

11th Joint Review Mission on Mid- Day Meal Scheme



Visakhapatnam & East Godavari Districts, Andhra Pradesh
(12th to 19th November, 2018)



Government of India

Ministry of Human Resource Development

Department of School Education & Literacy



**मध्याह्न भोजन योजना
Mid Day Meal Scheme**

**Report of 11th Joint Review Mission on
Mid-Day Meal Scheme**

ANDHRA PRADESH

(12th to 19th November, 2018)

Acknowledgement

The Joint Review Mission Team for the 11th Review Mission-Andhra Pradesh 2018-19 would like to thank the Ministry of Human Resource development, New Delhi and the Government of Andhra Pradesh for all the support rendered in organizing the logistics and providing much required information on implementation of the Mid Day Meal Scheme.

The JRM team is also very thankful to the officials for their support and hospitality; the teachers working in the remote villages; the State officials of the Mid-Day Meal Scheme; the cook-cum-helpers from the self help groups working in the schools.

The JRM team would also like to thank all the students and parents for their whole-hearted support in carrying out the study.

The review team has made an earnest effort to include in the report the wide range of observations and discussions held at various levels with key officials and other stakeholders. It sincerely hopes that the recommendations that have emerged through this multi-pronged exercise by interacting with the officials, experts, implementers and the children, would help the Government of Andhra Pradesh in strengthening the implementation of the Mid-Day Meal Scheme in schools and ensure that every school going child avails its right to nutritious food in the State.

JRM TEAM,

Andhra Pradesh: November, 2018

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ABBREVIATIONS

AWP&B	Annual Work Plan & Budget
BAS	Baseline Achievement Survey
BMI	Body Mass Index
BPL	Below Poverty Line
BRC	Block Resource Centre
CRC	Cluster Resource Centre
CWSN	Children with Special Needs
DEO	District Education Officer
DIET	District Institute of Education and Training
DISE	District Information System for Education
DC	District Coordinator
GOI	Government of India
GP	Gram Panchayat
ICDS	Integrated Child Development Services
JRM	Joint Review Mission
KGBV	Kasturba Gandhi BalikaVidyalaya
MDM	Mid-day Meal
MEO	Mandal Education Officer
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MHRD	Ministry of Human Resource Development
MI	Monitoring Institute
MIS	Management Information System
MLA	Member of Legislative Assembly
MP	Member of Parliament
MME	Management Monitoring and Evaluation
MS	MahilaSamakhya
MTA	Mother Teacher Association
NFHS	National Family Health Survey
NGO	Non-Governmental Organization
OBC	Other Backward Community
PAB	Project Approval Board
PRI	Panchayati Raj Institution
PTA	Parent Teacher Association
RBSK	Rashtriya Bal SwasthyaKaryakram
SC	Scheduled Caste
SMC	School Management Committee
SE&L	School Education & Literacy
SFD	Special Focus District

Executive Summary

The JRM Team visited 53 schools in two districts viz. Visakhapatnam and East Godavari. During the visits the team collected information as per the Term of References, held discussions with all stakeholders i.e. students, teachers, cook-cum-helpers, community members, parents and officials at Mandal, District and State level.

The team also carried out nutritional assessment for 1119 children (659 in district Visakhapatnam and 460 in East Godavari).

1. Good Practices observed

- i. Provision of eggs on 5 days in a week from State resources.
- ii. State is providing MDM to students of class IX and X from its own resources.
- iii. Constitution of children committee for MDM in East Godavari district. These committee members daily sign the tasting register and give their remarks on quality of meals served.
- iv. E-transfer of funds related from State to the bank accounts of implementing agencies i.e. Self Help Groups, etc.
- v. Buffer stock of foodgrains was maintained in all the visited schools.
- vi. Eating plates were available to all students, most of these plates were provided by community in the form of donations.
- vii. R.O. plants were available in some schools, these are donated by ex. students of the schools / community.
- viii. LPG is being used as mode of fuel in almost all schools.
- ix. Mobile App is in use for furnishing information related to implementation of MDM.
- x. State is providing foodgrains through e-pos system.
- xi. Toilets are generally clean and are being used by school children. Separate toilets were available for boys and girls in all schools.
- xii. Dining halls / Dining tables were also available in few schools.
- xiii. All the children were washing hands before and after eating the mid day meal.

- xiv. On special occasions like marriage, birthdays etc. members of community are serving special meals to school children in some schools.

2. Areas of Concern

- i. About 42 % (out of a sample of 1119) children were malnourished.
- ii. About 12% children (15% in Visakhapatnam and 7% in East Godavari) do not have breakfast before coming to school.
- iii. Many children in the upper primary section are not availing Mid Day Meal.
- iv. The portion size of meals served is less than the prescribed norms of the scheme especially in schools covered through centralised kitchens of ISKCON and Akshayapatra in Visakhapatnam.
- v. The quality of rice is not good.
- vi. Entitlement of children and MDM logo are not displayed in most of the visited schools.
- vii. Kitchen-cum-stores not constructed in many schools.
- viii. Storage bins are not available in the visited schools.
- ix. Inadequate monitoring of scheme.
- x. Clinical signs and symptoms observed clearly indicate Anaemia, Dental Caries, riboflavin deficiency in children, skin allergies.

3. Recommendations

- i. State may conduct a rapid assessment to find out the reasons for some children not opting for Mid Day Meal.
- ii. State needs to ensure that at least Fair Average Quality rice be supplied in Mid Day Meal Scheme.
- iii. Construction of kitchen-cum-stores to be completed expeditiously. State may follow the model of Maharashtra wherein, pre-fabricated kitchen-cum-stores have been installed in schools for Mid Day Meal Scheme.
- iv. Setting up of Nutri (kitchen) garden in schools, wherever feasible.

- v. To strengthen the involvement of community in serving special foods on special occasions like birthdays, marriage etc.
- vi. Provision of storage bins in schools.
- vii. Standardisation and simplification of formats for record keeping of MDM at school.
- viii. Replacement of worn out kitchen devices.
- ix. Display of Entitlement, Menu and Logo of Mid Day Meal Scheme at a prominent place, where it is easily visible to community.
- x. Training and sensitization of cook-cum-helpers and officials at different level.
- xi. In case of supply of MDM through centralised kitchens, the quantity of cooked meal per child per day should be standardized.
- xii. The portion size of each dish to be served to primary and upper primary students should be standardized.

CHAPTER 1

Introduction

Productivity and over all well-being of a person is affected a lot by poor nutrition. Malnutrition can have a number of adverse effects on the body, including mental and physical health. Malnutrition is a condition that results from eating a diet in which one or more nutrients either are not enough or are too much. India has been combating several issues like illiteracy, unemployment, child mortality and infant mortality since independence. It is a known fact that the prime cause for malnutrition among children is inadequate diet, recurring infections and low level of awareness.

In developed countries, the diseases of malnutrition are most often associated with nutritional imbalances or excessive consumption. In developing countries, malnutrition is more likely to be caused by poor access to a range of nutritious foods or inadequate knowledge. It is inextricably linked with illiteracy, especially female illiteracy, lack of safe drinking water, sanitation, ignorance, lack of awareness and ill health. It creates its own cycle within the large cycle of poverty.

Malnutrition adversely affects Universalization of Elementary Education (UEE). Even if a malnourished child does attend school, he/she finds it difficult to concentrate on and participate in the learning activities in school. Unable to cope, the child would very often drop out of school.

Various studies suggests that absence of an adequate breakfast over extended period can affect both behaviour and nutritional status; such children exhibit irritability, decreased attentiveness and low concentration span, all of which affect their active learning capacity. Malnutrition is therefore not just an issue for the nutritionist; the planners and economists also need to recognize that the cost of malnutrition is much greater than the investments required to end hunger/malnutrition.

With a view to enhance enrolment, attendance and retention and simultaneously to improve the nutritional status of children, a Centrally Sponsored Scheme 'National Programme of Nutritional Support to Primary Education (NP-NSPE)' was launched on

the 15th August 1995. The scheme was extended in 2008-09, to cover children of upper primary classes and the Scheme was renamed as 'National Programme of Mid-Day Meal in Schools' popularly known as Mid-Day Meal Scheme (MDMS). The MDMS covers all school children studying in I-VIII classes in *Government and Government-aided schools, Special Training Centres (STCs) and Madrasas & Maqtabas supported under SamagraShiksha*.

The Mid-Day Meal (MDM) Scheme is a flagship programme of the Government of India, having the distinction of being the largest school feeding programme in the world, reaching out to about 9.51 crore children in 11.34 lakh primary and upper primary Government, Government Aided and Local Body schools, Special Training Centres (STC) and Madarsa and Maqtabas supported under SamgraShiksha. Mid day meal is also served during the summer vacations in drought-affected areas. Cooked mid-day meal consists of 100 grams of wheat/rice, 20 grams of pulses, 50 grams of vegetables and 5 grams of oil/fat and provides 450 calories of energy and 12 grams of protein at primary stage. For upper primary stage children, it consists of 150 grams of wheat/rice, 30 grams of pulses, 75 grams of vegetables and 7.5 grams of oil/fat and to provide 700 calories of energy and 20 grams of proteins

1. Objectives of MDM

The objectives of the Mid-Day Meal Scheme are to address two of the pressing problems for majority of children in India, viz. hunger and education by:

- i. Improving the nutritional status of children studying in classes I – VIII in Government and Government-aided schools, Special Training Centers (STCs) and madrasas & maqtabas supported under SamagraShiksha.
- ii. Encouraging poor children, belonging to disadvantaged sections, to attend school more regularly and help them concentrate on classroom activities.
- iii. Providing nutritional support to children of elementary stage in drought-affected areas during summer vacations.

A programme of scale and magnitude of Mid Day Meal requires close monitoring and evaluation at all levels. In 2010, the Ministry of Human Resource Development, Govt. of

India, decided to review implementation of the programme in all its aspects through the Review Missions, which are also to provide suggestions for improvement.

1.1 Composition of Joint Review Mission

- i. Dr. Lakshmi Jagarlamudi, Professor & University Head, Dept. of Food & Nutrition, College of Home Science, Acharya N.G. Ranga Agricultural University, Guntur, Andhra Pradesh
- ii. Ms K. Sandhya Rani, Commissioner (MDM), Andhra Pradesh - Member
- iii. Shri G. Vijaya Bhaskar Director (MDM), MHRD, Govt. of India - Member
- iv. Dr. Lakshmi Kuchibhotla, Assistant Professor (F&N), College of Home Science, Acharya N.G. Ranga Agricultural University, Guntur - Member
- v. Shri Bhupendra Kumar, Chief Consultant, Mid Day Meal Scheme, New Delhi - Member
- vi. Shri Davander Kumar, Consultant, Mid Day Meal Scheme, New Delhi - Member

Dr. B. Avinash, Ms. Pavuluri Yaraswini, Ms. Agathamudi Sirisha, Ms. Boddu Revathi assisted the Joint Review Mission as Research Assistants.

The 11thJRM visited 29 schools in Visakhapatnam and 24 schools in East Godavari for monitoring the implementation of Mid Day Meal Scheme as per the defined terms of reference.

1.2 The Terms of Reference for the Joint Review Mission:

- i. Review the fund flow from State to Schools/implementing agencies.
- ii. Review the coverage of the Scheme
- iii. Review the availability of Management Structure at State, District, Block level
- iv. Review the delivery mechanism of food grains from State to Schools

- v. Review the smooth implementation of the Scheme with particular reference to Interruptions.
- vi. Review the Creation of Capital Assets
- vii. Construction of Kitchen-cum-stores
- viii. Procurement/Replacement of Kitchen Devices
- ix. Review the involvement of NGO's/Trust/Centralized kitchens in the Scheme
- x. Review the payment of Cost of Food grains to Food Corporation of India
- xi. Review the convening the meetings of District Level Committee under Chairpersonship of senior most Member of Parliament (Lok Sabha).
- xii. Review the Management Information System (MIS)
- xiii. Review the implementation of Automated Monitoring System
- xiv. Convergence with Rastriya Bal Swasthya Karyakram for health check-up, supplementation of micronutrients under WIFS & deworming medicine under National deworming day and health check ups and supply of spectacles to children suffering from refractive errors.
- xv. **Review the following**
 - a. Operationalization of Mid-Day Meal Rules, 2015
 - b. Dissemination of Food Safety Guidelines up to District, Block and School
 - c. Enrolment of children and Cook-cum-Helpers under Aadhaar
 - d. Payment of Honorarium to Cook-cum-Helpers
 - e. System of Storage food grains and other ingredients
 - f. Role of Teachers in Mid-Day Meal Scheme.
 - g. Tasting of MDM by Teacher, Parents and Community.
 - h. Testing of meals
 - i. Involvement of Community

- j. Bank Account of Cook-cum-helpers
- k. Awareness of the Scheme
- l. Contingency Plan

1.3. Terms of Reference for Nutritional aspects:

- a. To assess the anthropometric measurements of a sample of children availing MDM
- b. Height ii. Weight iii. Mid arm Circumference
- c. To Calculate the Body Mass Index (BMI) on the basis of measurement of height and weight.
- d. To identify the children who are undernourished and over nourished.
- e. To review the quality and quantity of the served MDM.
- f. To review the satisfaction of the children parents and community on the served meal under MDM in respect of quality and quantity.
- g. To suggest some nutritionally balanced region specific recipes.

1.4 Food and Calorific norms under MDM

Initially the MDM Scheme envisaged the provision of free of cost 100g of wheat /rice for children studying in classes' I-V in all Government, local body and Government aided primary schools. The central government provided wheat /rice to the States/UTs; 3 kg of cereals were to be distributed free of cost to children who had over 80% attendance in the previous month. Most of the states distributed food grains to children but some states who were earlier providing cooked mid day meal or ready to eat food to school children, continued to do so.

In 2001 Hon'ble Supreme Court of India directed that hot cooked mid day meal containing 300kcal energy and 12 g of protein/day for 200 days to all children studying

in classes I-V in all government, local body and government aided primary schools should be provided under Mid Day Meal Scheme.

Table 1: Food Norms

Nutritional content	Norm as per NP-NSPE,2004	Revised norm as per NP- NSPE,2006
Calories	300	450
Protein	8-12 g	120
Micro – nutrients	Not prescribed	Adequate quantities of Micro nutrients like Iron, Folic Acid and Vitamin A

The above food norms were revised w.e.f. 1st December, 2009 as indicated below:

- a) 450 kcal and 12g of protein which is derived from 100 g of food grains (rice/wheat), 20g of pulses , 50g of vegetables and 5g of oil for children studying in primary classes and
- b) 700 kcal and 20g of protein, which is derived from 150g of food grains (rice/wheat), 30g of pulses , 75g of vegetables and 7.5g of oil in upper primary classes.

Table 2: Revised Food Norms

S. No.	Items	Quantity per Child per Day	
		Primary	Upper Primary
1.	Food grains	100 g	150 g
2.	Pulse	20 g	30 g
3.	Vegetables (leafy also)	50 g	75 g
4.	Oil & fat	5.0 g	7.5 g
5.	Salt & Condiments	As per need	As per need

CHAPTER 2

Profile of State and Selected Districts

2.1 Andhra Pradesh: An Introduction

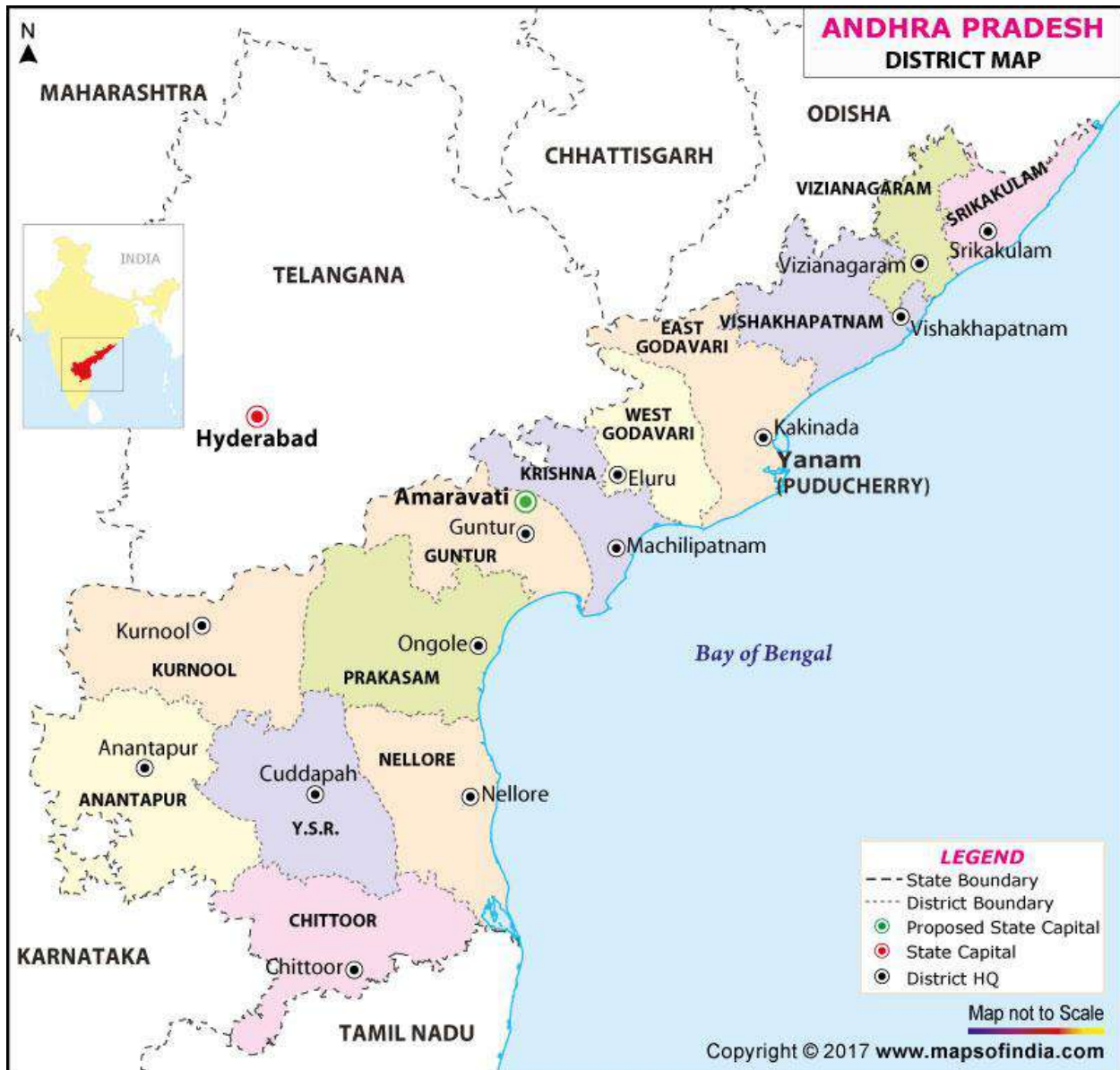
Situated in the south-east of the country, Andhra Pradesh it is the eighth-largest state in India, covering an area of 162,970 km² (62,920 sq mi). As per the 2011 census, it is the tenth most populous state, with 49,386,799 inhabitants.

Andhra Pradesh has a coastline of 974 km – the second longest coastline among the states of India, after Gujarat – with jurisdiction over almost 15,000 km² of territorial waters. The state is bordered by Telangana in the north-west, Chhattisgarh and Odisha in the north-east, Karnataka in the west, Tamil Nadu in the south, and to the east lies the Bay of Bengal. The small enclave of Yanam, a district of Puducherry, lies to the south of Kakinada in the Godavari delta on the eastern side of the state.

The state is made up of the two major regions of Rayalaseema, in the inland southwestern part of the state, and Coastal Andhra to the east and northeast, bordering the Bay of Bengal. The state comprises thirteen districts in total, nine of which are located in Coastal Andhra and four in Rayalaseema.

