



Prachi Pandey
Joint Secretary (EE.I)
Ministry of Education
Tel:- 011-23389247



DO. No: 13-1/2023 PM POSHAN 2-1

Dated 13th April, 2023

Respected Shree Shunchooram Jate Chiru,

The 13th Joint Review Mission visited Tamil Nadu from 21st November to 29th November 2022 to review the implementation of PM POSHAN in two districts viz. Madurai and Ramanathapuram as per the prescribed Terms of Reference (ToRs).

2. The JRM headed by Dr. Indrapal I Meshram, Scientist, National Institute of Nutrition, ICMR, Hyderabad. JRM team comprises of Director, PM POSHAN, Ministry of Education; Director, Government of Tamil Nadu; Scientist from NIN and Consultants from Ed.CIL's Technical Support Group for PM POSHAN as members. Research Assistants from NIN Hyderabad helped the JRM to take the anthropometric measurements of the selected group of children. The JRM visited 91 schools in the Madurai and Ramanathapuram districts.

3. The mission appreciated some of the best practices like serving of egg on all school days, introduction of variety in meals, well established administrative structure at State, District, Block and school levels, regular employment of Noon Meal Functionaries (Organiser, cook and Assistant Cooks) who are also eligible for promotion, delivery of next month's requirement of pulses, oil and salt at school between 15-25 day of previous month by Tamil Nadu Civil Supplies Corporation.

4. The JRM team has covered 1248 children, 584 children in Ramanathapuram and 664 in Madurai district, for assessment of nutrition status. Overall prevalence of stunting was about 9.5%, which was higher in Ramanathapuram district (10.5%) as compared to Madurai district (8.6%). The overall prevalence of thinness was 24.5% and was higher in Ramanathapuram district (26.2%) as compared to Madurai district (23.0%). Also, the prevalence of thinness was higher among boys (28.8%) as compared to girls (20.1%). About 7% of girls and 9% of boys were overweight/obese and the prevalence was higher in Ramanathapuram district (9.6%) as compared to Madurai district (7.4%).

5. The following areas of concern have been identified by the Mission:

- a. Some children are not taking meals in few of the visited schools. State Govt. may look-in to the reasons in this regard. State may put in place a system to closely monitor these schools and encourage children to take meals.
- b. State Government needs to ensure that the meals are provided as per the prescribed quantities under the guidelines of PM POSHAN Scheme including pulses and vegetables.

Contd...2/-

- c. Monitoring requires attention at all levels right from State to school level. It was observed that while officials, i.e. PA Noon meal, BDOs, Deputy BDOs etc, are visiting the schools however, they are recording observations in a very general manner rather than specific observations on important components of PM POSHAN Scheme.
 - d. Only 40% schools are reporting on Automated Monitoring System.
 - e. The entitlement of children under the Scheme is not displayed at a prominent place in many schools visited and almost all the teachers, organisers, SMC members /chairpersons were not aware of food norms and entitlements of children.
 - f. PM POSHAN logo, menu and emergency telephone numbers were not displayed/painted at a prominent place in some of the visited schools.
6. Some of the recommendations of the JRM are summarized below:
- a. Safe storage bins may be provided for keeping food grains in schools.
 - b. Creating greater awareness about the entitlements of the scheme.
 - c. Convening of District level Vigilance and Monitoring Committee meeting under the Chairmanship of Member of Parliament from the district. Convening of regular review meetings at the district/block level.
 - d. Social Audit of the Scheme in all districts.
 - e. Testing of food samples by reputed NABL accredited Food Laboratories/FSSAI laboratories.
7. A copy of the report is attached herewith. You are requested to go through the report thoroughly and initiate necessary actions. I shall appreciate, if you could submit an action taken note on the above within a month.

Let us join hands to ensure that every eligible child gets a nutritious hot cooked meal in a healthy and safe manner.

With regards,

Yours sincerely

Prachi Pandey
13/11/2011
(Prachi Pandey)

Thiru Shunchonngam Jatak Chiru,
Principal Secretary
Govt. of Tamil Nadu,
Social Welfare and Nutritious Meal,
Programme Department Secretariat,
Chennai-600 009. (swsec@tn.gov.in)



13th JOINT REVIEW MISSION REPORT - TAMILNADU PM - POSHAN SCHEME



Tamilnadu
21st - 29th Nov. 2022



Madurai District
Ramnad District

Ministry of Education
Department of School Education & Literacy
PM - POSHAN Scheme
Government of India

Acknowledgement

The Joint Review Mission Team would like to thank Government of Tamil Nadu for the support rendered in facilitating the Team to undertake the Review of the scheme successfully in Madurai and Ramanathapuram districts.

The members of the Mission acknowledge and value the support and hospitality extended by the Additional Chief Secretary (Department of social welfare and Women Empowerment); to the teachers working in the remote villages; the State office of the PM POSHAN Scheme and the kitchen staff working in the school kitchens; the Department of Health; the Food Corporation of India and the State Department of Food and Civil Supplies; SMC members and most importantly the students of the sample schools.

