International Journal of Applied Home Science
(An International Double Blind Peer Reviewed / Refereed Research Journal of Home Science)
Volume 11 (9 & 10), September & October (2024) : 491-498
Received : 09.08.2024; Revised : 24.08.2024; Accepted : 09.09.2024

RESEARCH PAPER
ISSN : 2394-1413 (Print)
DOI: 10.36537/IJAHS/11.9&10/491-498

Evaluating the Effectiveness of Nutritional Rehabilitation Program on the SAM Tribal Children in India: A Critical Review

HELEENA JATI*[1] AND SARITA MISHRA[2]
[1]Ph.D. Scholar and [2]Assistant Professor
P.G. Department of Home Science, Rama Devi Women's University, Vidya Vihar, Bhubaneswar (Odisha) India

ABSTRACT

The NRCs have documented the successful treatment outcomes for SAM tribal children who are inpatients; however, the same cannot be said for outpatient care. Depending on the socio-demographic profile of mothers, their level of nutritional knowledge, and the availability of food items for the preparation of ready-to-eat food, the results of this study will scientifically reveal the impact of Nutrition Rehabilitation Program and counseling on the nutritional status of Severely Acute Malnourished outpatient tribal children. Severe malnourished children experience alterations in their physiology and metabolism to maintain vital functions, such as slowed cellular activity and decreased organ function. It is more difficult to maintain metabolic control when infections coexist. Children who are severely malnourished are especially vulnerable to death from hypoglycemia, hypothermia, electrolyte imbalance, heart failure, and untreated infection as a result of these drastic changes. This research attempts to bring down the various levels of malnutrition in all children in an effort to stop the rate of severe malnutrition. Through appropriate nutrition, nutritional counseling, and childrearing techniques, the Nutrition Rehabilitation Program seeks to improve treatment, nutritional status, physical growth, hygiene, and mortality rates. The study will help to highlight positive and negative impact on the Nutrition care process of inpatients and outpatients of NRCs and Anganwadi Centers. So, in the present study efforts was made to promote the mothers and family members of severely malnourished tribal children to come and join Nutritional Rehabilitation Centers in hospital to bring down the prevalence of malnutrition in the state. This study will help the policy makers to develop the Health and Nutrition policy for tribal dominated areas. The study on the Nutrition Rehabilitation Program at different districts will also provide a road map to identify the health issues of the tribal children. So, an extensive study on this area needs to be addressed.

Keywords: Severely Acute Malnourished (SAM), Nutrition Rehabilitation Center (NRC), Tribal children, Nutritional status, Nutritional counseling

INTRODUCTION

Children are the greatest asset and the backbone of a country. The major investment of the country is made for the future resource development. Therefore, the nation's health and nutritional needs depends greatly on children. Their nutritional state is therefore very important. Childhood nutrition is the foundation for good health.

In terms of the number of undernourished children worldwide, India is ranked second only to Bangladesh, according to estimates from the World Bank. India has a higher prevalence of malnutrition than Sub-Saharan Africa. India is home to one out of every three undernourished children worldwide. It is estimated that 8.1 million children in India are severely malnourished. In fact, malnutrition is still prevalent among children which needs to be addressed by administration and policy makers. The tribal population specially needs attention. Malnutrition is defined as "the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth, maintenance, and specific function," by the World Health Organization. The

How to cite this Article: Jati, Heleena and Mishra, Sarita (2024). Evaluating the Effectiveness of Nutritional Rehabilitation Program on the SAM Tribal Children in India: A Critical Review. *Internat. J. Appl. Home Sci.,* **11** (9 & 10) : 491-498

Constitution of India acknowledges the unique position of tribal people and offers protections to preserve their culture and rights. Tribal people have, remained marginalized in terms of geography, socioeconomic status, politics, and, consequently, the national psyche, despite their enormous numbers. In India, 16 per cent of tribal children under 5 years suffer from severe stunting, and about 40 per cent have stunting. Tribal and non-tribal children exhibit comparable levels of mild to moderate stunting. However, when comparing tribal children to non-tribal children, the rate of severe stunting is higher (16% vs. 9%) (CNNS 2016–18).