2.1.1 Population

Andhra Pradesh, as per Census, 2011[update], had a population of 49,386,799 with a population density of 308/km² (800/sq mi). According to Polavaram ordinance bill 2014, 7 mandals of Khammam district in Telangana state merged with Andhra Pradesh to facilitate polavaram project, due to which population of 2,47,515 added to Andhra Pradesh. Thus the final population of Andhra Pradesh in the year 2014, as per census 2011 is 4,96,34,314, with a density of 304.5/km². There are 24,738,068 male and 24,648,731 female citizens—a sex ratio of 996 females per 1000 males, higher than the national average of 926 per 1000.



2.2 District - Visakhapatnam

The Visakhapatnam District has 3 Divisional Head Quarters. The District is consisting of 43 Mandals. and 1047 Gram Panchayats. Visakhapatnam Corporation is now known as Greater Visakha Municipal Corporation, Visakhapatnam is the highly industrially developed in our state having the following importance. Headquarters for eastern naval command. The District Headquarters is Visakhapatnam.

The Visakhapatnam district is divided into 3 categories namely, Agency, Rural and Urban areas. 1 Municipal Corporation (GVMC) and 2 Municipalities (Narsipatnam and Yelamanchili), there are 11 Mandals in agency area (Munchingput, Pedabayalu, Hukumpeta, Dumbriguda, Arakuvalley, Ananthagiri, Paderu, G. Madugula, G.K. Veedhi, Chintapalli, Koyyuru) and 5 Mandals in urban area (Visakhapatnam, Chinagadila, Pendurthi, Gajuwaka, Pedagantyada) and the remaining 27 Mandals are in rural area.



2.2.1 Population

According to the 2011 census, Visakhapatnam had population of 4,290,589 of which male and female were 2,138,910 and 2,151,679 respectively. In 2001 census, Visakhapatnam had a population of 3,832,336 of which males were 1,930,197 and remaining 1,902,139 were females.

There was change of 11.96 percent in the population compared to population as per 2001. In the previous census of India 2001, Visakhapatnam District recorded increase of 16.66 percent to its population compared to 1991.

Table 3: Information on vital parameters – District Visakhapatnam

Description	2011	2001
Actual Population	4,290,589	3,832,336
Male	2,138,910	1,930,197
Female	2,151,679	1,902,139
Population Growth	11.96%	16.66%
Area Sq. Km	11,161	11,161
Density/km ²	384	343
Proportion to Andhra Pradesh Population	5.07%	5.03%
Sex Ratio (Per 1000)	1006	985
Child Sex Ratio (0-6 Age)	961	976
Average Literacy	66.91	59.96
Male Literacy	74.56	69.68
Female Literacy	59.34	50.12
Total Child Population (0-6 Age)	452,213	493,124
Male Population (0-6 Age)	230,630	249,517
Female Population (0-6 Age)	221,583	243,607
Literates	2,568,249	2,002,316

Male Literates	1,422,878	1,171,082
Female Literates	1,145,371	831,234
Child Proportion (0-6 Age)	10.54%	12.87%
Boys Proportion (0-6 Age)	10.78%	12.93%

2.3 District - East Godavari

East Godavari district is a located in Coastal Andhra region of Andhra Pradesh. Its district headquarters is at Kakinada. As of Census 2011, it became the most populous district of the state with a population of 5,151,549. Rajahmundry and Kakinada are the two largest cities in the Godavari districts in terms of population.

The district has 7 revenue divisions namely, Amalapuram, Etapaka, Kakinada, Peddapuram, Rajahmundry, Ramachandrapuram and Rampachodavaram with 64mandals. These 64mandals consists of 1,374 villages, 2 municipal corporation, 7 municipalities and 10 census towns. It is the one of the two districts, alongside Chittoor district to possess two municipal corporations namely, Kakinada and Rajahmundry. The 7 municipalities in the district include, Amalapuram, Mandapeta, Peddapuram, Pithapuram, Ramachandrapuram, Samalkota, Tuni.

The East Godavari District is consisting of 64 Mandals with 5 Educational Divisions. The Mid day meal scheme was entrusted for preparation and supply of food to the students in this district by 4 NGOs i.e. Sri Buddhavarapu Charitable Trust, Polamuru, Akshaya Patra Foundation, Kakinada, Iskcon food relief foundation and Alluri Seetharamaraju Educational Society organizations, rest of the schools were entrusted to self help groups for supply of food.

2.3.1 Population

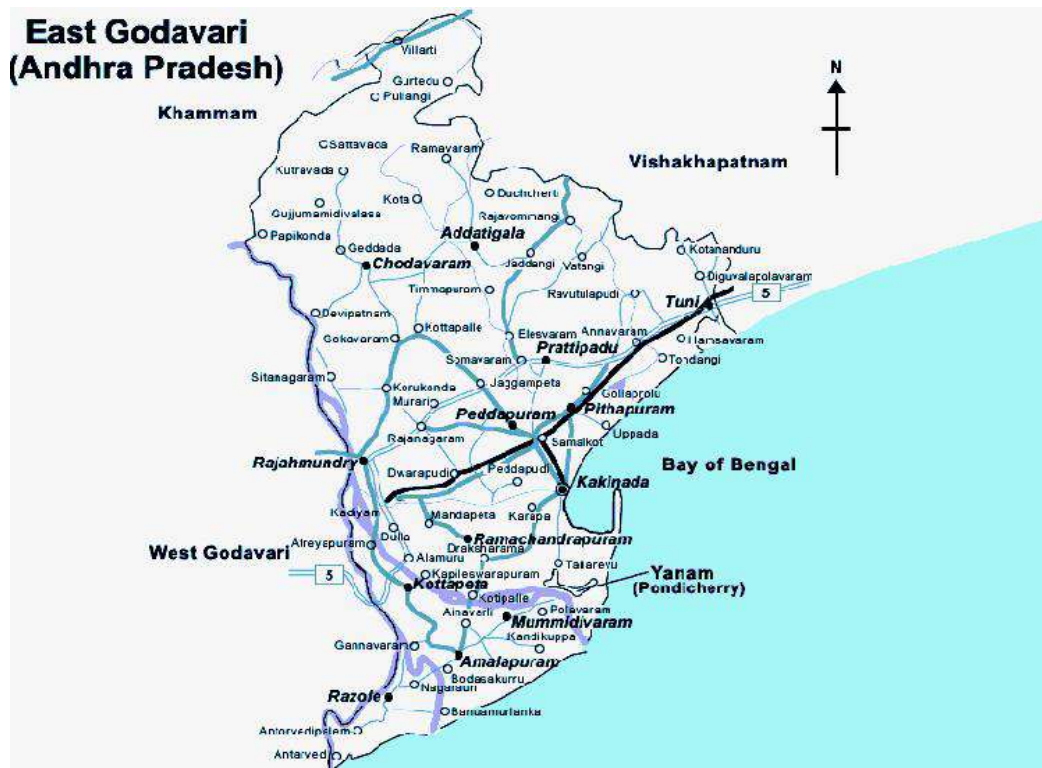
In 2011, East Godavari had population of 5,154,296 of which male and female were 2,569,688 and 2,584,608 respectively. In 2001 census, East Godavari had a population of 4,901,420 of which males were 2,459,640 and remaining 2,441,780 were females.

There was change of 5.16 percent in the population compared to population as per 2001. In the previous census of India 2001, East Godavari District recorded increase of 7.93 percent to its population compared to 1991.

Table 4: Information on vital parameters – District East Godavari

Description	2011	2001
Actual Population	5,154,296	4,901,420
Male	2,569,688	2,459,640
Female	2,584,608	2,441,780
Population Growth	5.16%	7.93%
Area Sq. Km	10,807	10,807
Density/km ²	477	454
Proportion to Andhra Pradesh Population	6.09%	6.43%
Sex Ratio (Per 1000)	1006	993
Child Sex Ratio (0-6 Age)	968	978
Average Literacy	70.99	65.48
Male Literacy	74.51	70.00
Female Literacy	67.52	60.94

Total Child Population (0-6 Age)	522,054	613,490
Male Population (0-6 Age)	265,244	310,110
Female Population (0-6 Age)	256,810	303,380
Literates	3,288,577	2,807,728
Male Literates	1,716,933	1,504,676
Female Literates	1,571,644	1,303,052
Child Proportion (0-6 Age)	10.13%	12.52%
Boys Proportion (0-6 Age)	10.32%	12.61%
Girls Proportion (0-6 Age)	9.94%	12.42%



CHAPTER 3

Methodology

3.1 Nutritional Assessment

A nutritional survey in a total of 53 government run primary and upper primary schools in two selected districts, namely Visakhapatnam and East Godavari were undertaken in which a total of school children were surveyed with an objective to collect information related to the following aspects of children availing Mid Day Meal:

- Food pattern
- Anthropometric profile
- Clinical signs of nutritional deficiencies
- Quality and Quantity of MDM

3.2 Sample selection

Nutritional status assessment survey was conducted in government and government aided primary and upper primary schools availing MDM in Andhra Pradesh. Two districts namely Visakhapatnam and East Godavari were selected. The multistage stratified random sampling was used for selection of schools in the districts. A total of 53 schools (Visakhapatnam 29 schools and East Godavari 24 schools) were visited.

According to NFHS-4, 2015-16 survey, almost 31% of the children under age five years are stunted for their age, 17% are wasted or too thin for their height and five percent of the children are severely undernourished. Minimum sample size for assessing nutritional status was calculated as per following formula.

$$\text{Sample size} = \frac{Z_{1-\alpha/2}^2 P(1-p)}{d^2}$$

Where,

$Z_{1-\alpha/2}$ = Standard normal variate (at 5% type 1 error ($P < 0.05$) it is 1.96. As in majority of studies P values are considered significant below 0.05 hence 1.96 is used in formula.

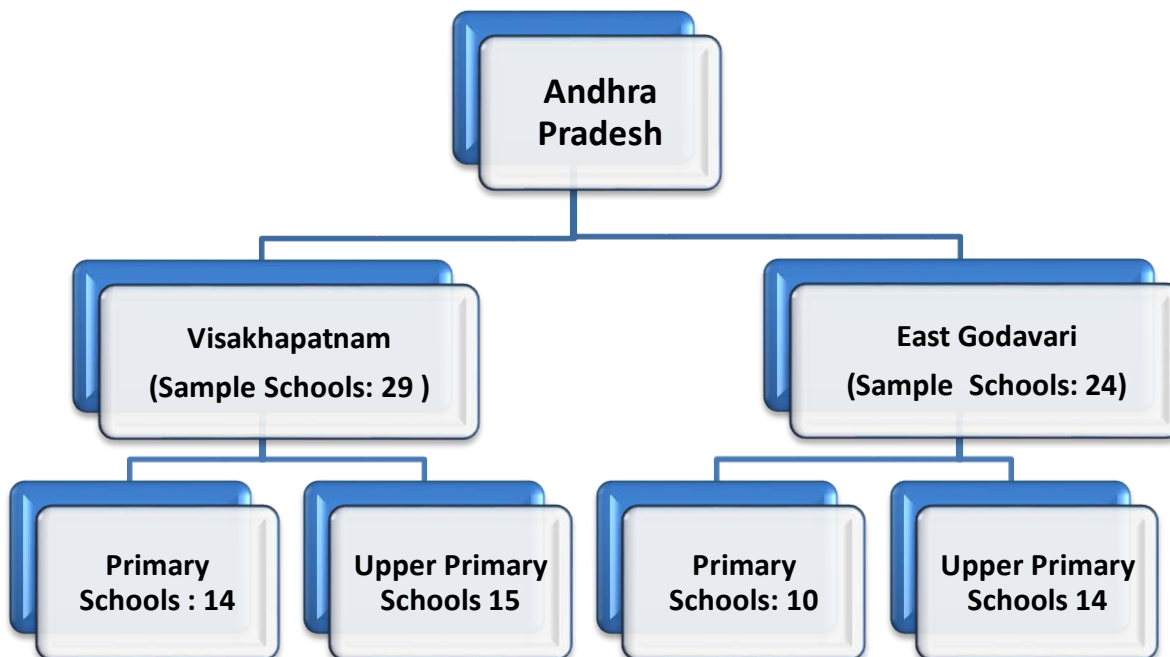
p = Percent prevalence.

d = Absolute error or precision.

Sample size obtained by using the above formula was multiplied by 2 i.e. is Design effect for the present study. Then 5 % of the sample size was added to it as contingency and sample of 1000 was obtained.

3.2.1 Data collection

Using the above formula, sample size was estimated as 1000. From both the districts more than 1000 sample i.e. total 1119 sample was selected. In Visakhapatnam total children were 659 (Boys 307 and Girls 352) and in East Godavari total children were 460 (Boys 241 and Girls 219). A multi stage stratified random sampling method was used for selection of schools in the selected districts.



3.3 Following procedures were adopted for assessing nutritional status of children

Anthropometric measurements of height, weight, mid upper arm circumference of selected children availing MDM was done to assess the nutritional status of children. Food frequency data was collected for consumption of cereals, pulses, milk & milk products, egg, meat and fish. A food frequency questionnaire is a limited check list of foods and beverages with a frequency response section for subjects to report how often each item was consumed over a specified

period of time. Clinical survey for nutritional deficiency signs and symptoms was done to identify the nutritional deficiencies.

The data collected was analysed by calculating mean, standard deviation, body mass index and compared with WHO reference standards (2007). The Height for Age and Body Mass Index (BMI) values were compared with the international classification as given by the World Health Organization for children aged five to nineteen years (WHO, 2007).

3.3.1 Classification of Children according to WHO Standard classification 2007- Body Mass Index (BMI)	
Below Normal	Median < -2SD to - 3 SD
Normal	Median \pm 1 SD
Above Normal	Median > +2 SD to +3 SD
3.3.2 Classification of Children according to WHO SD classification 2007 for Height for Age	
Below Normal	Below 25 th percentile
Normal	25 th to 75 th percentile
Above Normal	Above 75 th percentile
3.3.3 Classification of Children according to WHO SD classification 2007 for Weight for Age	
Below Normal	Below 25 th percentile
Normal	25 th to 75 th percentile
Above Normal	Above 75 th percentile

To collect data the members of MDM JRM were divided into two teams, each team consisted of 4/5 persons, The data was collected by using pretested questionnaires to collect the information related to objectives and pertaining to diet and nutritional status of school children, including their personal and environmental hygiene.

Cleanliness of the kitchen and cook-cum-helpers of the selected schools was also assessed for hygiene and practices as per MDM programme. The quantity of Mid day meal prepared on the day of the visit was checked keeping in mind the exact amounts of raw ingredients used and the number of children present on that day to find whether the “food norms” as recommended

for MDM are being followed or not. Additionally, weight diet survey of cooked MDM was used to assess individual intake of children, to assess whether the serving of meals was as per the recommendations for primary & upper primary children.

3.4. Data analysis

Anthropometry is presented as mean and standard deviation. The Body Mass Index (BMI) was calculated using the following Quetelet Index.

$$\text{BMI} = \text{Weight (Kg)} / \text{Height (m)}^2$$

Where, weight is in kilogram and height is in meters. The height, weight and BMI were analyzed for Z - scores using WHO standards, 2007.

3.5. Quality and Quantity of MDM: The quality and quantity of MDM was assessed by visiting schools at the time of serving of MDM. One 'food serving' was measured with the help of a measuring cup. The quantity of food was classified into more than adequate, adequate and inadequate. Quality of MDM served was assessed as poor, average, good and very good.

CHAPTER 4

Review of implementation of Mid-Day Meal in Andhra Pradesh on Physical and financial parameters during last four years (2014-15 to 2017-18)

The Mid-Day Meal is an on-going Centrally-Sponsored Scheme which covers all school children studying in Classes I-VIII of Government, Government-Aided, Special Training Centres including Madarasas and Maqtabas supported under Samagra Shiksha.

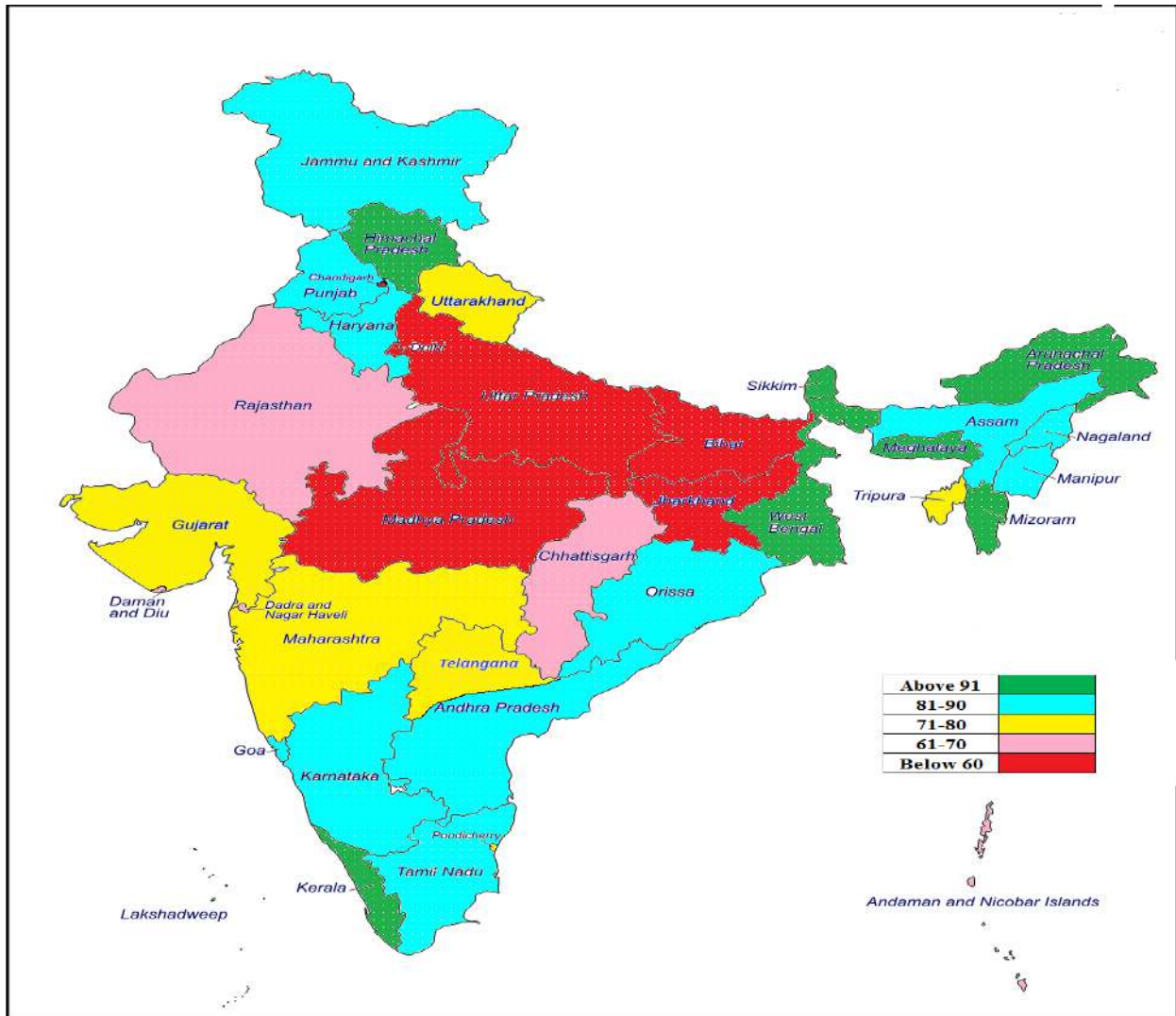
The objectives of the MDM Scheme are to improve nutritional status of children studying in classes I – VIII eligible schools, to encourage poor children belonging to disadvantaged sections to attend school more regularly and to provide nutritional support to children of elementary stage in drought-affected areas even during summer vacation.

4.1 Norms of Central assistance under Mid-Day Meal Scheme

At present, 100% recurring cost Central assistance is provided for cost of food grains, transportation of food grains from FCI depot to Schools and Management, Monitoring and Evaluation charges. 100% non-recurring Central assistance is provided for procurement/replacement of kitchen devices in schools. The Centre also provides assistance for cooking cost, payment of honorarium to cook-cum-helpers and construction of kitchen-cum-stores as per States Schedule of rates on sharing basis between Centre and State Government in the ratio of 60:40 for Non-NER States and 90:10 for NER States including 3 Himalayan States and 100% for Union Territories.

