

## A STUDY OF ICDS'S THR SCHEME- MEASURING THE EFFECT ON BENEFICIARIES DAILY FOOD REQUIREMENT

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### ABSTRACT

An ultimate initiative of the government as 'Take Home Ration' (THR) in the form of food packets and cooked food facility in schools and Anganwadi Centre (AWCs) played a tremendous job for deprived children, pregnant women, girls and lactating mothers. The current study tries to investigate the impact of THR scheme on beneficiaries' daily food requirements and need fulfillment. Four indicators are used like- *Balanced Food, Adequate Quantity, Fresh & Tasty Recipe, Variety*, to measure the effect of THR on beneficiaries' daily food requirement. Findings reveal that, THR scheme is proven as an effective program of handling the problem of malnutrition in majority of targeted areas but not as it was expected. Beneficiaries strongly believed that, THR is an effective program which provides balanced food at regular basis with adequate quantity, but taste & variety is somewhat an issue which often demoralizes beneficiaries to take advantage of this program. It leads to wastage of food as beneficiaries reluctantly taking the THR packets. Variety is another factor which deteriorates the effect of this scheme in major part of the studied area. Lactating mothers and pregnant women perception is found similar which reveal that both the beneficiaries believed that there is considerable scope in THR improvement which better come true on beneficiaries' expectation and fulfill daily food requirement.

**Keywords-** THR, AWCs, Malnutrition, THR distribution system, food requirement.

### 1. INTRODUCTION

Take Home Ration (THR) has been appreciated by every intellectual across the country as it has been made with a fair intention of feeding the very needy people of the society. The scheme is a flagship program that enables society to fight back against malnutrition (Hashmi, et al., 2024) and the challenge basic food requirements of household. THR is an India's biggest public nutritional program which primarily addresses food related daily needs of children, mothers and pregnant women (Kumar, et al., 2019). The scheme aims at ensuring supplementary nutrition to the said people. It extend food related (nutritional need) help and support to the families for whom access of adequate nutrition at daily basis is difficult. By this initiative the government target to minimize malnutrition in the society (Singh, et al., 2017).

Developing economies predominantly suffering from child malnutrition which is doesn't support to the equitable development of the society. Country like India is still facing big challenge to cope with nutritional deficiency across outer skirts of the cities (especially rural areas) where socio-economic development rate is quite slow and steady (Saha, et al., 2018). Due to lack of employment opportunities families are starving for daily food needs predominantly depends upon mid-day meal and THR packets (Kaur & Kaur, 2018). Hence, nutritional deficiency amongst this part of the society is quite common which leads to variety of diseases at early age and sometimes causes premature death. If one part of the society is depriving and struggling for basic nutritional demand then comprehensive growth of the nation can't be expected hence, government has worked out on a systematic plan which can deliver food and other nutritional supplements to this part of the society and that to at door step (Gaiha, et al., 2018). Therefore, it is important to know the prime objective of THR program-

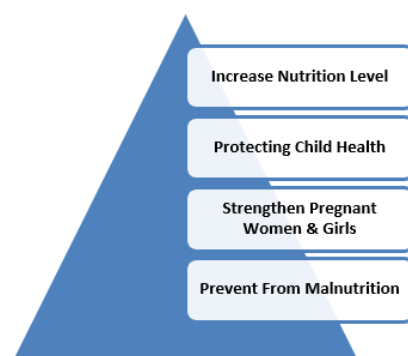


Fig 1- Primary Objectives of THR Program

- **Increasing Nutrition Level:** Nutrition deficiency amongst the children in major part of Indian society is a curse which has to be dealt cautiously and prevent the society from its long run ill effects. THR program is a positive step towards increasing the nutritional level of children of age group 6 months to 3 years (Bandyopadhyay & Biswas, 2017) during this time they need nutrition for rational physical and mental development. Under the THR program government distribute food packet, cooked food and ready to prepare packets to the pregnant women, lactating women and children to increase the nutrition level (Singh, et al., 2017).
- **Protecting Child Health:** The scheme basically focuses on child health during the pregnancy and at lactation period. During this time children requires adequate quantity of nutrition for physical and mental development (Anusha & Bose, 2018). Nutritional deficiency significantly impacts the mental health of infant babies who shall not be able to contribute to nation building in later stage if not taken care well at this stage (Leyvraz, et al., 2016).
- **Strengthen Pregnant Women & Girls:** Women are the society building entity whose health must take at priority basis. It's an ultimate source of healthier society but if she is healthy. Government with THR program target women and girls who are unable to get basic nutrition in their food at daily basis. Thus, under this program, areas were identified and take home ration packets are being distributed at regular basis which contain required nutrition. The initiative ensures healthier society at large (Harikrishna, et al., 2020).
- **Prevent from Malnutrition:** Problem of malnutrition in Indian rural society is very prominent and negatively affecting the growth of the country. Thus, ICDS has introduced THR program to feed with desired nutrition to the children, pregnant women and lactating mothers. It significantly reduces the incidences of anemia, malnutrition and other related diseases.