India is home to more than 104 million tribal people. Encompassed in 705 tribes, they represent 8.6% of the nation's total population. Tribal people's malnutrition is more than just a health problem. It is both a symptom and a cause of a wide range of unfavorable social, political, economic, cultural, and environmental variables. Food consumption patterns vary seasonally even within the same tribal group, ranging from severe starvation during the lean season to excessive intake during the post-harvest period. Poverty-related issues are compounded by poor sanitation, limited access to healthcare, and frequent illnesses that result in widespread undernutrition. Under-nutrition still continues to remain one of the main causes of morbidity and mortality in the tribal population. It is crucial to recognize that the eating habits of the tribal communities are changing as a result of the economic and cultural changes occurring within them, even though the main causes of this continue to be family size, lack of access to adequate quantity and quality of food due to poverty, landlessness, and lack of livelihood security.

Currently, there are Nutrition Rehabilitation Centers at the district level to treat cases of acute malnutrition. However, because of the great distances involved and the loss of income for the tribal families, these are not very effective. Many tribal people are also not comfortable with the hospital-like environment of the centers. Though theoretically there can be two separate approaches to management of malnutrition: institution based and community based, both the approaches are needed. Therefore, a wise combination that gives tribal families a choice must be used. In both cases, home based follow-up through frontline workers should be carried out. Tribal PHCs, or at least CHCs, should have Nutrition Rehabilitation Centers to take care of moderate and severe malnutrition cases.

According to WHO (2013), very low weight-for-height/length (Z-score below -3SD of the median WHO child growth standards), a mid-upper arm circumference of less than 115 mm, or the presence of nutritional edema are indicators of Severe Acute Malnutrition. Reducing malnutrition is crucial for lowering child mortality and enhancing maternal health because it contributes directly or indirectly to 35% of deaths in children under five. Severe acute malnutrition can rise sharply in emergency situations. The majority of cases are characterized by poor diets, limited food access, poor hygiene, chronic poverty, and a lack of education. Significant barriers to sustainable development are the outcome. India has the highest rate of undernourished children worldwide.

According to the National Family Health Survey-5 (NFHS- 5, 2019-21), in India,

- 36% were stunted
- 19% were wasted
- 32% were underweight

This is believed to be due to a combination of socio-economic and societal factors including poverty, food insecurity, gender inequality, disease and poor access to health and developmental services. An extension of this issue is severe acute malnutrition, which poses a serious risk to a child's life if they are between the ages of 6 to 59 months.

One of the most important issues facing India's development planners nowadays is preventing under nutrition. The famous quote from Mahatma Gandhi, "For the hungry, God is bread," still holds true for a large portion of the Indian populace. Under nutrition is still a silent crisis in India, despite significant gains in health and wellbeing since the nation's independence in 1947. Looking at the seriousness of malnutrition in Odisha, the Department of Health and Family Welfare, Government of Odisha, United Nations Children's Fund (UNICEF) and National Health Mission (NHM) have collaboratively set the Pusty Punarvas Kendras (Nutrition Rehabilitation Centers, NRC). Under this scheme severely malnourished child is brought to hospital. He/she can be admitted for up to 15 days.

Nutrition Rehabilitation Center (NRC) or Pusty Punarvas Kendra is a unit of the health facility dedicated to the admission and management of children suffering from Severe Acute Malnutrition (SAM). Children are given therapeutic medical and nutritional care upon admission in accordance with the established admission criteria. The child remains in the Nutrition Rehabilitation program after being released from the NRC until they

meet the program's specified discharge requirements. Therefore, a community-based program for the management of Severe Acute Malnutrition should be in place to complement the delivery of services by the NRCs. More significantly, systems for routinely tracking children's growth must be put in place. Only then will wasting and growth faltering be identified in their early stages, allowing for the implementation of corrective measures before the child reaches the most severe stages of undernutrition. Currently there are 63 NRCs functional in Odisha. The Nutrition Rehabilitation Center (NRC) was created as a cost-effective solution to the malnutrition problem. The goal of these rehabilitation facilities was to offer a diet based on foods that could be found nearby. Standard ready-to-eat food is known to be effective in enhancing nutrition, but its effectiveness in treating outpatients is questionable. Mothers' ignorance of issues related to nutrition, hygiene, and health may be the cause of this. Hence it is necessary to assess the impact of counseling on nutritional status of severely acute malnourished children in inpatient and outpatient care.

Objectives of the study:

The present study will be conducted with the following objectives:

- To study the demographic profile of the inpatient SAM tribal children.
- To analyze the nutritional status of the inpatient SAM tribal children.
- To study the knowledge of tribal mothers regarding nutrition and feeding practices.