4.2 National Scenario of coverage of children under MDM

During 2017-18, 9.51 crore children studying in elementary classes in schools covered under MDM, have availed MDM on an average basis against the total enrolment of 12.38 crore. Thus about 76% of the enrolled children have availed MDM on each school day.



4.3 Basic information on implementation of MDM during 2018-19

Table 5: Important indicators in implementation of MDM – Andhra Pradesh

S. N.	Indicator	PAB Approval / Total	Coverage / Utilisation
1	No. of Institutions	45,505	45692
2	Enrolment (pry)	1680000	1796600
3	Enrolment (Up. pry)	973955	1130286
4	Children (Pry): PAB Approval	1680000	1796600
5	Children (U Pry): PAB Approval	973955	1130286
6	Working Days	220	220
7	No. of cook-cum-helpers	91711	88296
8	Food Grain Lifted (in MTs)	Received at FP	38972.145

		Shops	
9	Food Grain utilised (in MTs)	Issued quantity to Schools	34880.902
10	Payment to FCI (Rs in lakh)		18.7 crores
11	Cooking Cost utilized (Rs in lakh)	29316.33	13587.07
12	Hon. to CCH (Rs in lakh)	8829.60	2055.45
13	MME (Rs in lakh)	459.98	248.12
14	TA (Rs in lakh)		
15	Implementation of RBSK		
15.1	Institutes covered under RBSK		45505
15.2	Health check-up (no. of children)		2707096
15.3	IFA administered (no. of children)		2191310
15.4	De-worming tablets (no. of children)		2581476
15.5	Spectacles (no. of children)		120681
16	Infrastructure facility available		
16.1	LPG facility		44826
16.2	Drinking Water		41353
16.3	Toilets		42502
17	No. of Institution Inspected		11736
18	Schools having LPG facility		44826
19	Annual Data Entry into MIS portal		43179
20	Monthly Data Entry into MIS portal		33802
21	Number of schools uploading data through AMS		40274
22	Number of children having Aadhaar		2458321
23	Cook-cum-helpers having bank a/c		All CCHs having their own bank accounts
24	CCH receiving hon. through bank a/c		Yes

Information on Fund flow during 2018-19

Component	Fund received		Funds released			
	Date	Amount	District		School	
			Date	Amount	Date	Amount
Cost of FG		1194.28		1194.28		
Cooking cost	13.06.2018 & 05.10.2018	15845.57	13.06.2018 & 05.10.2018	*		
Hon. to CCH		4565.66		*		
Transportation Asst.		298.57		298.57		

MME		269.06		*		
Kitchen-cum-store						
Kitchen Devices						

*The payment is made through centralized system.

Information on Kitchen-cum-stores and Kitchen devices

Component	Sanctioned	Constructed / Procured	In progress	Yet to construct / procure
Kitchen-cum-store	44316	17450	1874	5469
Kitchen devices (New)	47925	47925	0	0
Kitchen devices (Replacement)	47927	0	0	47927

*Reasons for delay in construction may be indicated.

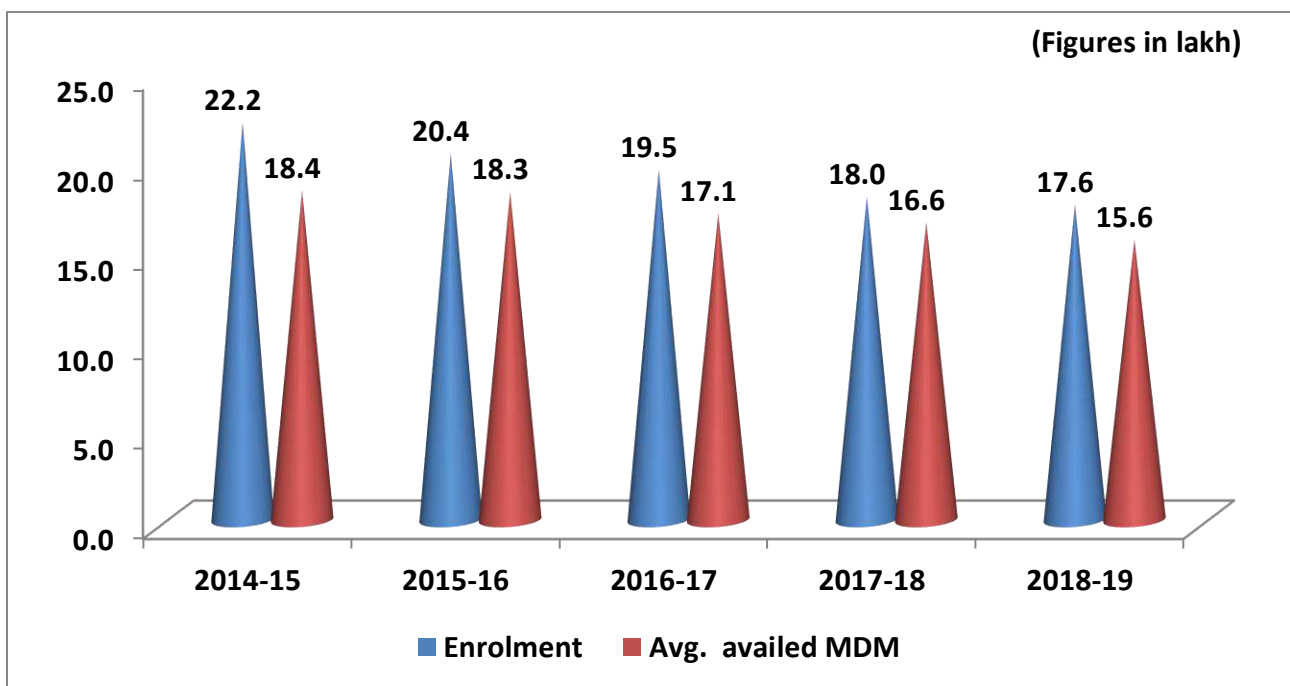
4.4 Review the coverage of children under MDM in Andhra Pradesh - Primary

The coverage of children at primary stage under Mid-Day Meal scheme has shown improvement over the years as it has gone up to 92% in 2017-18 from 83% in 2014-15.

Table 6: Enrolment, PAB Approval, and children availed MDM - Primary

Year	Enrolment	PAB approval	Avg. availed MDM	% availed vs. Enrol.	% availed vs. PAB approval
2014-15	2216678	2088865	1836648	83%	88%
2015-16	2042687	2000000	1828776	90%	91%
2016-17	1953667	1828776	1708605	87%	93%
2017-18	1803801	1740000	1660251	92%	95%
2018-19 (1 st QPR)	1759259	1683955	1563326	89%	93%

**Graph 1: Trends of Enrolment and Average number of children availing MDM:
Primary**



4.5 Review the coverage of children under MDM in Andhra Pradesh – Upper Primary

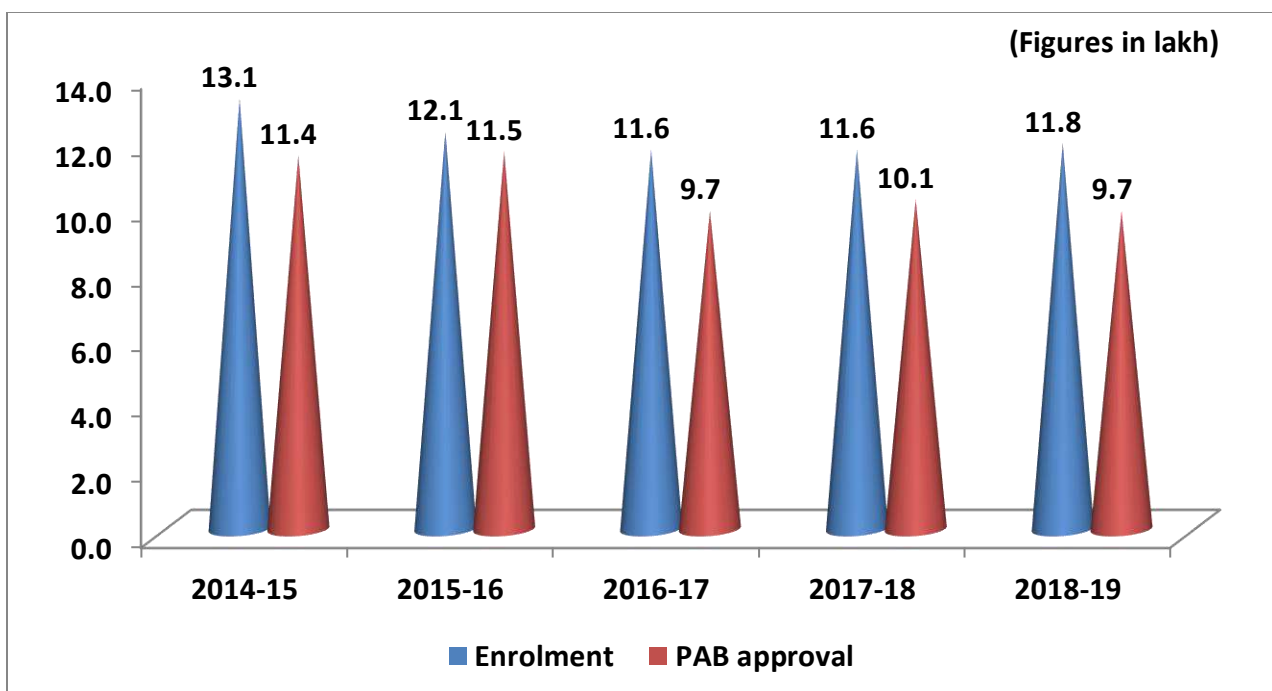
Unlike Primary, the decline in enrolment is not as much in upper primary stage, but at the same time in coverage of enrolled children at upper primary stage, as coverage has gone up to 82% from 84%. However it is pertinent to mention that the coverage is still below the Primary Stage of 92%. The trend in coverage is given as under:

Table 7: Enrolment, PAB Approval, and children availed MDM – Upper Primary

Year	Enrolment	PAB approval	Avg. availed MDM	% availed vs. Enrol.	% availed vs. PAB approval
2014-15	1314321	1140274	1080953	82%	95%
2015-16	1214319	1153168	972656	80%	84%
2016-17	1158123	971415	996946	86%	103%
2017-18	1158440	1006472	973025	84%	97%
2018-19 (1 st QPR)	1177267	970000	894995	76%	92%

Graph 2: Trends of enrolment and Average number of children availing MDM:

Upper Primary



4.6 Engagement of Cook-cum-helpers

The Programme Approval Board-Mid Day Meal has approved the engagement of 95,617 cook-cum-helpers against which the State has engaged 88,296 during 2017-18 for cooking and serving of MDM.

Table 8: Engagement of Cook-cum-Helpers vis-à-vis PAB Approval

Year	PAB approval	Engaged	% Engaged
2014-15	102099	97251	95%
2015-16	102099	92105	90%
2016-17	92105	92105	100%
2017-18	95617	88296	92%
2018-19	88296	88030	100%

Graph 3: Engagement of Cook-cum-Helpers vis-à-vis PAB Approval

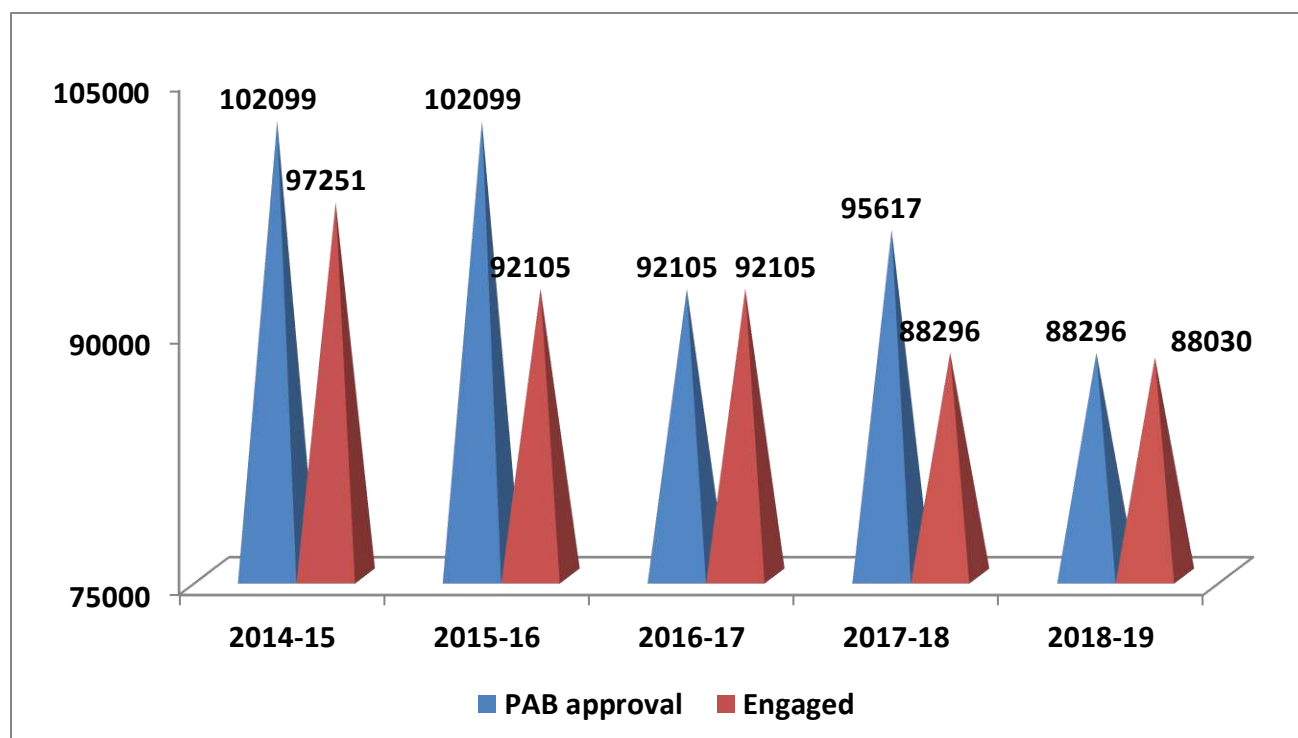


Table 9: Details of Allocation of funds and Expenditure against Central Assistance

(Rs. in Lakh)

Year	Cooking cost*		TA		Hon. to CCH		MME	
	Allocation	Util.	Allocation	Util.	Allocation	Util.	Allocation	Util.
2014-15	36454.8	31052.7	627.3	523.6	7657.4	7657.4	636.5	340.4
2015-16	37991.3	27863.3	512.5	471.6	6125.9	5526.3	528.4	397.6
2016-17	35718.8	34813.8	542.3	550.3	5526.3	3868.4	463.1	395.3
2017-18	35550.4	36879.1	536.4	462.4	5737.0	5297.8	470.8	377.3

*Central as well as State Share.

4.7: Component wise Details of Allocation and Expenditure

Table 10: Utilization of Cooking Cost (Central as well as State Share)

<i>(Rs in lakh)</i>				
Cooking Cost	2014-15	2015-16	2016-17	2017-18
Allocation of Funds	36454.8	37991.3	35718.8	35550.4
Expenditure	31052.7	27863.3	34813.8	36879.1

Graph 4: Utilization of Cooking Cost (Central as well as State Share)

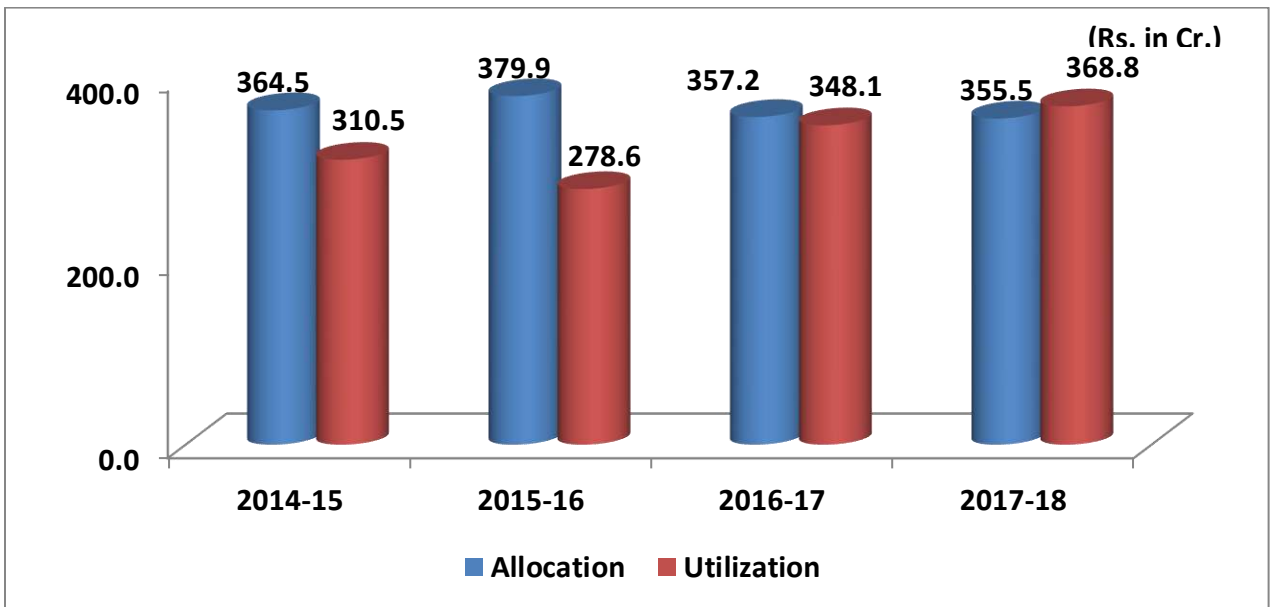


Table 11: Utilization of Honorarium to Cook-cum-helpers

<i>(Rs in lakh)</i>				
Hon. to CCH	2014-15	2015-16	2016-17	2017-18
Allocation of Funds	7657.4	6125.9	5526.3	5737.0
Expenditure	7657.4	5526.3	3868.4	5297.8

Graph 5: Utilization of Honorarium to Cook-cum-helpers

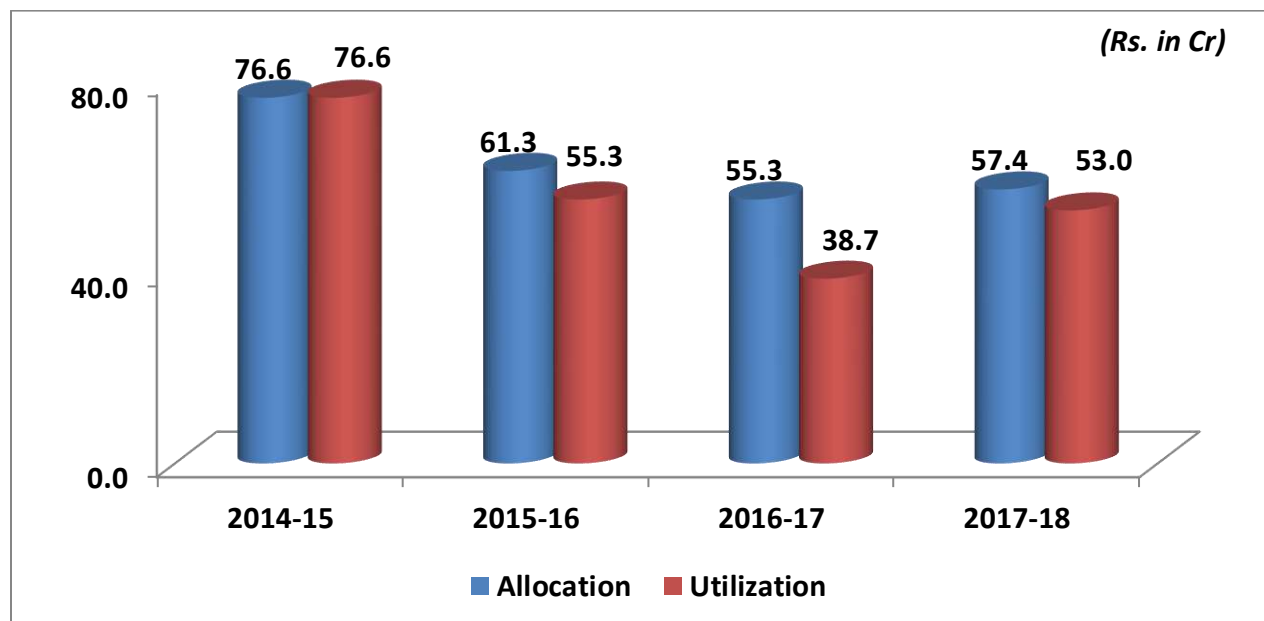


Table 12: Utilisation of Transportation Assistance

(Rs. in lakh)

