6. When THR is provided without correct knowledge of its advantages and usage, there is sharing of THR with other family members and wastage of THR.
7. There is need for Behavioral change Communication (BCC) and training regarding THR in the community.

Recommendations-

1. Aim should not be just on implementation of Program but should also pay attention towards uptake and utilization.
2. Supply of THR must be regulated more stringently and Providers should be made accountable.
3. Community should be involved in deciding the method of Supplementary Feeding.
4. IEC & BCC activities should be conducted in the community and mothers should be trained in different methods of cooking THR.
5. There should be an inbuilt system in the scheme to monitor the compliance of THR utilization.
6. There should be an inbuilt feedback system in the scheme for reporting of any adverse events following intake of THR. Feedback system may be connected with a dedicated committee to investigate the same and take corrective actions.

Limitations- Inputs from other stakeholders like anganwadi workers and other program officers would have made it more comprehensive and would have given a better understanding.

Conflict of Interest- None
Funding- None

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