Review of the Literature:

Dhawan and Singh (2023) concluded that one could think of malnutrition as a silent killer. Due to a lack of awareness, malnutrition in children from small and underdeveloped areas is either underreported, unrecognized, or detected later than it should. Malnutrition poses a serious threat to life in developing nations such as India. Severe acute malnutrition is negatively correlated with a number of variables, including socioeconomic status, education, poverty, and many others. Education is a weapon that allows people to help themselves in these kinds of situations in addition to being able to fight against their circumstances. The Nutrition Rehabilitation Center is a very good government initiative, but the population is not fully utilizing its benefits because of a lack of knowledge and awareness. The Nutrition Rehabilitation Center works toward major goals that are outlined in World Health Organization guidelines.

Anato (2022) reported that despite consistent efforts to reduce child undernutrition, severe acute malnutrition (SAM) continues to be a serious obstacle to child survival and development in Ethiopia. This study aimed to identify severe acute malnutrition and associated factors among children aged 6–59 months in Ethiopia. A cross-sectional study was undertaken with 384 under-five children from February to March, 2020 in Ethiopia. A mid-upper arm circumference (MUAC) tape, weight scale, height board (standing) and recumbent length measurements (for children < 0.05 was declared as significant. The prevalence of acute undernutrition was 26%; 18% and 8% of the children were moderately and severely undernourished, respectively. Family size (>5 members) (AOR: 3.71, 95% CI: 1.55–8.89), younger age group (6–11 months) (AOR: 4.80, 95% CI: 1.61–14.31) and history of diarrhea in the two weeks prior to the survey (AOR: 5.36, 95% CI: 1.97–14.61) were independently associated with SAM in the study population.

(NFHS- 5, 2019-21) reported that in India, 36% of children under five years old in India are stunted, meaning they are too small for their age. This indicates persistent malnutrition. While 32% of children under the age of five are underweight, 19% of them are wasted, or too thin for their height, which is an indication of severe undernutrition. Since 2015–16, there has been a decline in the prevalence of underweight and stunting, with the former falling from 48 per cent in 2005–06 to 36 per cent in 2019–20. The prevalence of wasting has stayed relatively stable over this same time frame. In Odisha, 34% of children under five suffer from stunting. Children in rural areas are more likely to be stunted (41%) than those in urban areas (31%). About 30% wasted and more than 40% of tribal children in India are stunted and underweight.

Panda *et al*. (2020) studied on Severe Acute Malnutrition; they included 353 children in their study. They discovered that 84% of children under the age of 2 years were suffering from severe acute malnutrition. The duration of the patient's stay at the Nutrition Rehabilitation Center was deemed adequate, and no deaths were recorded during that time. Overall, the results of this study indicate that Nutrition Rehabilitation Centers are an effective strategy for addressing malnutrition and for regaining weight.

Taneja (2018) revealed that out of the 52 girls and

48 boys in the study group, 60% were between the ages of 13 and 36 months. After a 7% dropout rate, anthropometric indicators were examined for 93 children. The weight of the children at admission and discharge had a statistically significant difference (t=14.552, P<0.001), and the mid upper arm circumference (MUAC) had a statistically significant difference (t=9.548, P<0.01) between the two points in time. During their stay at the centers, the average weight gain was 9.24 + 5.89 g/kg/day. After being admitted to NRCs, the number of severely malnourished children fell from 85 to 43 (x2 = 44.195, P<0.001); 48.78% of the children lost weight within 15 days of being released from the facilities. The study group experienced dropout rates of 9.89%, 23.07%, 42.65%, and 61.76% during the six-month follow-up period for the four follow-up visits that were held 15 days, 1, 3, and 6 months after discharge. The mothers of the children at the center did not have sufficient knowledge about health issues or how to prepare therapeutic diets.

METHODOLOGY

This literature review is primarily focused on SAM tribal children in India. The data for this study were gathered from published research publications, using the Goggle Scholar, EBSCO, and Pub Med databases. To identify relevant literature, we used the following search strategy: (SAM Tribal Children) and (tribal Severely acute malnourished children) and (impact of the Nutrition Rehabilitation on SAM tribal children) particularly studies among tribal population India. Given the limited research available, descriptive overviews and interventions that used qualitative, quantitative or mixed methods of any sample size were also included. In order to supplement our search, we looked through the reference lists of the included journal articles and papers and gathered a limited number of additional related research that fulfilled those broad criteria. These articles were extensively examined in order to find out the effectiveness of Nutritional Rehabilitation on the SAM Tribal Children in India.