Transportation Assistance	2014-15	2015-16	2016-17	2017-18
Allocation of Funds	627.3	512.5	542.3	536.4
Expenditure	523.6	471.6	550.3	462.4

Graph 6: Utilization of Transportation Assistance

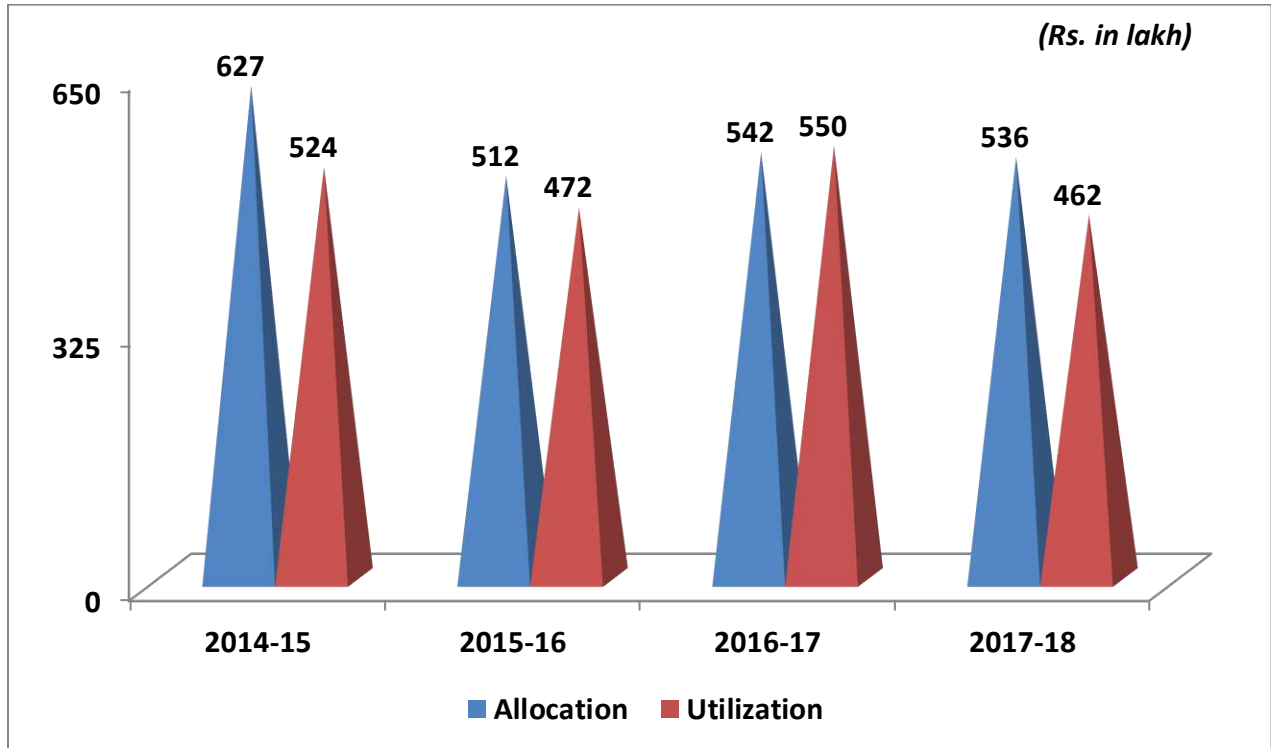
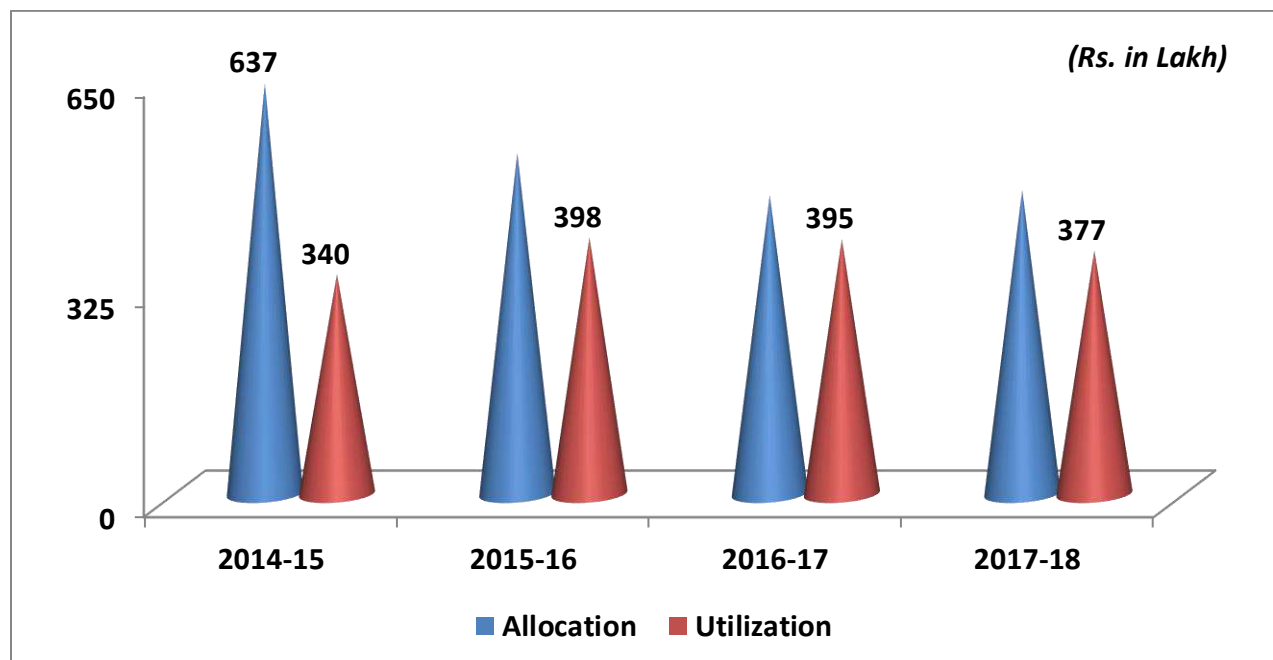


Table 13: Utilization of Management Monitoring and Evaluation (MME)

(Rs. in lakh)

MME	2014-15	2015-16	2016-17	2017-18
Allocation of Funds	636.5	528.4	463.1	470.8
Expenditure	340.4	397.6	395.3	377.3

Graph 7: Utilization of Management Monitoring and Evaluation (MME)



4.8 Basic Information on implementation of MDM in District Visakhapatnam

As per the information provided by the District Authorities the basic information on implementation of MDM in district Visakhapatnam is given below

S. N.	Indicator	PAB Approval / Total	Coverage / Utilization
1	No. of Institutions	3864	3864
2	Enrolment (pry)	132323	108432
3	Enrolment (Up. pry)	73910	48853
4	Children (Pry): PAB Approval	132136	108432
5	Children (U Pry): PAB Approval	75437	48853
6	Working Days	220	220
7	No. of cook-cum-helpers	6164	6179
8	Food Grain Lifted (in MTs)		2177.62MTs
9	Food Grain utilized (in MTs)		1793.033 MTs
10	Payment to FCI (Rs. in lakh)		Rs.81.66 lakhs bills received for 1 st & 2 nd Qtrs from FCI including Transportation. To be paid
11	Cooking Cost utilized (Rs. in lakh)		1323.97
12	Hon. to CCH (Rs. in lakh)		309.13

13	MME (Rs in lakh) Honorarium to the Dt.EO		1.66
14	TA (Rs in lakh)		Nil
15	Implementation of RBSK		
15.1	Institutes covered under RBSK	3864	3339
15.2	Health check-up (no. of children)	181611	181611
15.3	IFA administered (no. of children)	176900	176900
15.4	De-worming tablets (no. of children)	179666	179666
15.5	Spectacles (no. of children)	0	0
16	Infrastructure facility available		
16.1	LPG facility	3864	3864
16.2	Drinking Water	3864	3864
16.3	Toilets	3864	3864
17	No. of Institution Inspected		1756
18	Schools having LPG facility		3864
19	Annual Data Entry into MIS portal	3855	3852
20	Monthly Data Entry into MIS portal	3855	3852
21	Number of schools uploading data through AMS		3864
22	Number of children having Aadhaar		204826
23	Cook-cum-helpers having bank a/c		6179
24	CCH receiving hon. through bank a/c		6179

Information on Fund flow during 2018-19

Component	Fund received		Funds released			
	Date	Amount in lakhs	Block		School	
			Date	Amount in lakhs	Date	Amount in lakhs
Cost of FG	06.07.2018	35.60				
	08.10.2018	49.17				
Cooking cost					28.06.2018 To 08.10.2018	889.34
Hon. to CCH					28.06.2018 to 08.10.2018	175.80
Transportation Asst.	06.07.2018	8.81				
	08.10.2018	12.38				
MME					01.03.2018 to 30.09.2018	1.66

Kitchen-cum-store	17.10.2016	1302.00			21.02.2017 to 27.04.2018	1000.50
Kitchen Devices	Nil	Nil	Nil	Nil	Nil	Nil

Information on Kitchen-cum-stores and Kitchen devices

Component	Sanctioned	Constructed / Procured	In progress	Yet to construct/procure
Kitchen-cum-store	868	570	112	186
Kitchen devices (New)	Nil	Nil	Nil	Nil
Kitchen devices (Replacement)	Nil	Nil	Nil	Nil

4.9 Basic Information on implementation of MDM in District - East Godavari

As per the information provided by the District Authorities the basic information on implementation of MDM in district East Godavari is given below

S. N.	Indicator	PAB Approval / Total	Coverage / Utilization
1	No. of Institutions	4264	4229
2	Enrolment (pry)	161316 (1 – 5 pry 2017-18)	170158 (roll 1 – 5 pry 2018-19)
3	Enrolment (Up. pry)	134246 (6 – 8 UP 2017-18)	122702 (roll 6 – 8 UP 2018-19)
4	Children (Pry): PAB Approval (plan approval board)	143402 (1 – 5 pry 2018-19)	139730 (meal taken 1 – 5 pry 2018-19)
5	Children (U Pry): PAB Approval	87159 (6 – 8 UP 2018-19)	73059 (meal taken 6 – 8 UP 2018-19)
6	Working Days	220	220
7	No. of cook-cum-helpers	8230	7563
8	Food Grain Lifted (in MTs)	---	2768.819
9	Food Grain utilized (in MTs)	---	2768.819
10	Payment to FCI (Rs. in lakh)	---	83,89,521
11	Cooking Cost utilized (Rs. in lakh)		12,58,06,122

12	Hon. to CCH (Rs. in lakh)		3,73,82,000
13	MME (Rs in lakh) Honorarium to the D.EO		-
14	TA (Rs in lakh)		-
15	Implementation of RBSK		
15.1	Institutes covered under RBSK (Rastriya Bal SwasthyaKaryakram)		-
15.2	Health check-up (no. of children)		242336
15.3	IFA administered (no. of children)		--
15.4	De-worming tablets (no. of children)		188433
15.5	Spectacles (no. of children)		1014
16	Infrastructure facility available		
16.1	LPG facility		4229
16.2	Drinking Water		4229
16.3	Toilets		4229
17	No. of Institution Inspected		1391
18	Schools having LPG facility		4229
19	Annual Data Entry into MIS portal (Management information system)	4044	4044
20	Monthly Data Entry into MIS portal	4044	4044
21	Number of schools uploading data through AMS (Automatic monitoring system)		3757
22	Number of children having Aadhaar		352186
23	Cook-cum-helpers having bank a/c		7563
24	CCH receiving hon. through bank a/c		7563

Information on Fund flow during 2018-19

Component	Fund received		Funds released			
	Date	Amount	Block		School	
			Date	Amount	Date	Amount
Cost of FG	06-07-2018 15-10-2018	5097000 7040000	03-10-2018	5097000	--	--
Cooking cost	Direct payment to beneficiaries through online					
Hon. to CCH	Direct payment to beneficiaries through online					
Transportation Asst.	06-07-2018 15-10-2018	1262000 1773000	03-10-2018	1262000	---	---

MME	15-10-2018	100000	---	---	---	---
Kitchen-cum-store	--	---	---	---	---	---
Kitchen Devices	---	---	---	---	---	----

Information on Kitchen-cum-stores and Kitchen devices

Component	Sanctioned	Constructed / Procured	In progress	Yet to construct/procure
Kitchen-cum-store	1000	572	214	70
Kitchen devices (New)	-	-	-	-
Kitchen devices (Replacement)	-	-	-	-

CHAPTER: 5

Observations from the Field as per the ToR

5.1 Review of the fund flow mechanism

From September 2017 the payments of honorarium to CCHs and Cooking Cost are being made through Centralized Payment System in consultation with the AP Centre for Finance System and Services (APCFSS). The details of Children attended, opted and availed MDM are being captured through SMS/ Mobile App in co-ordination with NIC and AP Online (Automated Monitoring System). Based on the data collected through Automated Monitoring System the Cooking Cost and honorarium to cook-cum-helpers is being released directly from State to the Agencies/ CCHs.

The flow of funds released under Mid Day Meal Scheme during 2018-19 is given below:

State Level

Component	Fund received		Funds released (Rs in lakh)			
			District		School	
	Date	Amount	Date	Amount	Date	Amount
Cost of FG	13.06.2018 & 05.10.2018	1194.28	13.06.2018 & 05.10.2018	1194.28		
Cooking cost		15845.57		*		
Hon. to CCH		4565.66		*		
Transportation Asst.		298.57		298.57		
MME		269.06		*		

*The payment is made through centralized system.

District – Visakhapatnam

Component	Fund received		Funds released			
			Block		School	
	Date	Amount in lakhs	Date	Amount in lakhs	Date	Amount in lakhs
Cost of FG	06.07.2018	35.60				
	08.10.2018	49.17				
Cooking cost					28.06.2018 to 08.10.2018	889.34
Hon. to CCH					28.06.2018 to 08.10.2018	175.80
Transportation Asst.	06.07.2018	8.81				
	08.10.2018	12.38				
MME					01.03.2018 to 30.09.2018	1.66
Kitchen-cum-store	17.10.2016	1302.00			21.02.2017 to 27.04.2018	1000.50
Kitchen Devices	Nil	Nil	Nil	Nil	Nil	Nil

District – East Godavari

Component	Fund received		Funds released			
			Block		School	
	Date	Amount	Date	Amount	Date	Amount
Cost of FG	06-07-2018	5097000	03-10-2018	5097000	--	--
	15-10-2018	7040000				
Cooking cost	Direct payment to beneficiaries through online					
Hon. to CCH	Direct payment to beneficiaries through online					
Transportation Asst.	06-07-2018	1262000	03-10-2018	1262000	---	---
	15-10-2018	1773000				
MME	15-10-2018	100000	---	---	---	---
Kitchen-cum-store	--	---	---	---	---	---
Kitchen Devices	---	---	---	---	---	---

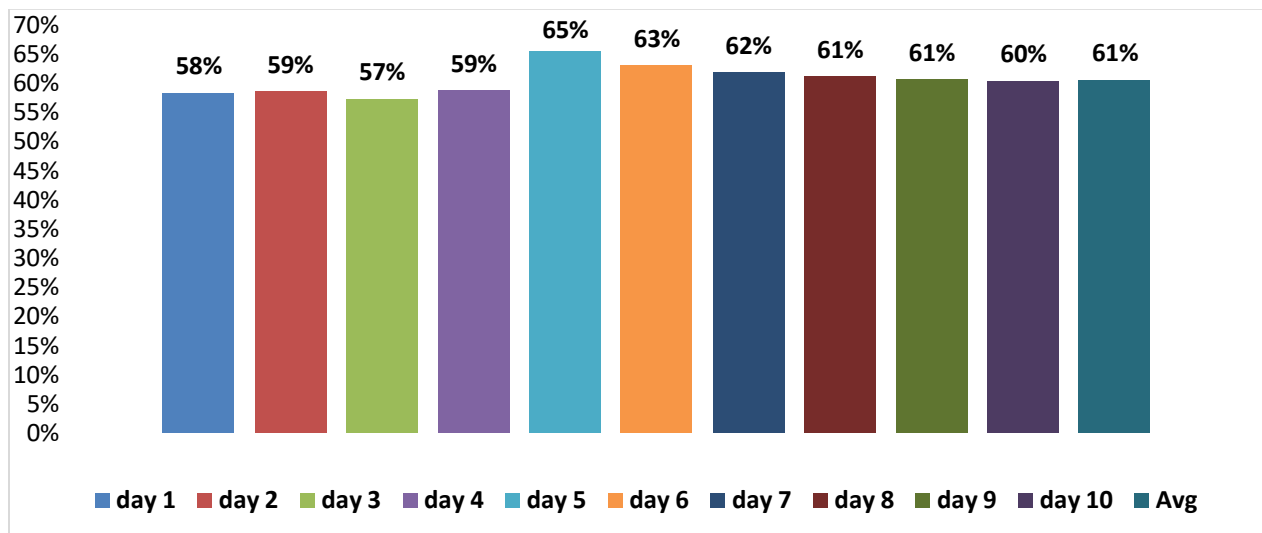
The Joint Review Mission observed during its visit to the schools that funds towards cooking cost and honorarium to cook-cum-helpers were released up to the month of August, 2018 in district Visakhapatnam and up to the month of September, 2018 in East Godavari. It was informed by the State officials that the State is now e-transferring the funds from the State level directly to the implementing agencies. It was also informed that this delay is because of change in bank accounts of some agencies.

JRM appreciated the efforts of State Government in releasing funds directly to the implementing agencies. However, the State to ensure that all the implementing agencies received funds within the stipulated time.

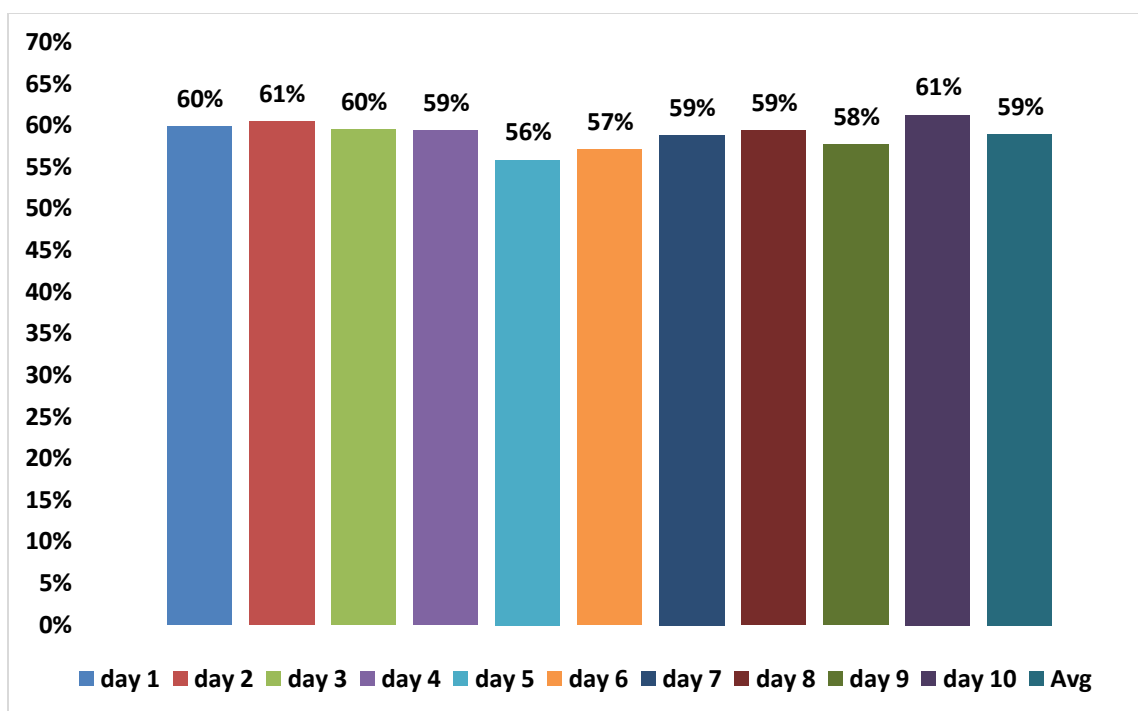
5.2. Review of the coverage of the scheme

The Review Mission visited 53 schools from 12th to 17th November, 2018. The cumulative enrolment in these schools was 14125. The average attendance in these schools for last 10 days was 11650 (82%) out of which 8472 (73% to attendance and 60% to enrolment) children availed the mid day meal on an average during the last 10 days.