#### Daily Nutrition Needed- As per World Health Organization (WHO)

According to 'World Health Organization' (WHO) a balanced diet is the fundamental right of every individual and it's a responsibility of the government to ensure food availability to every citizen. The WHO's nutritional guidelines primarily focuses upon healthier dietary practices which can prevent the society from malnutrition. WHO specifically works to minimize and control the diseases causes from nutritional deficiencies, unbalanced food etc. WHO has prescribed the nutritional dietary for every individual which he/she requires a daily basis. WHO actually wants to reduce the burden of non-communicable diseases amongst the deprived groups especially in struggling economies of the world which is a biggest enemy of the humanity. A balanced diet opined by WHO must contain carbohydrate, protein, salt, sugar, fiber and other nutrients. A balanced diet is mandatory for the pregnant women and the children of age bar 6 months to 3 years for complete growth and development. WHO also pointed out lactating mothers' health with respect to breast feeding to infant babies which who is an integral part of the society.

## 2. REVIEW OF LITERATURE

Acute malnutrition challenge was the prime reason of the inception of 'Integrated Child Development Scheme' (ICDS) in India in the year 1975. Rapidly deteriorating mental & physical health of children attracted the keen attention of the government and forces them to prepare a competent program which can fight against the issues of malnutrition amongst the children (Gragnotati, et al., 2006). Studies recorded rapidly increasing death rate of children under age of 5 yrs. especially in rural and semi-urban areas of the country. It became the alarming situation for the government and the country at large, as the nation is growing with sustainable pace and proving itself at international platform. It has also been observed around 5 million children suffer every year with 'severe acute malnutrition' in the country. Hence, the government has taken strong action against the problem of malnutrition from the country (Shanthi, 2024). ICDS is being viewing as an effective measure to bridge the nutritional gap amongst the children, pregnant women and the lactating mothers (Saxena & Srivastava, 2009).

#### THR & Nutritional Health

THR program running across the country has significantly contributed to the improved nutritional health of the targeted beneficiaries and leads to the healthy society (Gupta, et al., 2013). The scheme has increased the level of health of malnutrition children under the age of 5 years. The program has covered marginalized communities of the society that primarily lives in rural areas where families have very limited sources of employment thus couldn't afford daily balanced food need (Shirisha, 2022). THR program has been continuously working in the welfare of children, pregnant women and lactating mothers by supplying them adequate amount of food with essential nutrients. It has gradually improving the nutritional level of the beneficiaries and strengthening society. The scheme also supports to the government's effort to promote equitable development of the society (Kamble, 2009). Also, nutritional health of beneficiaries has significantly been improved over the years across the states.

### 3. PURPOSE OF THE STUDY

The current purposefully being conducted to analyze whether the THR program meet the daily food requirement of the beneficiaries or not? Here, daily food need represent the required quantity, taste, variety and freshness. For this, research focuses on Ujjain district of Madhya Pradesh India wherein it covers 28 AWCs. More specific following representing the core objectives of the study-

1. To study the daily quantity of THR delivered to the beneficiaries and does it meet their daily requirement.
2. To analyze the beneficiaries' perception towards food quality of THR with special reference to taste, variety and freshness.

### 4. METHOD AND MATERIAL

The research uses empirical research technique to investigate the fact related to THR scheme and beneficiaries daily food requirements. A survey was conducted in Ujjain district of Madhya Pradesh in which 11 AWCs were visited. Across these AWCs total 329 beneficiaries were interviewed with a self-structured questionnaire (in Hindi language) based on 5 point Likert's scale. The AWCs were selected at convenience basis where easy and timely access is possible. Questionnaire's reliability has been measured through Cronbach's Alpha Coefficient with .814 calculated values which is acceptable. The data has been analyzed using comparative tables and graphs that clearly represents the beneficiaries' opinion on THR and its impact on their daily food requirement.

Based on the research method and objectives the study formulated one hypothesis like-

$H_{01}$ : There is no association between respondents' category and their perception towards the THR taste, variety and freshness.