RESULTS AND DISCUSSION

Socio- Demographic Profile of the Respondents:

According to the socio- demographic profile of respondent Table 1, it was observed that 48.87% respondents were from the urban background whereas 51.13% were from rural region. Hence majority of the respondents were from the rural background. As for the

Table 1 : Socio- Demographic Profile of the Respondents (N=221)

Socio-demographic Variables	Category	Frequency	Percentage
Residence	Urban	108	48.87
	Rural	113	51.13
Gender of the Head of the family	Male	195	88.24
	Female	26	11.76
Religions	Hindu	158	71.49
	Muslim	63	28.51
Castes	Scheduled Caste (SC)	49	22.17
	Scheduled Tribe (ST)	8	3.62
	Other Backward Class (OBC)	104	47.06
	General	60	27.15
Types of Family	Nuclear	104	47.06
	Joint	117	52.94
Total No of Family members	≤ 5	119	53.85
	>5	102	46.15
Education	Illiterate	33	14.93
	Primary	170	76.92
	Middle	9	4.07
	High School	8	3.62
	Intermediate	1	0.45
Type of House	Kachcha	79	35.75
	Pakka	64	28.96
	Mixed	78	35.29

Source: Mathur *et al.* (2019)

concern of the gender of the head of the family, 88.24% were male whereas 11.76% were female, hence most of the cases male member were the head of the family. 71.49% respondents were Hindu and 28.51% were Muslim, hence most of the respondents were Hindu in this study. 22.17% respondents were belonging to Scheduled Caste (SC), 3.62% belong to Scheduled Tribe (ST), 47.06% belong to Other Backward Class (OBC)and 27.15% of the respondents were belong to General category, hence most of the respondents were Other Backward Class (OBC) category. 47.06% families were living in the nuclear family whereas 52.94% were in the joint family, hence most of the respondents were living in the joint family. As for as the concern of the total number of family members, 53.85% respondents having d" 5 members, whereas 46.15% respondents having >5 members in the family.14.93% respondents were illiterate, 76.92% respondents were educated up to primary level, 4.07% were educated up to middle level, 3.62% were up to high school, and 0.45% respondents were educated up to intermediate, hence most of the respondents were educated up to primary level. As for modified BG Prasad Classification for May 2021, 4.1% respondents were from the class I, 2.3% were form the upper class II, 6.8% were from theclass III, 66.5% were form the class IV, and 20.4 % respondents were from the class V in this study, hence most of the respondents were form the class IV.35.75% respondents having *kachcha* type of house, 28.96% respondents having *pakka*house, and 35.29% having mixed type of house, hence most of the respondents having *Kachcha* as well as mixed type of house.

To analyze the nutritional status of the inpatient SAM tribal children:

This Table 2 represents typical indicators and progression outcomes that NRCs monitor in SAM children, showing baseline conditions at admission and improvements following therapeutic care. Recovery varies depending on the treatment adherence, follow-up

Table 2 : The nutritional status of SAM (Severe Acute Malnutrition) tribal children admitted to Nutritional Rehabilitation Centres (NRCs). This table format reflects typical data found in health and nutrition reports on children undergoing treatment for SAM.

Category	Indicator	Baseline on Admission	Progress at Discharge	Notes
Anthropometric Measurements				
Weight-for-Age	Severe Deficit (WAZ <-3 SD)	75%	25%	Majority admitted below WHO threshold
Weight-for-Height (WFH)	Severe Wasting (WFH <-3 SD)	80%	30%	Improvement through therapeutic foods
Height-for-Age	Stunting (HAZ <-2 SD)	60%	50%	Stunting persists; focus on long-term interventions
Mid-Upper Arm Circumference (MUAC)	<11.5 cm (Severe)	90%	15%	Drastic improvement with interventions
Clinical Indicators				
Edema	Present in cases	20%	5%	Reduction indicates response to therapy
Bilateral Pitting	Noted	15%	2%	Declines with nutritional intervention
Micronutrient Deficiencies				
Anemia	Hemoglobin <11 g/dL	85%	45%	Iron supplements included in treatment
Vitamin A Deficiency	Serum retinol <0.7 µmol/L	70%	30%	Vitamin A supplementation at NRC
Zinc Deficiency	Plasma zinc <0.66 µmol/L	50%	20%	Improvement with diet and supplementation
Health Status at Discharge				
Recovered	Target WFH ? -2 SD	-	60%	WHO defines recovery at discharge
Defaulted (Discharged Early)		-	10%	Early discharges noted
Relapsed within 6 Months	Return to NRC	-	15%	High in cases without follow-up care