Graph 8: Day wise average students availing MDM in the visited schools in district - Visakhapatnam



District – East Godavari



Enrolment, Attendance and Average availing MDM in visited schools

District	Enrolment	Average attendance during last 10 days	Average availing MDM during last 10 days	% availing MDM vis-à-vis Attendance
Visakhapatnam	8990	7365	5442	74%
East Godavari	5135	4285	3030	71%
Total	14125	11650	8472	73%

It is clearly evident from the above data that 74% of the students attending schools are availing MDM on an average basis in district Visakhapatnam, whereas the ratio decreased slightly in East Godavari to 71%.

District - Visakhapatnam

Type of kitchen	Enrolment	Average attendance during last 10 days	Average availing MDM during last 10 days	% availing MDM vis-à-vis Attendance
School based	5763	4565	3545	78%
NGO	3227	2800	1896	68%
Total	8990	7365	5442	74%

The analysis of data with regard to schools where meal is cooked by SHGs vis-à-vis schools covered through centralised kitchens in district Visakhapatnam reveal that there is a huge difference of 10%. In schools having school based kitchen 78% of the present children in school are availing MDM, whereas only 68% of the present children are availing MDM in case of meals being served through centralised kitchen.

District - East Godavari

Type of kitchen	Enrolment	Average attendance during last 10 days	Average availing MDM during last 10 days	% availing MDM vis-à-vis Attendance
School based	2676	2157	1556	72%
NGO	2459	2128	1475	69%
Total	5135	4285	3030	71%

The difference with regard to children availing MDM on account of mode of kitchen is less in district East Godavari. As can be seen in the above data 72% of the present children in a school are availing MDM, when it is cooked in the school based kitchen, whereas 69% of the present children in a school avail MDM in case of supply of meals from centralised kitchen.

5.3 Review of the Management structure

Education Department is nodal department for implementation of Mid-Day Meal Scheme, which coordinates with different departments like Food Department, Food Corporation of India, Panchayati Raj Department, Health and other Departments for smooth implementation of Mid-Day Meal Scheme in the State. State Steering-cum-monitoring Committee has been constituted under the chairmanship of Chief Secretary, Govt. of Andhra Pradesh to oversee the implementation and performance of the Scheme.

Mid-day-Meal is being cooked and served in the schools by the Self-Help Groups and being served to the students under the supervision of the teachers of the school. In every school one teacher taste the meal on rotation basis before serving to the students. The SMC members and officers of the Mandal Level and District Level are supervising the scheme implementation. The Joint Review Mission observed that schools were being inspected regularly on monthly basis by the Mandal Education Officers and Cluster Resource persons. The District officers also inspected the schools time to time. However, it was also observed that the inspection needs to be more focused as most of the times inspecting officials are not providing adequate attention to vital parameters in implementation of MDM. Some of the Mandal Education Officers were unaware about the norms of Mid Day Meal Scheme. None of the officials was familiar about the quantities of food to be served under Mid Day Meal scheme.

The JRM also observed that too many records are maintained at schools for Mid Day Meal. It was also noticed that schools were using different formats for recording information on implementation of MDM in district Visakhapatnam. In district East Godavari, schools are maintaining the information regarding utilisation of food grains, even though meals are served from the centralised kitchens. It is recommended to design a standardised proforma to capture information on implementation of MDM, this will save precious time of teachers.

The JRM also recommends designing a proforma for inspections and after every inspection a copy of the filled format should be shared with District and State authorities, in order to keep a close watch on the effectiveness of inspections. State may devise a mechanism for follow up visits. State Government may also constitute State level Review Missions to oversee the implementation of the scheme.

5.4 Review the delivery mechanism of food grains from State to Schools

The Food Corporation of India (FCI) supplies Fair Average Quality (FAQ) food grains under Mid Day Meal Scheme. Andhra Pradesh State Civil Supplies Corporation is the nodal agency for lifting the food grains from the godowns of Food Corporation of India (FCI) and delivers it to schools / implementing agencies through Fair Price Shop Dealers and Mandal Level Stock points. Food grains are being stored in the godowns of District Civil Supplies Corporation and at Mandal level stock points and in the school building at school level.

As the per the MDM guidelines, Transportation Assistance @ Rs 75 per quintal is provided for transportation of food grains from FCI godowns to the school door steps. The JRM observed that the fair price shop dealers are taking the gunny bags of food grains in order to supply the food grains from fair price shop to schools. The State may take up the issue with Civil Supplies Department and ensure that the gunny bags are not taken back by the FPS shop dealer as means of transporting food grains from FPS shop to schools.

For delivery of Food grains the E-POS system has been introduced in the State. Under E-POS system the HM/SHG member, the Cook-cum-Helper (CCH), draw the Food grains, oil and pulses directly from the nearest Fair Price Shop through Aadhar identification as per requirement.

The JRM team appreciated that buffer stock of food grains was maintained at every school. However, the quality of rice was not up to the mark in some schools. The MDM guidelines provides for joint inspection at the time of lifting of food grains from the FCI godown. It is recommended to ensure that these inspections are done at the time of lifting so that quality of the rice is ensured.

The JRM team also observed that in district East Godavari the task of cooking of MDM is being allotted to centralised kitchens from 1st November. The process of handing over the food grains from schools to centralised kitchens is also going on. It is advised to closely monitor the whole process to ensure smooth transition of food grains from schools to centralised kitchen.

5.5 Review the smooth implementation of the Scheme with particular reference to Interruptions.

JRM team did not observe any interruption in the mid day meal.

5.6 Review the Creation of Capital Assets

Component	Sanctioned	Constructed / Procured	In progress	Yet to construct / procure
Kitchen-cum-store	44316	17450	1874	5469
Kitchen devices (New)	47925	47925	0	0
Kitchen devices (Replacement)	47927	0	0	47927

5.7 Construction of Kitchen-cum-stores

Central assistance of Rs. 33444.22 Lakh has been released for construction of 44875 Kitchen-cum-Stores. As on 31.3.2018, construction has been completed for 17450 Kitchen-cum-stores and construction work is in progress for 1874 kitchen-cum-stores. The State Government has not started any construction work for kitchen-cum-stores in 5469 schools. The State has requested to surrender 19523 kitchen-cum-stores (which were sanctioned at a flat rate of Rs 60000 per kitchen) and to re-sanction the same as per the plinth area norm and State schedule of rates.

It was observed during the field visit that the MDM is cooked in classrooms or in open area. The JRM recommended for construction of remaining kitchen-cum-stores in quick time. In this connection it is advised that the State may adopt the model of Maharashtra, where prefabricated kitchen-cum-stores have been installed in schools for Mid Day Meal Scheme.

5.8 Procurement/Replacement of Kitchen Devices

The non-recurring Central assistance of Rs. 2396.26 lakh has been released towards procurement of 47925 units of kitchen devices during 2006-07 to 2017-18. The State has reported that all the units of kitchen devices have been procured. 47927 units of kitchen devices

were also sanctioned during 2012-13 as replacement of kitchen devices, however State has not yet procured these kitchen devices.

As per MDM guidelines, non recurring central assistance is admissible to all the schools for procuring cooking utensils, serving devices and storage bins under Mid Day Meal Scheme. The JRM found that most of the schools had adequate number of cooking and serving utensils. It is also appreciated that community has provided eating plates in almost all the visited schools for all children. However, storage bins for food grains and other ingredients were not available in almost all the visited schools. It is recommended to provide storage bins for safe storage of food grains and other ingredients.

5.9 Review the convening the meetings of District Level Committee under Chairpersonship of senior most Member of Parliament (LS)

The MDM guidelines provides for monitoring structures at various levels for monitoring and supervision of the scheme. The MHRD has constituted a District level committee under the chairpersonship of the senior most Member of Parliament (Lok Sabha) in the district. The committee is supposed to meet at least once in a quarter. As per the information provided by the district authorities one meeting of this committee has taken place in both the visited districts. Similarly, 1 meeting of the District Level Monitoring Committee under the chairpersonship of District Magistrate held in both Visakhapatnam and East Godavari.

5.10 Review the Management Information System (MIS)

Web-enabled Management Information System for Mid Day Meal (MIS-MDM) was launched in June, 2012 for monitoring of the scheme. The States are required to make monthly as well as annual data entries in the MIS-MDM. The State has made 74% monthly data entries. However, 95% annual data entries have been made in the said portal. The State may make entries for the remaining schools also.

As per the information provided by the State 88% of the schools are furnishing the information on number of meals served on every school day through mobile app. The JRM team observed that although the information is being submitted by the schools through MIS and AMS, but this

information is not fully utilized for monitoring purposes. It is recommended that proper analysis being done of the data submitted through AMS and MIS and the same may then be used for focused inspections.

5.11 Review the implementation of Automated Monitoring System

Andhra Pradesh has developed an android based MDM-APP for submission of general attendance, meals taken information by all the schools every day. There is also the provision to submit general attendance, meals taken data through SMS by Headmasters. MDM bills are being generating online basing on the information regarding meals taken submitted by the Headmasters through MDM-APP / SMS. The information collected on number of meals served through IVRS is uploaded on the AMS portal. Out of 45692 schools, the data is being reported by 40274 schools. JRM team personally saw the reporting under this App on day of visit. It is recommended that the State may ensure daily reporting by 100% schools on MDM beneficiaries through AMS on the central server.

5.12 Convergence with RastriyaBalSwasthyaKaryakram for health check-up, supplementation of micronutrients under WIFS & deworming medicine under National deworming day and health checkups and supply of spectacles to children suffering from refractive errors.

Mid Day Meal Guidelines envisage health check up of the students through RashtriyaBalSwasthyaKaryakaram (RBSK) under National Health Mission of the Ministry of Health & Family Welfare. The medical teams have been conducting the health check up of the children in all the schools. Iron Folic Acid capsules and de-worming tablets were also distributed to the children. However, School Health Cards (SHC) of the students was not kept by the schools. The Headmasters/Principals of the schools informed that Health authorities had taken the SHCs with them.

District – Visakhapatnam

The District Medical & Health Officer, Visakhapatnam has furnished the following information on implementation of Rastriya Bal SwasthyaKaryakram (RBSK) programme:

Sl. No	Name of the Month	No. of Institutions Covered	No. of children covered under Health Check-up	No. of children IFA Administered	No. of Children covered Deworming tablets
1	APRIL	612	54134	327843	Deworming Day twice in yearly February & August Months
2	JUNE	683	57395	332767	-
3	JULY	756	57947	331423	-
4	AUGUST	699	54581	334758	327842
5	SEPTEMBER	657	64356	332245	-
6	OCTOBER	544	58917	339512	-

District – East Godavari

The District Medical & Health Officer, East Godavari has furnished the following information on implementation of Rastriya Bal SwasthyaKaryakram (RBSK) programme:

Sl. No	Name of the Month	No. of Institutions Covered	No. of children covered under Health Check-up	No. of children IFA Administered	No. of Children covered Deworming tablets
1	APRIL	3631	262227	231797	208069
2	JUNE	3536	218488	125807	114567
3	JULY	3651	240719	209304	221598
4	AUGUST	3668	231842	231973	205673
5	SEPTEMBER	3639	242336	221561	188433
6	OCTOBER	3631	262227	231797	208069

5.13 Operationalization of Mid-Day Meal Rules, 2015

The State Government has issued instructions to all the field functionaries for implementation of the MDM Rules'2015 scrupulously duly communicating a copy of the Gazette Publication issued by the Government of India. It is submitted that, as per the National Food Security Act'2013 (20 of 2013), Cooked food testing labs are not available. The available lab in Visakhapatnam shall check the quality of the ingredients only. Cooked food testing labs are not available. The available lab in Visakhapatnam shall check the quality of the raw-ingredients only. During the previous year samples of ingredients were sent for checking and the lab issued certification stating as "not un safe".

5.14 Enrolment of children and Cook-cum-Helpers under Aadhaar

Department of School Education & Literacy has advised all States/UTs in February, 2017 for enrolment of the school children under Aadhaar. As per the information provided more than 99% of the enrolled children and 100% cook-cum-helpers are having Aadhaar card. In order to have accurate enrolment data the Aadhar Seeded Child Info and Mid Day Meal data are being integrated in the State. The cooking cost is being paid based on the Aadhaar based information submitted through the mobile app. The school U-DISE code and the nearest Fair Price shop code are interlinked to CCH (based on Aadhaar Number) for receiving food grains, oil and condiments.

5 Payment of Honorarium to Cook-cum-Helpers

The JRM observed that in most of visited schools honorarium to cook-cum-helpers is being paid up to the month of September in district East Godavari and upto the month of August in district Visakhapatnam. Since the CCHs belong to socio-economically challenged segment of the society, the payment of honorarium should be made regularly on monthly basis.

The JRM team also observed that payment of honorarium is being made through e-transfer directly from the State level, which is appreciable.

5.15 System of Storage food grains and other ingredients

Buffer stock of food grains was available in all the visited schools. However, storage bins are not provided to schools. It is recommended to provide storage bins to schools for safe and hygienic storage of food grains and other ingredients.

5.16 Role of Teachers in Mid-Day Meal Scheme.

As per the MDM guidelines, the role of the teacher is to organize, supervise and ensure that the mid day meal is served in an orderly manner. The JRM interacted with the teachers in the visited schools. Almost all the teachers informed that they are able to keep the MDM record easily because Self Help Groups and Cook-cum-Helpers are responsible for cooking and serving the mid day meal. This has relieved them for attending to their teaching and learning activities. The JRM team noticed that different formats were used for recording of information on MDM in district Vishakhapatnam. It was observed that too many records are maintained at schools for MDM. It is recommended to standardise and simplify the format for record keeping.

5.17 Testing of meals

The Mid Day Meal Rules, 2015 envisage that randomly selected food samples by the State Food & Drugs Department would be sent for testing of quality as well as quantity of meals. The JRM could not get information from any of the visited schools about the food samples having been collected by the State Food & Drugs Department for testing by accredited Labs. The State may ensure that provisions of MDM Rules, 2015 are complied by sending randomly selected samples to the accredited labs for testing.

5.18 Awareness of the Scheme

Menu of MDM and MDM logo were displayed in majority of the visited schools. However, Entitlement of children under MDM was not displayed in most of the visited schools. In some schools during interaction with the community some people informed that they at times visit schools for seeing the implementation of MDM. However, they could not comment about the

quantity of meals being served as they were not sure about the norms. It is recommended to display the MDM logo, menu and entitlement of children under MDM at a visible place, preferably on the outer walls of the school, so that these are visible to all.

5.19 Involvement of NGOs

At present in district East Godavari 4 NGOs i.e. Sri Buddhavarapu Charitable Trust, Polamuru, Akshaya Patra Foundation, Kakinada, ISKCON food relief foundation and Alluri Seetharamaraju Educational Society organization. In Visakhapatnam, ISKCON and Akshayapatra Foundation are cooking and serving Mid Day Meal. 78052 children studying in 421 schools in East Godavari and 38400 children studying in 150 schools are served MDM through centralised kitchens.

The JRM team observed that meal was supplied to schools 2-3 hours prior to the lunch time. The quantity of cooked meal was also noticed very less than the prescribed norms especially in district Visakhapatnam.

CHAPTER: 6

Nutritional and Anthropometric Assessment

6. Nutritional Anthropometry

The data related to anthropometric measurements of children is given in Tables 14 (A, B and C). The data shows that the height and weight of both girls and boys are found to be below the standard height and weight expected for that age. However, a gradual increase in both height and weight is observed in children from age 5 to 15 years, which is a positive sign. Regular intake of eggs and dhal would help the children to meet their protein requirement during the growth spurts. Very few percentages of children were found to be of more than expected weight and height.

Table14 (A): Nutritional Anthropometry as per Age and Gender (District Visakhapatnam)

(Visakhapatnam)										
			Height (cm)				Weight (kg)			
Age	Boys	Girls	WHO Std. Ht/Age	Boys	WHO Std. Ht/Age	Girls	WHO Std. Wt/Age	Boys	WHO Std. Wt/Age	Girls
5	16	26	110.0	105±6.88	109.4	108.3±5.79	18.30	15.5±2.27	16.40	17.12±3.01
6	27	32	116.0	112.6±6.18	115.10	111.7±8.05	20.50	17.17±2.27	18.70	17.4±4
7	22	31	121.7	118.5±4.6	120.80	117±7.44	22.90	18.71±2.1	21.20	19.57±3.27
8	21	32	127.3	123.2±7.15	126.60	123.14±7.34	25.40	21.13±3.47	24.00	22.04±3.15
9	34	48	132.6	129.7±6.77	132.50	126.49±9.54	28.10	23.94±3.35	27.20	23.7±6.25
10	38	56	137.8	133.76±7.31	138.60	133.2±7.23	31.20	28.15±6.57	31.00	27.9±5.6
11	40	49	143.1	137.2±9.02	145.00	140.16±7.30	34.70	29.63±8.48	35.40	30.78±6.21
12	58	45	149.1	144.4±10.9	151.20	144.9±8.58	39.00	34.15±8.7	39.80	35.38±8.64
13	32	27	156.0	149.43±9.05	156.40	148.48±9.41	43.30	38.07±10.03	43.60	40.14±7.69
14	13	10	163.2	152.16±6.11	159.80	149.6±5.9	48.20	42.9±9.89	46.40	45.25±7.97
15	3	9	169.0	161±3.51	161.70	143.1±7.5	53.10	51.5±8.04	48.40	37.5±2.87

Table 14 (B): Nutritional Anthropometry as per Age and Gender (District East Godavari)

(East Godavari)										
Age	N		Height (cm)				Weight (kg)			
	Boys	Girls	WHO Std. Ht/Age	Boys	WHO Std. Ht/Age	Girls	WHO Std. Wt/Age	Boys	WHO Std. Wt/Age	Girls
5	14	5	110.0	109.71±4.49	109.4	109.4±4.97	18.30	17.21±1.80	16.40	17.8±2.1
6	8	15	116.0	112.62±4.77	115.10	114.4±3.50	20.50	17.875±2.16	18.70	18.4±1.14
7	19	20	121.7	119.14±5.26	120.80	118±7.032	22.90	19.94±3.27	21.20	21.2±3.42
8	13	11	127.3	122.76±5.71	126.60	128.2±5.540	25.40	21.92±3.81	24.00	27.4±5.02
9	20	24	132.6	132.21±7.30	132.50	128.2±4.14	28.10	27.28±4.04	27.20	26.4±5.12
10	35	29	137.8	133.64±5.99	138.60	135.8±3.563	31.20	27.85±5.06	31.00	29.2±1.92
11	36	37	143.1	141.07±7.09	145.00	135.4±10.59	34.70	31.78±4.99	35.40	30±3.53
12	47	47	149.1	147.21±6.79	151.20	148±6.51	39.00	36.28±6.37	39.80	40.8±7.46
13	32	22	156.0	149.28±9.16	156.40	150±7.61	43.30	39.5±12.34	43.60	35.2±6.37
14	13	6	163.2	151.84±8.20	159.80	152.8±5.54	48.20	42.42±9.21	46.40	39.3±6.07
15	4	3	169.0	150.25±10.75	161.70	155±3.46	53.10	39±7.34	48.40	44.6±0.577

Table 14(C): Nutritional Anthropometry as per Age and Gender (Andhra Pradesh)

(Andhra Pradesh)										
			Height (cm)				Weight (kg)			
Age	Boys	Girls	WHO Std. Ht/Age	Boys	WHO Std. Ht/Age	Girls	WHO Std. Wt/Age	Boys	WHO Std. Wt/Age	Girls
5	29	30	110.0	107.3±6.22	109.4	108.53±5.46	18.30	16.32±2.20	16.40	17.2±2.87
6	37	49	116.0	112.6±5.85	115.10	111.24±7.46	20.50	17.32±2.23	18.70	17.4±3.67
7	40	41	121.7	118.78±5.77	120.80	118.10±6.79	22.90	19.3±2.89	21.20	20.45±4.06
8	35	43	127.3	123.04±6.58	126.60	124.26±7.22	25.40	21.42±3.57	24.00	22.82±3.62
9	54	72	132.6	130.56±6.8	132.50	126.6±8.06	28.10	24.77±3.89	27.20	24.08±5.71
10	73	84	137.8	133.54±7.76	138.60	134.15±7.24	31.20	28.26±6.59	31.00	28.57±5.43
11	76	86	143.1	139.34±8.83	145.00	139.86±7.58	34.70	31.45±8.11	35.40	31.54±6.9
12	106	92	149.1	144.64±9.79	151.20	145.29±7.84	39.00	34.87±8.61	39.80	36.3±8.38
13	64	49	156.0	148.57±9.07	156.40	148.24±8.44	43.30	38.1±10.16	43.60	39.48±7.51
14	25	16	163.2	152±7.12	159.80	150.81±5.64	48.20	42.66±9.34	46.40	43.87±7.86
15	7	11	169.0	155±9.84	161.70	146.36±8.52	53.10	44.35±9.65	48.40	39.45±4.13

6.2 BMI:

Using BMI Z score prevalence of malnutrition among school children was assessed and is presented in Table 15 (A, B, C). Nearly 48.13 per cent boys and 56.5 per cent girls had normal nutritional status. It was found that 47.5 per cent boys and 36.6 per cent girls were below normal nutritional status with lower BMI values. Up to 3.8 per cent boys and 5.6 per cent girls were overweight.