$H_1$ : There is association between respondents' category and their perception towards the THR taste, variety and freshness.

#### Analysis

*Objective 1- To study the daily quantity of THR delivered to the beneficiaries and does it meet their daily requirement.*

AWCs estimate the food quantity to be distributed by using individual beneficiary's age and prescribed calories needed by NITI Aayog. According to the authorities nutritional requirement has been defined so that problem of malnutrition can be fight back. The below table represent the prescribed calories required by the beneficiaries and being distributed by the AWCs-

**Table 2- Daily Food Quantity (Calories & Protein) Delivered by AWCs**

S. No.	Beneficiary	Calories	Protein
1.	Children (Age 6-36 months)	500/day	12-15 grams/day
2.	Children (Age 3-6 Years)	500/day	12-15 grams/day
3.	Pregnant Women	600/day	20-25 grams/day
4.	Lactating Mothers	800/day	18-20 grams/day

Source: www.niti.gov.in/thr/report/2022

The AWCs primarily focuses upon systematic distribution of ration to the targeted beneficiaries and also ensure to deliver prescribed nutrition values. The table 2 indicates daily calories and protein requirement of beneficiaries to live healthier. ICDS strictly follow the norms related to maintain and deliver decided nutritional value to the beneficiaries. It is estimated that the problem of malnutrition shall be handled effectively and make society healthy.

In order to understand the distributed calories and protein 'Khichdi Premix' is analyzed with its ingredients and 'fortificants'. The below table 3 representing the contribution of 'Khichdi Mix' to daily food requirement of the beneficiaries-

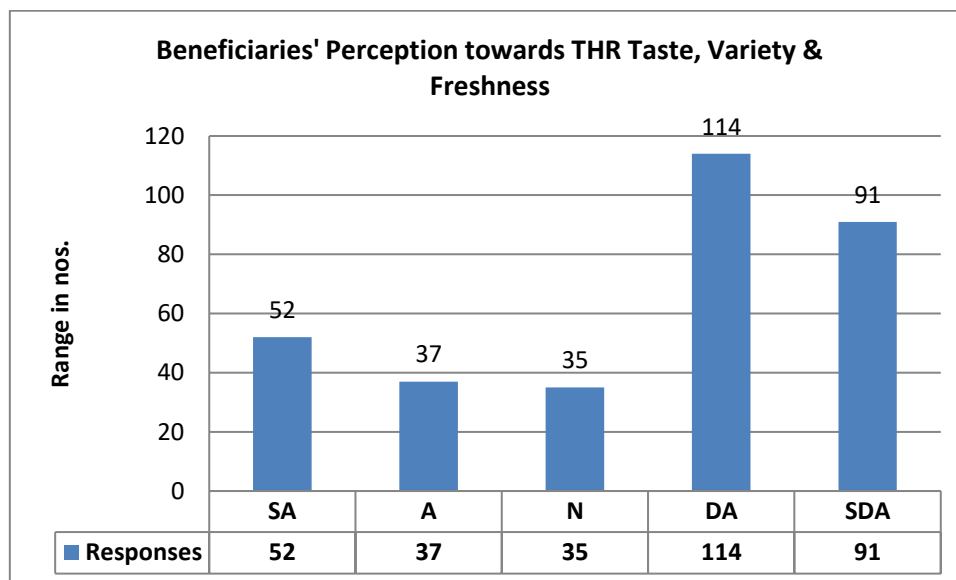
**Table 3- RDA in percentage Contribution from Khichdi Premix**

THR Product	Energy Dense	Protein Content	Ingredients	Sugar Content	Fat Content	Fortificants
Khichdi Premix	Yes	14.3%	Fortified rice, soya, pulses	0%	33%	Iron, Folate, Zinc (50% RDA) Vitamins B6, B12 and D (50% RDA)

Source: www.niti.gov.in/thr/report/2022

According to the ICDSs efforts, THR product planning and intensive distribution clearly indicate that the daily food requirements of the beneficiaries are well met through fortified THR packets (Trivedi, 2023). THR products are prepared with desired nutritional value and being distributed to the beneficiaries.

Objective 2- To analyze the beneficiaries' perception towards food quality of THR with special reference to taste, variety and freshness.