Source: Patel (2010)

support, and the overall socioeconomic conditions of families. For long-term impact, NRCs work to integrate education on nutrition, breastfeeding, and hygiene for sustained progress in vulnerable tribal communities.

According to the Targeted Weight gain Class, it is clear that 57.0% respondents (SAM children) were discharged with targeted weight gain which is more than not acceptable recovery rate (<50%). Also, 33.9% were discharged without targeted weight gain, and 3.6% were belonged to non-Responder category. Table 3 also shows that defaulter rate in this study was only 5.0% which is acceptable (<15%) and death rate was only 0.5% which is also acceptable (<5%). Therefore, it can be concluded that most of the SAM children were discharged with targeted weight gain in the NRC.

Table 3 : Targeted Weight gain Class

Targeted Weight gain Class	Frequency	Per cent
Discharge with targeted weight gain	126	57.0
Discharged without targeted weight gain	75	33.9
Non-Responder	8	3.6
Defaulter	11	5.0
Death	1	.5
Total	221	100.0

Source: Anato (2022)

According to the Weightgain Class Table 4, it was found that 47.5% respondents attained the acceptable weight gain which is more than 8gm/Kg/Day while 47.1% children did not attain the acceptable weight gain. Also (12) 5.4% and 1(0.5%) children were belonged to the defaulter and death category, respectively (Fig. 1).

Table 4 : Weight gain Class

Weight gain Class	Frequency	Per cent
Acceptable Weight Gain (≥8gm/kg/day)	105	47.5
Not acceptable weight gain (<8gm/kg/day)	104	47.1
Defaulter and Death	12	5.4
Total	221	100.0

Source: Kumar *et al.* (2020)

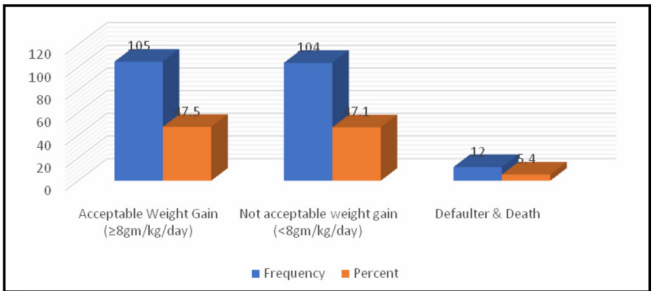

Fig. 1 : Weight gain class

According to the Comparison of MUAC between Pre and Post Table 5, it was observed that proportion of severely acute malnourished and moderately acute malnourished children both were decreased from 43.6% to 28.0% and 43.0% to 40.5% respectively. While the proportion of well-nourished children were increased from 13.4% to 31.5% during hospital stay (Fig. 2).

Table 5 : Frequency and Percentage Comparison of MUAC between Pre and Post

Risk Category	MUAC Pre		MUAC Post	
	Frequency	Per cent	Frequency	Per cent
Red	78	43.6	47	28.0
Yellow	77	43.0	68	40.5
Green	24	13.4	53	31.5
Total	179	100	168	100

Source: Taneja (2018)

Note: Red color indicates severe acute malnutrition (SAM), yellow color indicates that the child is at risk for acute malnutrition, and green color, indicates that the child is well nourished.