Table 15 (A): BMI (Z scores) of school children as per Gender (District Visakhapatnam)

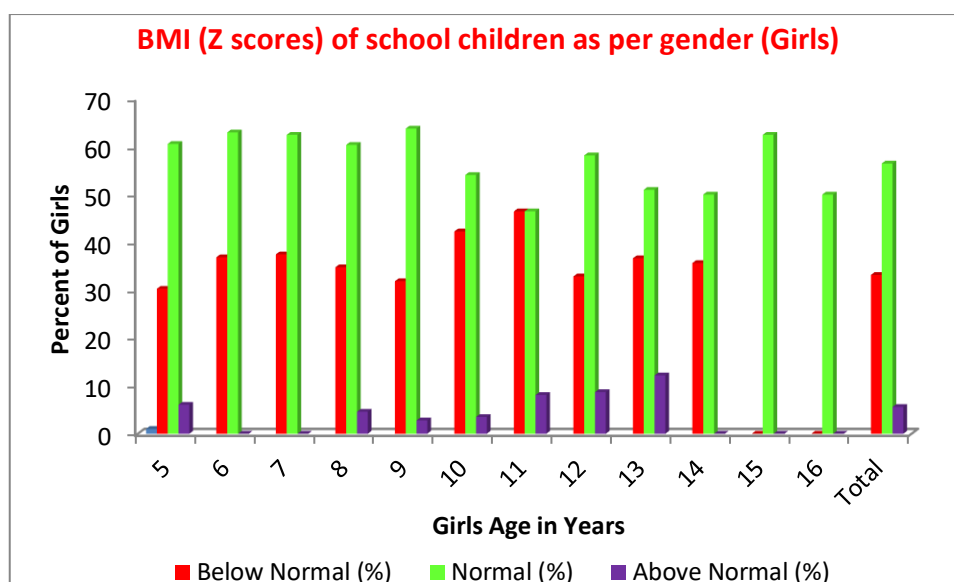
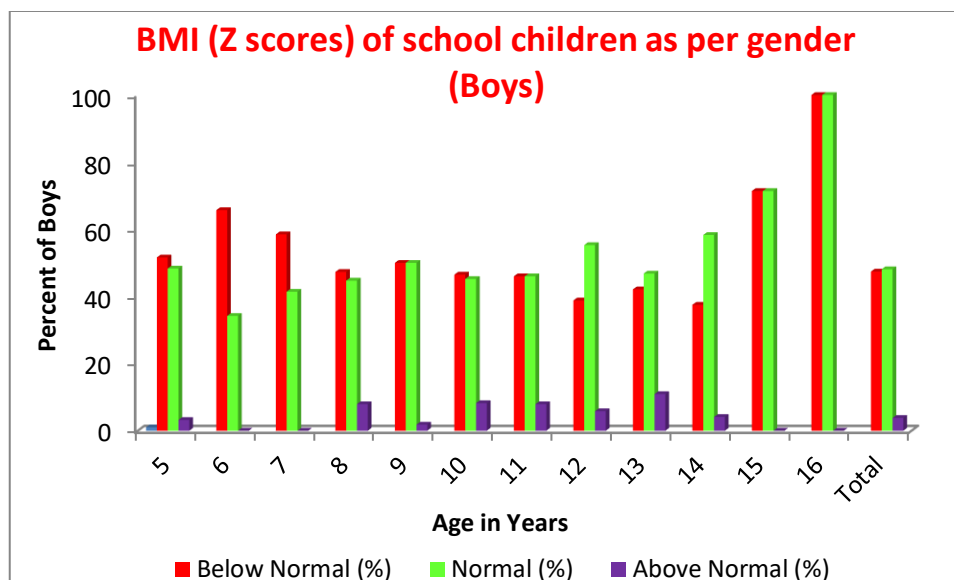
Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	18	26	12 (66.7)	9 (34.6)	6 (33.3)	15 (57.7)	0	2 (7.7)
6	26	32	19 (73.1)	11 (34.4)	7 (26.9)	21 (65.6)	0	0
7	21	21	15 (71.4)	8 (38.1)	6 (28.6)	13 (61.9)	0	0
8	21	32	12 (57.1)	13 (40.6)	9 (42.9)	18 (56.3)	0	1 (3.1)
9	34	48	17 (50)	17 (35.4)	17 (50)	29 (60.4)	0	2 (4.2)
10	38	55	20 (52.6)	28 (50.9)	15 (39.5)	24 (43.6)	3 (7.9)	3 (5.5)
11	40	49	21 (52.5)	25 (51)	17 (42.5)	22 (44.9)	2 (5)	2 (4.1)
12	59	45	24 (40.7)	20 (44.4)	32 (54.2)	21 (46.7)	3 (5.1)	4 (8.9)
13	32	27	14 (43.8)	9 (33.3)	16 (50)	14 (51.9)	2 (6.3)	4 (14.8)
14	13	9	4 (30.8)	3 (33.3)	9 (69.2)	4 (44.4)	0	2 (22.2)
15	4	7	4 (100)	0	2 (50)	5 (71.4)	0	0
16	1	1	1 (100)	0	0	1 (100)	0	0
Total	307	352	163 (53.1)	143 (40.6)	136 (44.3)	187 (53.1)	10 (3.3)	20 (5.7)

Table 15 (B): BMI (Z scores) of school children as per Gender (District East Godavari)

Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	13	7	4 (30.8)	1 (14.3)	9 (69.2)	5 (71.4)	1 (7.7)	0
6	9	14	4 (44.4)	6 (42.9)	5 (55.6)	8 (57.1)	0	0
7	20	19	9 (45)	7 (36.8)	11 (55)	12 (63.2)	0	0
8	17	11	6 (35.3)	2 (18.2)	8 (47.1)	8 (72.7)	3 (17.6)	1 (9.1)
9	20	24	10 (50)	6 (25)	10 (50)	17 (70.8)	1 (5)	0
10	35	30	14 (40)	8 (26.7)	18 (51.4)	22 (73.3)	3 (8.6)	0
11	36	38	14 (38.9)	15 (39.5)	18 (50)	18 (47.4)	4 (11.1)	5 (13.2)
12	44	46	16 (36.4)	10 (21.7)	25 (56.8)	32 (69.6)	3 (6.8)	4 (8.7)
13	32	22	13 (40.6)	9 (40.9)	14 (43.8)	11 (50)	5 (15.6)	2 (9.1)
14	11	5	5 (45.5)	2 (40)	5 (45.5)	3 (60)	1 (9.1)	0
15	3	1	1 (33.3)	0	3 (100)	0	0	0
16	1	2	1 (100)	0	2 (100)	0	0	0
Total	241	219	97 (40.2)	66 (30.13)	128 (53.11)	136 (52.1)	21 (8.71)	12 (5.47)

Table 15 (C): BMI (Z scores) of school children as per Gender (Andhra Pradesh)

Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	31	33	16 (51.6)	10 (30.3)	15 (48.3)	20 (60.6)	1 (3.2)	2 (6.06)
6	35	46	23 (65.7)	17 (36.9)	12 (34.2)	29 (63.0)	0	0
7	41	40	24 (58.5)	15 (37.5)	17 (41.4)	25 (62.5)	0	0
8	38	43	18 (47.3)	15 (34.8)	17 (44.7)	26 (60.4)	3 (7.9)	2 (4.6)
9	54	72	27 (50)	23 (31.9)	27 (50)	46 (63.8)	1 (1.8)	2 (2.78)
10	73	85	34 (46.5)	36 (42.3)	33 (45.2)	46 (54.1)	6 (8.2)	3 (3.5)
11	76	86	35 (46.0)	40 (46.5)	35 (46.0)	40 (46.5)	6 (7.9)	7 (8.1)
12	103	91	40 (38.8)	30 (32.9)	57 (55.3)	53 (58.2)	6 (5.8)	8 (8.7)
13	64	49	27 (42.1)	18 (36.7)	30 (46.8)	25 (51.0)	7 (10.9)	6 (12.2)
14	24	14	9 (37.5)	5 (35.7)	14 (58.3)	7 (50)	1 (4.1)	2 (14.2)
15	7	8	5 (71.42)	0	5 (71.4)	5 (62.5)	0	0
16	2	3	2 (100)	0	2 (100)	1 (50)	0	0
Total	548	571	260 (47.4)	209 (36.6)	264 (48.1)	323 (56.5)	21 (3.8)	32 (5.6)



Graph 9: Percentage for BMI (Z scores) of school children as per gender

6.3. Height for Age

Z scores (Table 16 A, B, C) reveals that nearly 40 per cent boys and 45 per cent girls had normal height for age. Nearly 54 per cent boys and 50 per cent girls were below normal height i.e. these children did not achieve normal height as per their age. This data depicts under nutrition. This condition needs to be corrected by proper nutritional care.

Table 16 (A): Height for Age (Z scores) of school children as per gender

(District Visakhapatnam)

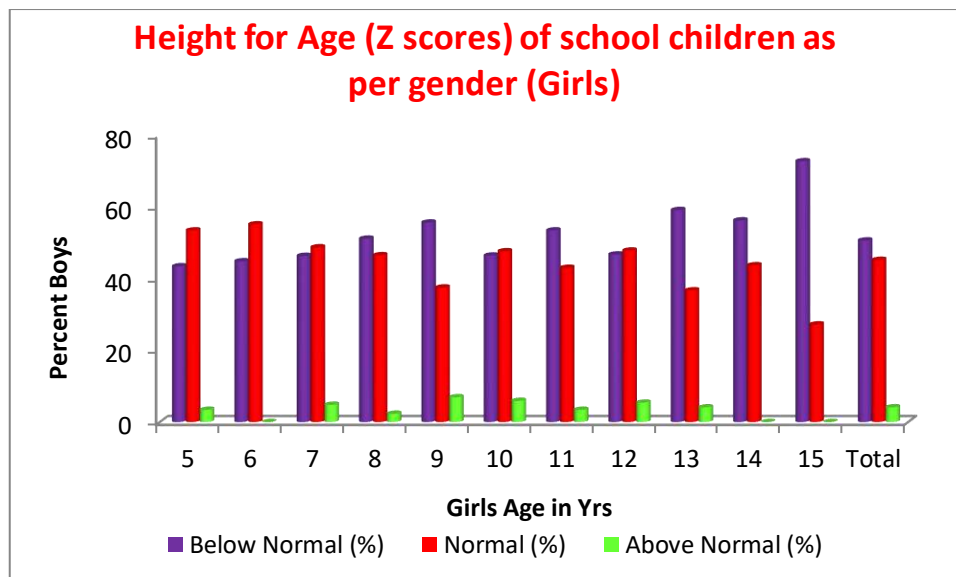
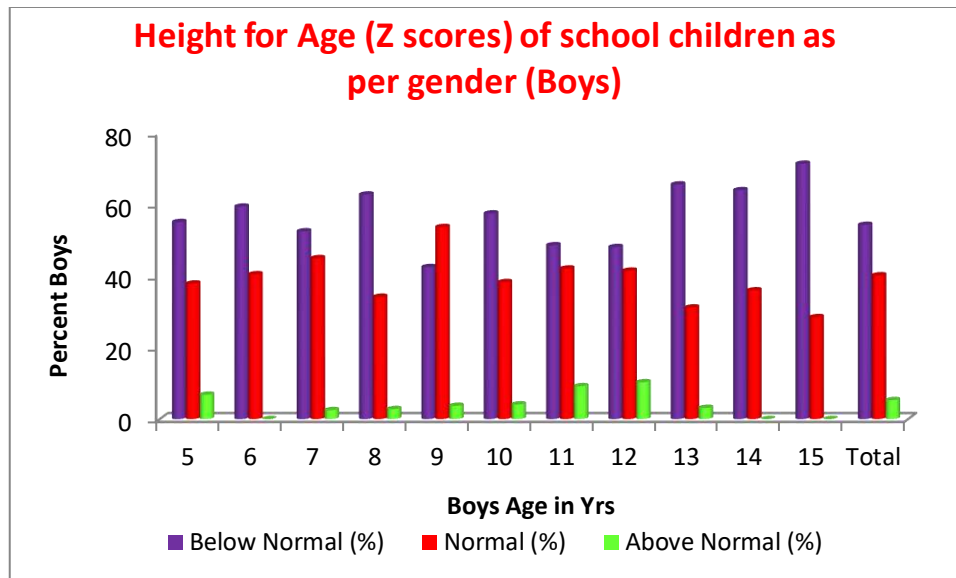
Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	16	26	14 (87.5)	12 (46.1)	2 (12.5)	13 (50)	0	1 (3.8)
6	27	32	17 (62.9)	14 (43.7)	10 (37)	19 (59.3)	0	0
7	22	21	14 (63.6)	7 (33.4)	7 (31.8)	14 (66.7)	1 (4.5)	0
8	21	32	12 (57.1)	17 (53.1)	8 (38)	14 (43.7)	1 (4.7)	1 (3.1)
9	34	48	16 (47)	27 (56.2)	17 (50)	17 (35.4)	1 (2.9)	4 (8.4)
10	38	56	21 (55.2)	31 (55.3)	15 (39.4)	23 (41)	2 (5.2)	2 (3.5)
11	40	49	22 (55)	26 (53)	14 (35)	21 (42.8)	4 (10)	2 (4)
12	58	45	29 (50)	17 (37.8)	21 (36.2)	26 (57.8)	8 (13.7)	2 (4.5)
13	32	27	19 (59.3)	13 (48.1)	12 (37.5)	13 (48.1)	1 (3.1)	1 (3.7)
14	13	10	9 (69.2)	5 (50)	4 (30.7)	5 (50)	0	0
15	3	9	3 (100)	7 (77.8)	0	2 (22.3)	0	0
Total	304	355	176 (57.8)	176 (49.5)	110 (36.1)	167 (47)	18 (5.9)	13 (3.6)

**Table 16 (B): Height for Age (Z scores) of school children as per gender
(District East Godavari)**

Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	14	5	3 (21.4)	2 (40)	10 (71.4)	3 (60)	1 (7.1)	0
6	8	15	4 (50)	7 (46.7)	4 (50)	8 (53.4)	0	0
7	19	20	8 (42.1)	10 (50)	11 (57.8)	10 (50)	0	0
8	13	11	8 (61.5)	5 (45.4)	5 (38.4)	6 (54.5)	0	0
9	20	24	8 (40)	13 (54.1)	11 (55)	10 (41.7)	1 (5)	1 (4.1)
10	35	29	21 (65.6)	9 (31)	13 (37.1)	17 (58.6)	1 (2.8)	3 (10.3)
11	36	37	15 (41.7)	20 (54)	18 (50)	16 (43.2)	3 (8.4)	1 (2.7)
12	47	47	22 (46.8)	26 (55.3)	22 (46.8)	18 (38.2)	3 (6.3)	3 (6.3)
13	32	22	23 (71.8)	16 (72.7)	8 (25)	5 (22.7)	1 (3.12)	1 (4.5)
14	13	6	7 (53.8)	3 (50)	6 (46.1)	2 (33.4)	0	1 (16.7)
15	4	3	2 (50)	2 (66.7)	2 (50)	1 (33.4)	0	0
Total	241	219	121 (50.2)	113 (51.5)	110 (45.6)	96 (43.8)	10 (4.14)	10 (4.5)

**Table 16 (C): Height for Age (Z scores) of school children as per gender
(Andhra Pradesh)**

Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	29	30	16 (55.1)	13 (43.4)	11 (37.9)	16 (53.4)	2 (6.8)	1 (3.4)
6	37	49	22 (59.4)	22 (44.8)	15 (40.5)	27 (55.1)	0	0
7	40	41	21 (52.5)	19 (46.3)	18 (45)	20 (48.7)	1 (2.5)	2 (4.8)
8	35	43	22 (62.8)	22 (51.1)	12 (34.2)	20 (46.5)	1 (2.8)	1 (2.3)
9	54	72	23 (42.5)	40 (55.6)	29 (53.7)	27 (37.5)	2 (3.7)	5 (6.9)
10	73	84	42 (57.5)	39 (46.4)	28 (38.3)	40 (47.6)	3 (4.1)	5 (5.9)
11	76	86	37 (48.6)	46 (53.4)	32 (42.1)	37 (43.0)	7 (9.2)	3 (3.4)
12	106	92	51 (48.1)	43 (46.7)	44 (41.5)	44 (47.8)	11 (10.3)	5 (5.4)
13	64	49	42 (65.6)	29 (59.1)	20 (31.2)	18 (36.7)	2 (3.12)	2 (4.08)
14	25	16	16 (64)	9 (56.2)	9 (36)	7 (43.7)	0	0
15	7	11	5 (71.4)	8 (72.7)	2 (28.5)	3 (27.2)	0	0
Total	546	573	297 (54.3)	290 (50.6)	220 (40.2)	259 (45.2)	29 (5.3)	24 (4.1)



Graph 10: Percentage of Height for Age (Z scores) of school children as per gender

6.4. Weight for Age

Z scores (Table 17 A, B, C) reveals that nearly 50.7 per cent boys and 50.6 per cent girls had normal weight for age. Nearly 47 per cent boys and 45 per cent girls were underweight, i.e. these children did not achieve normal weight as per their age.