**Graph 4-** Perception Estimation towards THR Products

Source: Authors' Preparation

The result reveals unsatisfactory result towards the beneficiaries' perception towards the THR taste, variety and freshness. It indicates that 62.31% (DA= 34.65, SDA= 27.66) beneficiaries are disagreed with THR product quality they receive, they believed that it could be better in taste, variety and freshness which can win the beneficiaries' heart and make this scheme user interested. 27.05% (SA= 15.80, A= 11.24) beneficiaries are agreed with the delivered THR quality, taste and variety whereas 10.63% beneficiaries are found 'neutral'. The statistics indicate that THR taste, variety and freshness is not up to the expectation and need to be improved if government wants to get desired response from the beneficiaries.

$H_{01}$ : There is no association between respondents' category and their perception towards the THR taste, variety and freshness.

$H_{11}$ : There is association between respondents' category and their perception towards the THR taste, variety and freshness

**Table 5- Chi-Square Test**

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.130 <sup>a</sup>	1	.718		
Continuity Correction <sup>b</sup>	.054	1	.816		
Likelihood Ratio	.130	1	.718		
Fisher's Exact Test				.798	.409
Linear-by-Linear Association	.130	1	.719		
N of Valid Cases <sup>b</sup>	329				
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 38.41.					
b. Computed only for a 2x2 table					

Null hypothesis  $H_{01}$  is accepted with sig. value  $0.781 > 0.05$ . The test is observed not significant as 5% level of significance which reveals that 'Pregnant Women and Lactating Mother' do not differ in their perception with respect to THR taste, variety and freshness. Here, alternate hypothesis  $H_1$  stands rejected which indicate that both the category of respondents strongly believed that the THR quality needs to be improved so that beneficiaries can willingly consume the products and government's agenda of minimizing malnutrition could be succeeded.

**Table 6- Cross-Tabulation**

Res_Category * Responses Crosstabulation					
			Responses		Total
			1	2	
Res_Category	Lactating Mothers	Count	44	37	81
		Expected Count	42.6	38.4	81.0
	Pregnant Women	Count	129	119	248
		Expected Count	130.4	117.6	248.0
Total		Count	173	156	329
		Expected Count	173.0	156.0	329.0

The result of cross-tabulation supports the calculated result and hypothesis acceptance. The analytics shows no significant difference between the 'observed count and expected count' which indicates that both the categories of respondents carry similar perception. No difference signifies that the test is not significant and beneficiaries' category viz. lactating mothers and pregnant women do not differ in their perception towards THR. Lactating mothers observed count is 44 against the expected count of 42.6 whereas pregnant women observed count is 129 against the expected count of 130.4. Both counts are close to each other and reveals that there is no difference in mean perception of both the categories.

## 5. FINDINGS

Being a milestone scheme of government THR predominantly contain prescribed nutritional values which can meet the daily nutritional requirement of the targeted beneficiaries. It is primarily focuses upon needed nutrition and vitamin, thus prepare a complete diet food which can ensure to fulfill government's objective and significantly neutralize the problem of malnutrition. Khichdi Premix has been identified as a potential THR product which is being distributed in Madhya Pradesh. The survey result clearly indicates towards partial satisfaction of the beneficiaries which somehow make them reluctant to accept and consume the THR offerings. The biggest reason of beneficiaries' half-heartedness is lack of variety, taste and freshness in THR offerings. The study also investigated about the beneficiaries' level of acceptance for ready to eat meal being distributed in AWCs and found that there are numerous issues with quantity, variety, taste, hotness, repetition. Some beneficiaries pointed out the delay in food delivery which demoralizes beneficiaries to take part in the THR program.

## 6. RECOMMENDATION

The research findings suggest important recommendations and implications to the authorities for removing the shortcomings in THR distribution mechanism and food preparation which are the primary cause of THR quality degradation in terms of taste and freshness. Authorities should try to assess and limit the number of AWCs allotted to the food preparation and distribution unit to avoid delay in THR delivery and managing THR quality. Numerous challenges were observed before the supply chain employees who face difficulties in reaching allotted AWCs. Government is supposed to revisit the THR distribution system which affect THR quality and hamper the success of the program.

## 7. LIMITATIONS

Limitation is not the shortcoming of the research but it's an opportunity for the future research work on corresponding topics as well as the area. The current study has been conducted on a very serious topic thus it keeps immense importance for its limitation to be cautiously taken into consideration. It is observed that limited AWCs were visited and only 329 beneficiaries could be interviewed. Hence, the inferences are geography specific which may question the findings and observation on the whole schemes being run across the state of Madhya Pradesh. Only pregnant women and lactating



mothers were interviewed which is another a limitation of the study. Future researches can be initiated on the similar topics and cover the larger geographic areas with larger sample size.

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