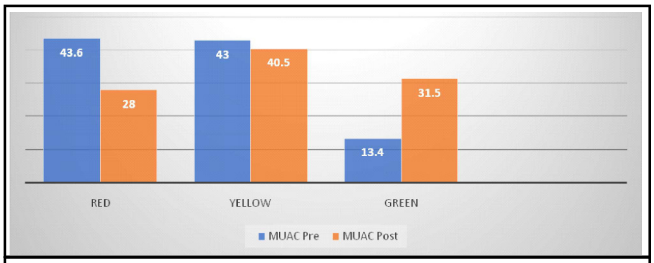

Fig. 2 : Risk Category

To study the knowledge of tribal mothers regarding nutrition and feeding practices:

According to the Mother's Knowledge table, it was found that 99.1% mothers knew the importance of breastfeeding whereas 0.9% mothers did not know the importance of breastfeeding, hence most of the mothers knew the importance of breastfeeding. 28.5% mothers knew the inconveniencies of not breastfeeding whereas 71.5% mothers did not know the inconveniencies of not breastfeeding, hence most of the mothers did not know the inconveniencies of not breastfeeding. 98.6% mothers the importance of colostrum whereas 1.4% mothers did not know the importance of colostrum, hence most of the mothers knew the importance of colostrum, 4.5% mothers knew the the inappropriateness of prelacteal liquids whereas 95.5% mothers did not know the

Table 6 : Mother's Knowledge

Sr. No.	Statements	Yes		No	
		N	Percentage	N	Percentage
1.	Do you know the importance of breastfeeding	219	99.1	2	.9
2.	Do you know the inconveniencies of not breastfeeding	63	28.5	158	71.5
3.	Do you know the importance of colostrum	218	98.6	3	1.4
4.	Do you know the inappropriateness of pre lacteal liquids	10	4.5	211	95.5
5.	Do you know the time limit for initiating breastfeeding	218	98.6	3	1.4
6.	Do you know the period of exclusive breastfeeding	185	83.7	36	16.3
7.	Do you know the minimum age for breastfeeding	215	97.3	6	2.7
8.	Do you know the moment to initiate complement feeding	68	30.8	153	69.2

Source: Dhawan and Singh (2023)

inappropriateness of prelacteal liquids, hence most of the mothers did not know inappropriateness of prelacteal liquids. 98.6% mothers knew the time limit for initiating breastfeeding whereas 1.4% mothers did not know the time limit for initiating breastfeeding, hence most of the mothers knew the time limit for initiating breastfeeding. 83.7% mothers knew the period of exclusive breastfeeding whereas 16.3% mothers did not know the period of exclusive breastfeeding, hence most of the mothers knew the period of exclusive breastfeeding. 97.3% mothers knew the minimum age for breastfeeding whereas 2.7 % mothers did not know the minimum age for breastfeeding, hence most of the mothers knew the minimum age for breastfeeding. 30.8% mothers knew the moment to initiate complement feeding whereas 69.2% mothers did not know the moment to initiate complement feeding, hence most of the mothers did not know the moment to initiate complement feeding (Table 6).

Conclusion:

Malnutrition can be considered as a silent killer. Due to a lack of awareness, malnutrition in children from tribal and underdeveloped areas is either underreported, unrecognized, or detected later than it should be. Malnutrition poses a serious threat to life in developing nations such as India. Severe acute malnutrition is negatively correlated with a number of variables, including socio-economic status, education, poverty etc. Education is a weapon that allows people to help themselves in these kinds of situations in addition to being able to fight against their circumstances. The Nutrition Rehabilitation Center (NRC) is a very good government initiative, but the population is not fully utilizing its benefits because of a lack of knowledge and awareness. The Nutrition Rehabilitation Center works towards major goals that are outlined in WHO guidelines. Children are admitted to Nutrition Rehabilitation Centers based on some basic parameters. These guidelines also include information on the necessary infrastructure, required equipment, human resource, medications, diets, and financial framework. If implemented effectively, this will offer instructions and guidelines for opening new Nutrition Rehabilitation Centers. It should be mandatory to conduct appropriate follow-up after the child is released from the facility. Reducing malnutrition will be aided by education, awareness and knowledge combined with a desire to combat severe acute malnutrition. A key strategy in the fight against malnutrition is poverty reduction needs to be developed. This study will help the policy makers to develop the Health and Nutrition policy for tribal dominated areas. The study on the Nutrition Rehabilitation Program at different districts will also provide a road map to identify the health issues of the tribal children. So, an extensive study on this area needs to be addressed. The study will help to highlight positive and negative impact on the Nutrition care process of inpatients and outpatients of NRCs and Anganwadi Centers. The results of the present study will scientifically reveal the impact of the NRCs on nutritional status of Severely Acute Malnourished outpatient tribal children and if found suitable may be implemented in other areas depending upon the socio-demographic profile of mothers, their nutritional knowledge and availability of food items for preparation of ready to eat food.