Table 17 (A): Weight for Age (Z scores) of school children as per gender (District Visakhapatnam)

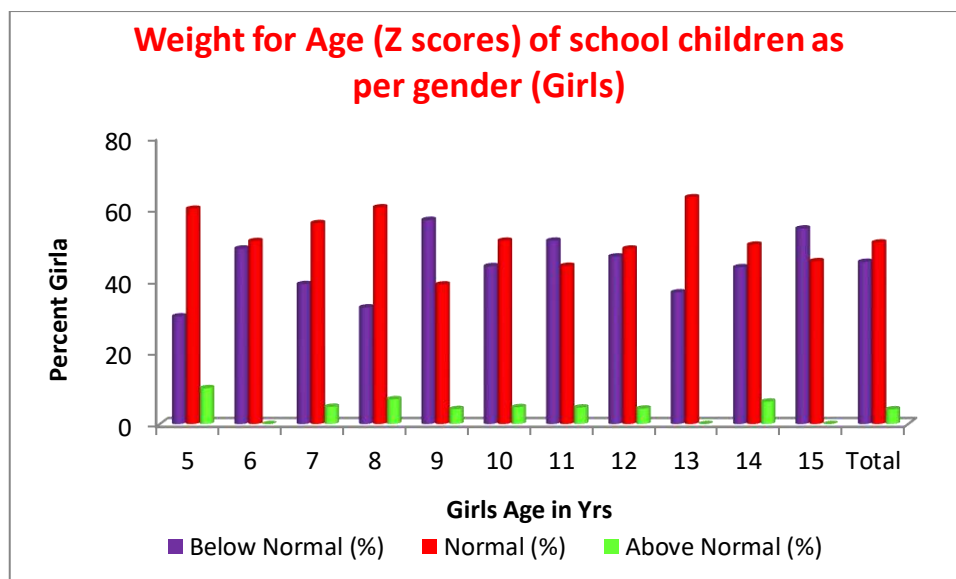
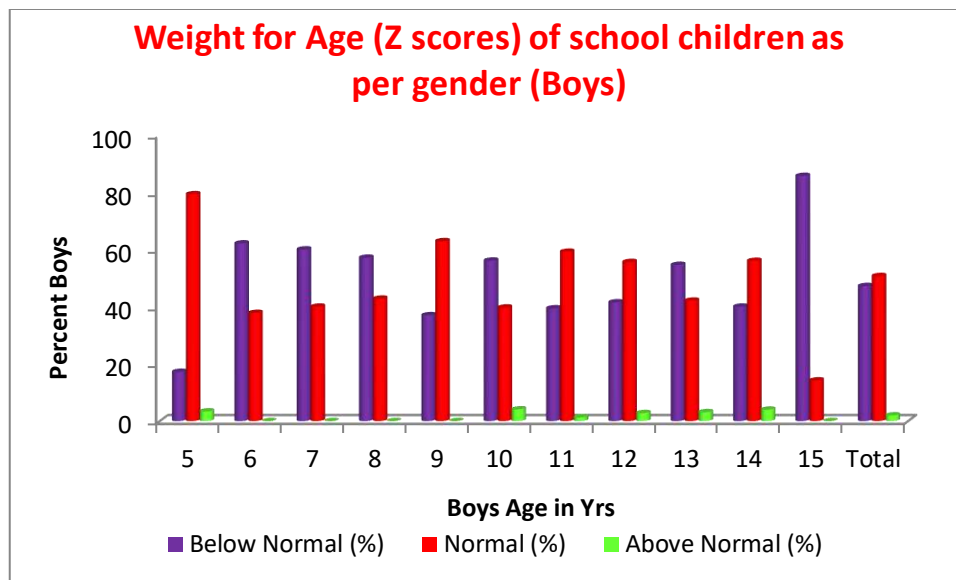
Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	16	26	14 (87.5)	9 (34.6)	12 (75)	15 (57.6)	0	2 (7.6)
6	27	32	17 (62.9)	16 (50)	9 (33.4)	16 (50)	1 (3.7)	0
7	22	21	13 (59)	10 (47.6)	9 (40.9)	11 (52.3)	0	0
8	21	32	10 (27.6)	21 (65.6)	11 (52.3)	11 (34.3)	0	0
9	34	48	13 (38.2)	24 (50)	21 (61.7)	22 (45.8)	0	2 (4.17)
10	38	56	20 (52.6)	18 (32.1)	15 (39.4)	37 (66)	3 (7.8)	1 (1.7)
11	40	49	19 (47.5)	27 (55.1)	20 (50)	22 (44.8)	1 (2.5)	0
12	58	45	24 (41.3)	26 (57.8)	33 (56.8)	18 (40)	1 (1.7)	1 (2.3)
13	32	27	15 (46.8)	9 (33.4)	16 (50)	14 (51.8)	1 (3.12)	4 (14.8)
14	13	10	4 (30.7)	4 (40)	8 (61.5)	5 (50)	1 (7.6)	1 (10)
15	3	9	1 (33.4)	6 (66.7)	2 (66.7)	3 (33.4)	0	0
Total	304	355	150 (49.3)	170 (47.8)	156 (51.3)	174 (49)	8 (2.6)	11 (3.09)

**Table 17 (B): Weight for Age (Z scores) of school children as per gender
(District East Godavari)**

Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	14	5	2 (14.2)	2 (40)	12 (85.7)	3 (60)	0	0
6	8	15	4 (50)	7 (46.7)	4 (50)	8 (53.4)	0	0
7	19	20	12 (63.1)	6 (30)	7 (36.8)	12 (60)	0	2 (10)
8	13	11	8 (61.50)	4 (36.3)	5 (38.4)	7 (63.6)	0	0
9	20	24	8 (40)	12 (50)	12 (60)	11 (45.8)	0	1 (4.1)
10	35	29	21 (60)	7 (24.1)	14 (40)	22 (75.8)	0	0
11	36	37	11 (30.6)	14 (37.8)	25 (69.5)	19 (51.3)	0	4 (10.8)
12	47	47	20 (42.5)	17 (36.1)	25 (53.1)	27 (57.4)	2 (4.2)	3 (6.3)
13	32	22	20 (62.5)	8 (36.3)	11 (34.3)	14 (63.6)	1 (3.1)	0
14	13	6	6 (46.1)	1 (16.7)	7 (53.8)	3 (50)	0	2 (33.4)
15	4	3	4 (100)	0	0	3 (100)	0	0
Total	241	219	116 (48.1)	78 (35.6)	122 (50.6)	129 (58.9)	3 (1.2)	12 (5.4)

**Table 17 (C): Weight for Age (Z scores) of school children as per gender
(Andhra Pradesh)**

Age (years)	N		Below Normal		Normal		Above Normal	
	Boys	Girls	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)	Boys n (%)	Girls n (%)
5	29	30	5 (17.2)	9 (30)	23 (79.3)	18 (60)	1 (3.4)	3 (10)
6	37	49	23 (62.1)	24 (48.9)	14 (37.8)	25 (51)	0	0
7	40	41	24 (60)	16 (39)	16 (40)	23 (56)	0	2 (4.8)
8	35	43	20 (57.1)	14 (32.5)	15 (42.8)	26 (60.4)	0	3 (6.9)
9	54	72	20 (37)	41 (56.9)	34 (62.9)	28 (38.9)	0	3 (4.17)
10	73	84	41 (56.1)	37 (44)	29 (39.7)	43 (51.1)	3 (4.1)	4 (4.7)
11	76	86	30 (39.4)	44 (51.1)	45 (59.2)	38 (44.1)	1 (1.3)	4 (4.6)
12	106	92	44 (41.5)	43 (46.7)	59 (55.6)	45 (48.9)	3 (2.8)	4 (4.3)
13	64	49	35 (54.6)	18 (36.7)	27 (42.1)	31 (63.2)	2 (3.12)	0
14	25	16	10 (40)	7 (43.7)	14 (56)	8 (50)	1 (4)	1 (6.25)
15	7	11	6 (85.7)	6 (54.5)	1 (14.2)	5 (45.4)	0	0
Total	546	573	258 (47.2)	259 (45.2)	277 (50.7)	290 (50.6)	11 (2)	24 (4.1)



Graph 11: Percentage of Weight for Age (Z scores) of school children as per gender

6.4. Food Frequency

The food frequency data indicates that 100 per cent of the children are habituated to consumption of cereals every day, especially, rice. Pulse consumption, mainly Red gram dal is consumed at school. Eggs are consumed weekly five times by all the children studied. Consumption of Milk and milk products is negligible. Fish is consumed by 20% of children twice in a week. Consumption of green leafy vegetables is poor. Some taboos about consumption of pumpkin and papaya were observed. Religious concerns were found for consumption egg. In all, it is observed that five food group pattern in consuming meals is not followed.

6.5. Clinical signs and symptoms

The Table 5 shows high incidences of few micro nutrient deficiencies. Discoloured enamel of teeth and dental caries was observed indicating poor oral hygiene followed by children. Swollen gums were seen to some extent and bleeding gums was negligible in the studied children. Incidences of B vitamin deficiency symptoms like angular stomatitis and cheilosis was observed in few children. Pale conjunctiva has been observed in nearly 7.68 per cent children indicating iron deficiency .

Table 18: Clinical signs of nutritional deficiencies in school Children (Andhra Pradesh)

Clinical Signs	Visakhapatnam						East Godavari						Andhra Pradesh	
	Girls 352		Boys 307		Total 659		Girls 219		Boys 241		Total 460		Total 1119	%
	n	%	n	%	n	%	n	%	n	%	n	%		
Teeth														
Discoloured enamel	64	18.1	66	21.4	130	1.97	39	17.8	40	16.5	79	17.17	209	18.6
Cavity	30	8.5	36	11.7	66	10	40	18.2	30	12.4	70	15.2	136	12.15
Gums														
Swollen	26	7.3	25	8.1	51	7.7	14	6.3	12	4.9	26	5.65	77	6.8

Bleeding	7	1.9	2	0.6	9	1.3	0	-	0	-	0	-	9	0.80
Mouth														
Lesions at the angle of mouth	15	4.2	25	8.1	40	6.06	7	3.1	10	4.14	17	3.69	57	5.09
Cheilosis	21	5.9	24	7.8	45	6.8	20	9.1	16	6.6	36	7.82	81	7.2
Tongue														
Pale and smooth	40	11.3	30	9.7	70	10.6	20	9.1	30	12.4	50	10.8	120	10.7
Magenta Tongue	0	-	0	-	-	-	0	-	0	-	-	-	-	-
Pigmented Tongue	0	-	0	-	-	-	0	-	0	-	-	-	-	-
Hair														
Dry/ Lusture less	56	15.9	38	12.3	94	14.2	63	28.7	70	29.0	133	0.2	227	20.2
Thin and sparse	2	0.5	0	0	2	0.3	1	0.45	0	0	1	0.2	3	0.26
Discolouration	0	-	0	-	-	-	0	-	0	-	-	-	-	-
Eyes														
Night blindness	0	-	0	-	-	-	0	-	0	-	-	-	-	-
Pale Conjunctiva	25	7.1	20	6.5	45	6.8	23	10.5	18	7.4	41	8.9	86	7.68
Conjunctival Dryness	0	-	0	-	-	-	0	-	0	-	-	-	-	-
Bitot's Spot	0	-	0	-	-	-	0	-	0	-	-	-	-	-
Skin														
Scaly Dry Skin	15	4.2	10	3.2	25		5	2.2	13	5.3	18	3.9	43	3.8
Neck														
Grade 1	0	-	0	-	-		0	-	0	-	-	-	-	-

Nails														
Chalky Nails	5	1.4	2	0.65	7	1.06	4	1.8	9	3.7	13	2.8	20	1.7
Spoon shaped	1	0.28	4	1.3	5	0.75	1	0.45	2	0.8	3	0.6	8	0.71
Knees														
Knock Knees	0	-	0	-	-	-	0	-	0	-	-	-	-	-
Bow Legs	0	-	0	-	-	-	0	-	0	-	-	-	-	-

6.6. QUANTITY AND QUALITY OF MID DAY MEAL

It was noted that most children eat breakfast before coming to school whereas few (approx.25%) children don't consume breakfast at home and Mid Day Meal becomes their first meal at around 11:30 am and 12 noon. Some children take lunch at home while others don't take lunch after eating mid day meal in school.

Majority (75%) of the children reported that the quality of MDM meal served to them is satisfactory. Quantity was MDM was inquired from children it was found that most of the school children were satisfied whereas few children told that the quantity of the meal is inadequate and were not satisfied with quantity of the meal. It was observed by the JRM team that the quantity of the food served was not as per the recommended norms of MDM guidelines.

In many schools, the children as well as the cooks complained about the quality of rice. More slender, polished and old rice is preferred to bold, unpolished, new rice varieties. The children had a strong perception that the quality of rice served is poor because it is supplied through Fair Price Shops (Ration/Quota). There were no complaints from children about sambar, dal, curries or egg.

6.7. Recipes

1. VEGETABLE RICE:

Ingredients	Primary school children			High school children		
	Quantity (g)	Energy (kcal)	Protein (g)	Quantity (g)	Energy (kcal)	Protein (g)
Rice	100	356	7.94	150	535	11.91
Carrots	10	3.32	-	15	4.98	-
Onions	10	4.8	-	15	7.2	
Peas	20	60.7	4.02	25	75.87	5.02
Potato	20	13.8	0.30	30	20.7	0.45
Oil	5	45	-	7.5	67.5	-
Green chillies	As required			As required		
Mint leaves/curry leaves/coriander	Few			Few		
Ginger garlic paste	¼ tsp			½ tsp		
Salt	As required			As required		

Method of preparation:

- Vegetables need to be washed and cut into large size pieces
- Soak dry peas for 4 hrs and cook and keep aside.
- Clean and wash the rice and keep aside.
- Add oil to the cooking vessel, fry chopped vegetables, mint leaves, ginger garlic paste and cooked green peas until they turn to light golden brown colour.
- Add water and salt. Once the water starts boiling, add cleaned and washed rice. Cook until done.

2. KICHIDI

Ingredients	Primary school children			High school children		
	Quantity (g)	Energy (kcal)	Protein (g)	Quantity (g)	Energy (kcal)	Protein (g)
Rice	100	356	7.94	150	535	11.91
Green gram dhal	20	65.21	4.77	30	97.82	7.16
Seasonal leafy vegetables	30	7.32	0.64	45	10.98	0.96
Onions	10	4.8	-	15	7.2	-
Oil	5	45		7.5	67.5	-
Turmeric	As required			As required		
Spices (Garam Masala Powder)	¼ tsp			½ tsp		
Green chillies	As required			As required		
Ginger garlic paste	¼ tsp			½ tsp		
Salt	As required			As required		

Method of preparation:

- Clean green gram and soak it for ½ an hour
- Clean selected green leafy vegetable, wash and chop.
- Clean and wash rice and keep it aside.

- Add oil to the cooking vessel, add green chillies, chopped onions chopped green leafy vegetables and soaked green gram and fry them.
- Add water and salt as required. Add rice when the water starts boiling.
- Cook until done.

3. VEGETABLE RICE WITH MEAL MAKER

Ingredients	Primary school children			High school children		
	Quantity (g)	Energy (kcal)	Protein (g)	Quantity (g)	Energy (kcal)	Protein (g)
Rice	100	356	7.94	150	535	11.91
Meal maker	20	75.4	7.4	30	113.1	11.1
Potato	30	20.9	0.46	40	27.9	0.61
Beans	10	3.34	0.37	15	5.01	0.55
Carrots	10	3.32	-	15	4.98	-
Onions	10	4.8	-	15	7.2	-
Tomato	10	1.88	-	20	3.77	-
Oil	5	45	-	7.5	67.5	-
Green chillies	As required			As required		
Ginger garlic paste	¼ tsp			½ tsp		
Garam masala powder	¼ tsp			½ tsp		
Salt	As required			As required		

Method of preparation:

- Clean and wash rice. Boil the meal maker for two minutes and strain. Discard strained water.
- Clean and wash all the vegetables and chop them into big pieces.
- Add oil to the cooking vessel.
- Add all the chopped vegetables and fry them till they turn into golden brown colour
- Add ginger garlic paste and garam masala powder.
- Add water and salt. When the water starts boiling, add rice and cook till done.

4. PERUGU PACHADI (RAITHA):

Ingredients	Quantity (g)	Energy (kcal)	Protein (g)
Curds	50	36.48	1.63
Onions	20	9.6	-
Tomato/cucumber	10	1.88	-
Green chillies	As required		
Coriander leaves	Few		
Salt	As required		

- Clean and wash all the vegetables and chop them into fine pieces.
- Churn the curds, add small quantity of clean drinking water and salt.
- Add finely chopped vegetables to it.
- Garnish with coriander.

Chapter - 7

RECOMMENDATIONS

The JRM observed that quality and quantity aspects of the served meal are to be monitored closely. Some suggestions and recommendations are given below which may help in further improvement in implementation of MDM scheme:

- 1) It has been observed that many children from class VI-VIII were not availing Mid Day Meal. It is recommended that the State may conduct a rapid assessment study to find out the reasons for this.
- 2) The quality of rice was not Fair Average Quality in most of the visited schools. State needs to ensure that at least Fair Average Quality rice be supplied in Mid Day Meal Scheme.
- 3) In some of the schools cooking was being done in open area and classrooms. Cooking activity should be carried in kitchen only. Construction of kitchen-cum-stores to be completed expeditiously. State may follow the model of Maharashtra wherein, pre-fabricated kitchen-cum-stores have been installed in schools for Mid Day Meal Scheme.
- 4) Development of Kitchen garden should be encouraged. Plantation of fruit bearing trees like papaya, guava, lemon and mango and green leafy vegetables can be done in space available in school.
- 5) To strengthen the involvement of community in serving special foods on special occasions like birthdays, marriage etc.
- 6) State may provide storage bins in schools for safe and hygienic storage of rice and other ingredients. It was observed that there is no planned arrangement for storage of items particularly pulses, salt and spices in most of the schools. There is need to work on systematic storage facility with provision of air and light.
- 7) Standardisation and simplification of formats for record keeping of MDM at school.
- 8) Replacement of worn out kitchen devices.
- 9) In case of supply of MDM through centralised kitchens, the quantity of cooked meal per child per day should be standardized. The portion size of each dish to be served to primary and upper primary students should be standardized.

- 10) Cooks should be trained in food safety. It should be made compulsory for them to follow hygienic practices and wear headgears and aprons during meal preparations.
- 11) There is need for training to Govt. Officials and school teachers about how much raw food converts to cooked food. All head teachers should be asked to get cooked one unit of rice (100 g or 150 g) and one unit of Pulses and vegetables in school. They should measure the cooked amount in one vessel/serving device. This measure should be used to serve food as per norms.
- 12) Training and sensitization of teachers and officials at different level is required, as many of the officials were not aware about the norms of the Mid Day Meal Scheme.
- 13) Efforts need to be put for tasting of meals by at least one parent before it is served to children.
- 14) It is appreciated that the State has issued instructions for marking of eggs, to be supplied to schools in each week. However, it is advised to ensure that this marking of eggs is done with only permitted food colours.
- 15) The portion size of each dish to be served to primary and upper primary students should be standardized. It was observed during survey that the recommended quantity of food items is not being served to the school children especially in case of centralised kitchen. There should be standard equipment for serving food to primary and upper primary children. Serving size was found to be highly approximate. School Management Committees and parents should be involved for ensuring the quantity and quality of food being served.
- 16) Inspection is an important component for smooth implementation of the Scheme at the grass root level. Effective monitoring mechanism should be developed by the State Govt. to ensure periodic inspection of the scheme by officials at all levels. Inspecting Officers should record their observations on the implementation of the Scheme. The PRIs or SMC member or any government official can write their remarks/comments about their observations of MDM in school.
- 17) It is appreciated that every school has LPG cylinder, however at some places they are using firewood due to non-availability of refilled LPG cylinder. LPG tube should be checked for leakage periodically. Provision of fire extinguisher at easily reachable place should be made near the kitchen in all the schools.

- 18) There is urgent need to revise and enhance the honorarium of CCH because they belong to the disadvantaged segment of the society.
- 19) For effective implementation of MDM, all the functionaries involved in the scheme need to be aware about nutrition, health, hygiene and safety of foods. It is recommended that in the districts where State Agricultural Universities/ Colleges are located their Foods and Nutrition Department may be roped in for develop model schools in their districts by providing training to the Block officials, teachers and cook-cum-helpers regarding nutrition, health, hygiene and food safety.
- 20) There is a need to develop a nutrition health index card for each child so that tracking can be done easily for monitoring of moderate and severely undernourished children.
- 21) The convergence with Rastriya Bal SwasthyaKaryakram involvement needs to be strengthened. Every district should have a nutritionist to monitor growth and nutritional status of school children. In case of severe undernutrition or urgency they should be referred to health department. The nutritional status of these identified children may be recorded on quarterly basis.