Limitations of the study:

- The present study will be limited to SAM tribal children below 5 years of age.
- The present study will be limited to assess the impact of Nutrition Rehabilitation Program and counseling on nutritional status of SAM tribal

children.

Possible outcomes of the proposed study:

- The study will be useful in combating malnutrition in SAM tribal children.
- This study will help to contribute to the clinical management of children suffering from Severe Acute Malnutrition and help lower their mortality rate, especially in cases where there are medical complications.
- This study will facilitate proper physical growth of children with Severe Acute Malnutrition (SAM).
- This study will help to identify the social factors that contributed to the child slipping into Severe Acute Malnutrition.
- The status report of NRC will help to understand the need of increasing the establishment of NRCs in different blocks according to the prevalence of SAM children.
- This study will be a background study report for extensive research in different tribal districts.
- This study will be useful in controlling malnourishment in the tribal children discharged from NRC in future by ascertaining a regular follow-up for continued enhancement of nutritional status of children after they are discharged from the NRC.
- This study will provide nutritional counselling to the tribal mothers that will create awareness among them towards nutritious food preparation from the locally available foods.
- This study will enhance the awareness of mothers regarding appropriate feeding and caring practices for infants and young children and food handling practices.
- The study will be a road map for Policy makers, Administrators, Academicians and Researchers.

Conflict of Interest:

There is no conflict of interest.

REFERENCES

Anato, A. (2022). Severe acute malnutrition and associated factors among children under-five years: A community based-cross sectional study in Ethiopia, *Heliyon,* **8**:1-6.

Bhatia, M., Mishra, A. and Mungi, S. (2014). A Cross-Sectional Study to Assess Causes of Under Nutrition in Under 5 Year Children in Gwalior District: A Population Based Study. *National J. Community Medicine*, **5** (3).

Dhawan, Tripti and Singh, K.N. (2023). A Review Study on the Effectiveness of Nutrition Rehabilitation Centers in the Field of Severe Acute Malnutrition. *Biological Forum – An International Journal*, **15**(2): 702-707.

Ghimire, U., Aryal, B.K., Gupta, A.K. and Sapkota, S. (2020). Severe acute malnutrition and its associated factors among children under-five years: a facility-based cross-sectional study. *BMC Pediatrics*, **20** : 2-9.

Kumar, S., Kumar, D., Raina, S.K. and Sharma, M. (2020). Building evidence for information surveillance of Nutrition Rehabilitation Center to assess risk factors for Severe Acute Malnutrition in a tertiary hospital of the northern state of India. *Amrita J. Medicine*, **16**(3) : 110-114.

Mathur, Meeta, Jain, Naveen, Kaushik, Shivangi and Pandey, Aakanksha (2019). Institutional Quality of Care in Inpatient Facilities for The Management of Severe Acute Malnutrition in India. *Field Exchange Issue* **59**, January 2019, www. Ennonline.net/fex.

Mena, M.B., Dedefo, M.G. and Billoro, B.B. (2018). Treatment Outcome of Severe Acute Malnutrition and Its Determinants among Pediatric Patients in West Ethiopia. *International J. Pediatrics*, 1-7.

Ministry of Health and Family Welfare and the Ministry of Tribal Affairs, Government of India (2018) Tribal Health India: Bridging the Gap and a Roadmap for the Future. New Delhi. (Available at www.tribalhealthreport. in; and www.mohfw.gov.in).

Panda, M., Nanda, S., Murmu, M.C., Giri, R.C. and Debi, L.L. (2020). Evaluation of the outcome indicators of a Nutritional Rehabilitation Center in Eastern India. *Internat. J. Medical Sci. & Public Health*, **8**(4): 292-297.

Patel, D. (2010). Home-based Rehabilitation of Severely Malnourished Children in Resource Poor Setting. *Indian Pediatrics*, **47** August 17, 2010.

Pati, S., Mahapatra, S., Sinha, R., Pati, S. and Samal, S.N. (2018). Community Management of Acute Malnutrition (CMAM) in Odisha, India: A Multi-Stakeholder Perspective. *Front Public Health.,* **6**:158

Taneja, S. (2018). Mid upper arm circumference as a predictor of risk of mortality in children in a low resource setting in India. *PLoS one*, **13**(6) : 1-10.

****