SWOC ANALYSIS

A) STRENGTH

- i. State is providing MDM to children studying in class IX and X from its own resources.
- ii. Provision of eggs for 5 days in a week.
- iii. E-transfer of funds directly to implementing agencies from State.
- iv. Provision of eating plates.
- v. Provision of LPG.
- vi. Toilets are generally clean and are being used by school children
- vii. Availability of R.O. plant, Dining hall / tables and kitchen garden in some schools.
- viii. Use of Mobile app for daily information on MDM.

B) WEAKNESS

- i. Some children are not availing Mid Day Meal.
- ii. Shifting from school based kitchens to centralised kitchen, even in rural area.
- iii. Inferior quality of rice.
- iv. Inadequate monitoring.
- v. Inadequately trained cook-cum-helpers.
- vi. Kitchen-cum-stores not constructed in most of the schools.
- vii. Parents are not coming to schools for tasting of meals.

C) OPPORTUNITY


- i. Opportunity for improvement is there as very well built system of providing MDM is in place. Visakhapatnam is an industrial area so CSR funds can be tapped for providing an infrastructure as it has been done in some schools.
- ii. Development of kitchen gardens.
- iii. Involvement of Community especially parents in monitoring the implementation of MDM.
- iv. Constitution of State JRM on the lines of Govt. of India.
- v. Training of officials for improved monitoring and reporting.

D) CHALLENGES

- i. Construction of kitchen-cum-stores in quick time.

- ii. Setting up of kitchen gardens.
- iii. Improved monitoring.
- iv. If hygiene, sanitation and fire extinguisher are not ensured properly, it may lead to safety and disease threats


Davander Kumar


K Ravindhranath Reddy


Bhupendra Kumar


Dr. Lakshmi Kuchibhotla


G. Vijaya Bhaskar


Dr. Lakshmi Jagarlamudi

School wise details of Attendance and Avg. children availed MDM during last ten days

Districts Visakhapatnam and East Godavari

SI.No.	School Name	Enrol	Aadhar	day 1	day 2	day 3	day 4	day 5	day 6	day 7	day 8	day 9	day 10	Avg	% of Enrol
	Visakhapatnam														
1	Govt. High School Paderu	252	252	176	174	170	179	177	176	171	165	155	155	170	67%
2	MP UPS Dabbaputtu	101	101	87	85	67	88	84	86	85	88	89	82	84	83%
3	GPS TW Adarmettu	24	24	22	20	17	14	23	21	21	20	19	23	20	83%
4	MPPS Masada	31	31	28	29	30	30	31	29	30	31	29	30	30	96%
5	GPS Araku	254	254	164	185	190	193	181	181	188	205	194	193	187	74%
6	ZINC High School	367	367	268	303	201	340	367	321	321	322	311	329	308	84%
7	ZINC P Scool	111	103	88	93	92	94	96	95	95	97	95	79	92	83%
8	ZPHS Gajuwaka	1710	1617	750	740	710	610	840	820	860	820	820	800	777	45%
9	MPPS New Gajuwaka	212	170	162	170	175	175	170	176	177	178	167	164	171	81%
10	ZPHS Mindi	530	530	300	300	300	300	300	300	300	300	300	300	300	57%
11	ZPHS Akkereddipleem	344	344	270	270	270	260	270	270	270	260	260	260	266	77%
12	GPHS Vadapalem	138	138	91	84	55	58	110	80	82	68	61	81	77	56%
13	MPPS G. Timmapuram	21	21	18	20	19	20	20	20	18	20	20	20	20	93%
14	ZPHS Mangamaripeta	133	133	105	120	93	90	95	90	104	110	110	115	103	78%
15	MPPS Mangamari Peta	24	24	16	19	20	22	24	22	23	23	24	23	22	90%
16	MPUPS Chinauppada	131	127	108	94	76	80	75	99	104	107	100	103	95	72%
17	MPPS Ch. Dibbadipalem	25	25	16	20	17	11	18	18	18	16	20	11	17	66%
18	MPPS Vijay Ram Raju Peta	109	109	94	95	95	95	94	95	95	96	95	95	95	87%
19	ZPHS Vijay Ram Raju Peta	149	149	142	136	145	143	140	138	132	100	111	139	133	89%
20	MPPS Damunapalli	73	73	55	62	64	69	72	70	69	71	70	67	67	92%
21	ZPHS Lakshampuram	289	289	247	234	247	250	254	260	260	250	257	244	250	87%
22	MPPS Thotagaruvu	211	201	170	168	182	176	182	183	184	192	192	187	182	86%
23	MPPS Santhapalem	116	108	108	107	108	108	108	108	108	108	108	107	108	93%
24	ZPHS Thotaharuvu	946	946	275	382	392	392	382	372	392	382	362	352	368	39%
25	GVMC PS	116	116	91	95	87	78	96	98	91	91	96	92	92	79%

26	S G UPS	366	366	333	304	314	316	324	323	325	328	340	334	324	89%
27	ZPHS Gottipalli	161	161	148	157	120	129	123	135	130	144	145	147	138	86%
28	MPPS Gottipalli	84	84	76	74	76	76	76	78	78	77	76	76	76	91%
29	ZPHS Chandavampalem	1962	1962	830	727	820	877	1153	998	826	826	826	826	875	45%
	Total	8990	8825	5238	5267	5152	5273	5885	5662	5557	5495	5452	5434	5442	61%
	East Godavari														
30	ZPHS V Kothuru	272	272	151	130	116	111	95	107	100	113	111	124	116	43%
31	MPPS V Kothuru	69	69	57	57	56	53	55	54	56	56	55	55	55	80%
32	MPPS Hamsavaram	107	98	80	91	85	85	94	87	87	91	94	92	89	83%
33	ZPHS Hamsavaram	283	283	257	222	255	252	246	244	248	251	242	242	246	87%
34	AP MS Hamsavaram	427	427	152	151	153	151	152	151	152	154	153	148	152	36%
35	ZPHS SA Colton	385	384	300	300	300	300	300	300	300	300	300	300	300	78%
36	ZPPHS Vemagiri	410	410	158	278	243	254	254	218	233	245	228	263	237	58%
37	RZPHS Ryali	619	619	220	230	270	300	230	150	230	200	154	290	227	37%
38	MPP Main Ravulapem	116	115	104	105	105	106	109	99	94	100	83	108	101	87%
39	GH School Alamuru	535	535	367	326	292	264	216	289	312	295	320	292	297	56%
40	ZPPHS Kandarada	143	143	107	103	122	114	61	92	96	103	115	107	102	71%
41	ZPPHS Kumarapuram	78	78	70	70	72	68	66	66	56	64	43	66	64	82%
42	MPPS Gooaprolu	167	167	143	138	140	135	141	130	141	142	132	133	138	82%
43	ZPPGHS Gollaprolu	333	333	128	152	102	122	148	212	260	218	237	208	179	54%
44	ZPHS Kothapalli	256	256	98	75	53	75	73	96	92	101	94	84	84	33%
45	MPPS A. Kothopalli	46	46	35	40	42	35	37	40	37	43	42	42	39	85%
46	MPPS Main S Yadatha	109	109	86	84	89	78	77	81	76	83	85	83	82	75%
47	ZPHS Yeditha	359	359	228	230	231	225	196	202	187	191	172	182	204	57%
48	ZPHS Tapeswaram	353	353	277	266	270	263	259	253	223	241	250	266	257	73%
49	MPPS Kothapeta-2	68	68	59	61	65	63	64	63	44	63	57	65	60	89%
	Total	5135	5124	3077	3109	3061	3054	2873	2934	3024	3054	2967	3150	3030	59%
	Grand Total	14125	13949	8315	8376	8213	8327	8758	8596	8581	8549	8419	8584	8472	60%

**School wise details of Infrastructure facilities
Districts Visakhapatnam and East Godavari**

Sl.No.	School Name	Menu	Logo	Entitlement	KS	Fuel	KD	Eating plates
	Visakhapatnam							
1	Govt. High School Paderu	No	No	No	No	LPG	Yes	No
2	MP UPS Dabbaputtu	Yes	Yes	Yes	Yes	LPG	Yes	Yes
3	GPS TW Adarmettu	Yes	No	No	No	LPG	Yes	No
4	MPPS Masada	Yes	Yes	No	Yes	LPG	Yes	No
5	GPS Araku	Yes	No	No	Yes	LPG	Yes	No
6	ZINC High School	Yes	Yes	Yes	Yes	LPG	Yes	Yes
7	ZINC P Scool	Yes	Yes	Yes	Yes	LPG	Yes	Yes
8	ZPHS Gajuwaka	No	No	No	No	LPG	Yes	Yes
9	MPPS New Gajuwaka	Yes	Yes	Yes	Yes	LPG	Yes	Yes
10	ZPHS Mindi	No	No	No	No	LPG	Yes	Yes
11	ZPHS Akkereddiplam	Yes	No	No	No	LPG	Yes	Yes
12	GPHS Vadapalem	Yes	Yes	Yes	Yes	LPG	Yes	Yes
13	MPPS G. Timmapuram	Yes	Yes	Yes	Yes	LPG	Yes	Yes
14	ZPHS Mangamaripeta	Yes	Yes	Yes	Yes	LPG	Yes	Yes
15	MPPS Mangamari Peta	Yes	Yes	Yes	Yes	LPG	Yes	Yes
16	MPUPS Chinauppada	No	No	No	Yes	LPG	Yes	Yes
17	MPPS Ch. Dibbadipalem	No	No	No	No	LPG	Yes	No
18	MPPS Vijay Ram Raju Peta	Yes	No	No	No	LPG	Yes	No
19	ZPHS Vijay Ram Raju Peta	Yes	Yes	Yes	Yes	LPG	Yes	Yes
20	MPPS Damunapalli	Yes	Yes	Yes	Yes	LPG	Yes	Yes
22	MPPS Thotagaruvu	Yes	Yes	No	Yes	LPG	Yes	Yes
23	MPPS Santhapalem	Yes	Yes	No	Yes	LPG	Yes	Yes
24	ZPHS Thotaharuvu	Yes	Yes	Yes	Yes	LPG	Yes	No
25	GVMC PS	Yes	No	No	No	LPG	No	Yes
26	S G UPS	Yes	Yes	No	No	LPG	Yes	Yes
27	ZPHS Gottipalli	Yes	Yes	Yes	Yes	LPG	Yes	Yes
28	MPPS Gottipalli	Yes	Yes	Yes	Yes	LPG	Yes	Yes
29	ZPHS Chandavampalem	Yes	Yes	Yes	Yes	LPG	Yes	Yes
	East Godavari							
30	ZPHS V Kothuru	Yes	Yes	No	No	LPG	No	Yes
31	MPPS V Kothuru	Yes	No	No	No	LPG	No	No
32	MPPS Hamsavaram	Yes	Yes	Yes	Yes	LPG	Yes	Yes
33	ZPHS Hamsavaram	No	No	No	No	LPG	No	No
34	AP MS Hamsavaram	Yes	No	No	No	LPG	No	No

35	ZPHS SA Colton	Yes	Yes	Yes	No	LPG	No	No
36	ZPPHS Vemagiri	Yes	Yes	No	Yes	LPG	Yes	Yes
37	RZPHS Ryali	Yes	Yes	Yes	Yes	LPG	Yes	Yes
38	MPP Main Ravulapem	Yes	Yes	No	No	LPG	Yes	Yes
39	GH School Alamuru	Yes	Yes	No	Yes	LPG	Yes	Yes
40	ZPPHS Kandarada	Yes	Yes	No	Yes	LPG	Yes	Yes
41	ZPPHS Kumarapuram	Yes	Yes	No	Yes	LPG	Yes	Yes
42	MPPS Gooaprolu	Yes	Yes	No	No	LPG	Yes	Yes
43	ZPPGHS Gollaprolu	Yes	Yes	No	Yes	LPG	Yes	Yes
44	ZPHS Kothapalli	Yes	Yes	Yes	Yes	LPG	Yes	Yes
45	MPPS A. Kothopalli	Yes	No	No	No	LPG	Yes	Yes
46	MPPS Main S Yadatha	Yes	No	No	No	LPG	Yes	Yes
47	ZPHS Yeditha	Yes	No	Yes	No	LPG	Yes	No
48	ZPHS Tapeswaram	Yes	Yes	No	Yes	LPG	Yes	Yes
49	MPPS Kothapeta-2	No	No	No	No	LPG	Yes	Yes

Sl.No.	School Name	Toilet		Water source		CCH	Training of CCH	Inspection
		Boy	Girl	Tap	Hand Pump			
1	Govt. High School Paderu	Yes	Yes	Yes	Yes	4	No	Yes
2	MP UPS Dabbaputtu	Yes	Yes		Yes	2	Yes	No
3	GPS TW Adarmettu	Yes	Yes	Yes		1	No	Yes
4	MPPS Masada	Yes	Yes	Yes	Yes	1	No	No
5	GPS Araku	Yes	Yes		Yes	3	Yes	Yes
6	ZINC High School	Yes	Yes	Yes	Yes	4	No	Yes
7	ZINC P Scool	Yes	Yes	Yes	Yes	2	No	Yes
8	ZPHS Gajuwaka	Yes	Yes	Yes	Yes	2	No	Yes
9	MPPS New Gajuwaka	Yes	Yes	Yes	Yes	3	Yes	Yes
10	ZPHS Mindi	Yes	Yes	Yes	Yes	1	No	Yes
11	ZPHS Akkereddiplam	Yes	Yes	Yes	Yes	1	Yes	Yes
12	GPHS Vadapalem	Yes	Yes	Yes	Yes	2	Yes	Yes
13	MPPS G. Timmapuram	Yes	Yes	Yes	Yes	1	Yes	Yes
14	ZPHS Mangamaripeta	Yes	Yes	Yes	Yes	2	Yes	Yes
15	MPPS Mangamari Peta	Yes	Yes	Yes	Yes	1	No	Yes
16	MPUPS Chinauppada	Yes	Yes	Yes	Yes	2	Yes	Yes
17	MPPS Ch. Dibbadipalem	Yes	Yes	Yes	Yes	1	No	Yes
18	MPPS Vijay Ram Raju Peta	Yes	Yes		Yes	3	Yes	Yes
19	ZPHS Vijay Ram Raju Peta	Yes	Yes	Yes	Yes	3	Yes	No
20	MPPS Damunapalli	Yes	Yes	Yes	Yes	3	Yes	Yes
22	MPPS Thotagaruvu	Yes	Yes		Yes	3	No	Yes

23	MPPS Santhapalem	Yes	Yes	Yes	Yes	3	No	Yes
24	ZPHS Thotaharuvu	Yes	Yes	Yes	Yes	5	No	No
25	GVMC PS	Yes	Yes	Yes		1	No	Yes
26	S G UPS	Yes	Yes	Yes		1	No	Yes
27	ZPHS Gottipalli	Yes	Yes	Yes	Yes	3	No	Yes
28	MPPS Gottipalli	Yes	Yes	Yes		2	Yes	Yes
29	ZPHS Chandavampalem	Yes	Yes	Yes	Yes	8	Yes	No
	East Godavari							
30	ZPHS V Kothuru	Yes	Yes	Yes	Yes			Yes
31	MPPS V Kothuru	Yes	Yes	Yes	Yes	0		Yes
32	MPPS Hamsavaram	Yes	Yes		Yes	2	Yes	Yes
33	ZPHS Hamsavaram	Yes	Yes	Yes	Yes			No
34	AP MS Hamsavaram	Yes	Yes	Yes	Yes		Yes	Yes
35	ZPHS SA Colton	Yes	Yes	Yes	Yes			Yes
36	ZPPHS Vemagiri	Yes	Yes	Yes	Yes	3	No	No
37	RZPHS Ryali	Yes	Yes	Yes	Yes	4	Yes	Yes
38	MPP Main Ravulapem	Yes	Yes	Yes	Yes	2	Yes	Yes
39	GH School Alamuru	Yes	Yes	Yes	Yes		Yes	Yes
40	ZPPHS Kandarada	Yes	Yes	Yes	Yes		Yes	Yes
41	ZPPHS Kumarapuram	Yes	Yes	Yes	Yes	2	Yes	Yes
42	MPPS Gooaprolu	Yes	Yes	Yes	Yes	3	Yes	Yes
43	ZPPGHS Gollaprolu	Yes	Yes	Yes	Yes	5	Yes	Yes
44	ZPHS Kothapalli	Yes	Yes	No	Yes		Yes	Yes
45	MPPS A. Kothopalli	Yes	Yes	Yes	Yes	1	No	No
46	MPPS Main S Yadatha	Yes	Yes	Yes	Yes	3	No	Yes
47	ZPHS Yeditha	Yes	Yes	Yes	Yes	4	No	No
48	ZPHS Tapeswaram	Yes	Yes	Yes	Yes	5	No	No
49	MPPS Kothapeta-2	Yes	Yes		Yes	2	No	No

Anthropometric measurements and Dietary assessment



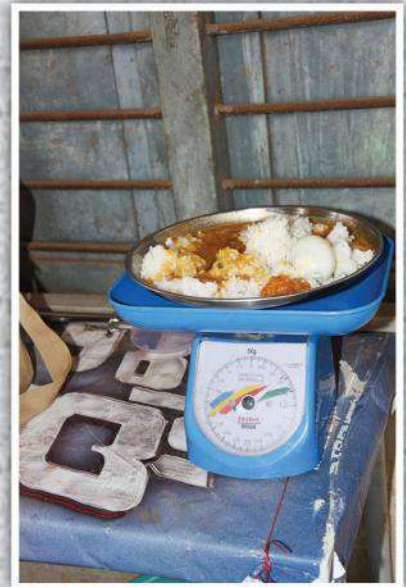
Clinical signs and symptoms of nutritional deficiencies



Serving in plates



Quantity of served food



Eating space



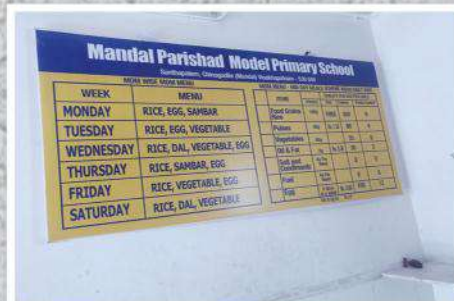
Utensils and hand washing



Toilets



Mid Day Meal logo and menu



Grain storage and quality



Discussion with school officials



Visited schools

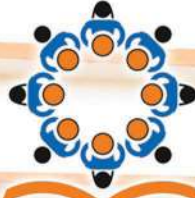


Tasting of food



Fuel used





Mid- Day Meal Scheme
मध्याह्न भोजन योजना

సర్కార్ కాటన్ జిల్లా ప్రజాపరిషత్ ఉన్నత పాఠశాల బాలుకు
ధవళేశ్వరం తూ. గా. జిల్లా యూ. డి. కార్ - 508102

సర్కార్ అభియాన్
శుభ్రతా - శాంతి - సహకారం

ప్రజాస్వామిక పాఠశాల
(గౌరవ సంగ్రహం)
అడాలమట్ల



శ్రీ వేరూరి గంగాధరం జిల్లా ప్రజాపరిషత్ ఉన్నత పాఠశాల
వేమగిరి
ఫోన్ నంబర్: 28143100107

మధ్యాహ్నం భోజన పథకం మెనూ

సోమవారం	గుడ్డు + సాంబార్
మంగళవారం	ఆకుకూర పప్పు + కూరగాయ
బుధవారం	గుడ్డు + సాంబార్
గురువారం	ఆకుకూర పప్పు + గుడ్డు
శుక్రవారం	గుడ్డు + కూరగాయ
శనివారం	ఆకుకూర పప్పు

మండల పరిషత్ ప్రాథమిక పాఠశాల
అంధ్రప్రదేశ్ ప్రభుత్వము - విద్యాశాఖ
తూ. గా. జిల్లా - తూ. గా. జిల్లా