The JRM also acknowledge the valuable contribution of the Mr. G.L Stephen, Ms. Jeya Jeraldin, Ms S. Nanthini and Mr. Sreenu Pagidoju Research Assistants for the mission of during the visit of JRM in Tamil Nadu.

The 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 would help the Government of Tamil Nadu in strengthening the implementation of the PM POSHAN in schools and ensure that every school going child avails its right to nutritious food in the State.

The JRM team places its sincere thanks to Dr. S. Revathi, Joint Director, NMP State Govt. of Tamil Nadu and her entire team for all the support and efforts made for the successful completion of the visit of the JRM team.

Team JRM- Tamil Nadu

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Key Indicators for Tamil Nadu

i NFHS-5 Data : Malnutrition:

- a) 25% children are Stunted;
- b) 14% children are wasted and
- c) 22% children are underweight.
- d) 57.4% children are anaemic

ii Health & Wellness Ambassadors : One Teacher in Madurai.

iii Availability of girls toilet : in all the Schools separate girls were found.

iv Total number of SNGs : 33618 (78%)

v Tithi Bhojan (April to October 2022) : in 25914 schools to 2073120 Children

vi Annual Data entered on MIS : 99%

vii Monthly Data entered on MIS : 99%

viii Data AMS:40%

ix Status of PFMS : State has implemented

x Social Audit : Not carried out in Madurai and Ramanathapuram

Report: Joint Review Mission Tamil Nadu

Executive Summary

The 13th Joint Review Mission visited the State of Tamil Nadu during 21st to 29th November 2022 for review of implementation of Pradhan Mantri Poshan Shakti Nirman with defined Terms of Reference. For this purpose the mission visited 49 schools (27 in district Madurai and 22 in district Ramanathapuram). During the visits, the team collected information as per the Terms of Reference, held discussions with the select stakeholders i.e. students, teachers, Cook-Cum-Helpers, community members, parents of the students and officials at Block, District and State level.

The JRM team has covered 1248 children, 584 children Ramanathapuram and 664 in Madurai district for assessment of nutrition status and perceptions and practices of the select students, parents, teachers, community members and functionaries. Overall prevalence of stunting was about 9.5%, which was higher in Ramanathapuram district (10.5%) as compared to Madurai district (8.6%). The overall prevalence of thinness was 24.5% and was higher in Ramanathapuram district (26.2%) as compared to Madurai district (23.0%). Also the prevalence of thinness was higher among boys (28.8%) as compared to girls (20.1%). About 7% of girls and 9% of boys were overweight/obese and the prevalence was higher in Ramanathapuram district (9.6%) as compare to Madurai district (7.4%). Clinical signs of nutritional deficiency was observed among 2%; Goitre (0.6%), Bitot's spot (0.3%), Fluorosis (0.6%).

JRM appreciates that the meal under PM POSHAN is providing required amount of calories and proteins.

The actual intake of energy (482 Kcal/child/day) and protein (16.6g/student/day) through hot cooked meal among primary school children in Madurai district was higher than the PM-POSHAN nutrition norms (energy: 450 Kcal; protein: 12g), while it was 733 kcal and 22.3g proteins among upper primary school children which is higher than the suggested under PM-POSHAN (700 Kcal and 20 g protein)

The actual intake of energy (507 Kcal/child/day) and protein (16.01g/student/day) through hot cooked meal among primary school children in Ramanathapuram district

was higher than the PM-POSHAN nutrition norms (energy: 450 Kcal; protein: 12g), while it was 737 kcal and 20.2g proteins among upper primary school children which is higher than the suggested under PM-POSHAN (700 Kcal and 20 g protein).

The team has summarized recommendations which are realistic and applied with a higher objective to accrue maximum benefits out of the resources and efforts mobilized for the scheme. The team reiterates that besides nutritional adequacy of PM POSHAN, nutrition education appropriately utilizing School Nutrition Gardens should serve as an effective tool for the child, teacher and parents.

1. Good Practices observed

- a) The state is providing egg/banana daily to all students from its own resources.
- b) State is providing Meal to students of classes 9th and 10th also from its own resources.
- c) Provision of breakfast in 1,545 schools covering 1.14 lakh children from States own resources.
- d) Health check-up of school children is being carried out under Rashtriya Bal Swasthya Karyakram (RBSK). In most of the school student health and ophthalmic examination were done under RBSK.
- e) State is providing time scales pay to cook-cum-helpers.
- f) Cook-cum-Helpers in most of the visited schools were using aprons and head gears and Hygiene kits.
- g) School Nutrition (Kitchen) Garden have been setup in most of the visited schools.
- h) Eating plates were provided for serving meal to children in all schools from State own resources.
- i) Use of LPG as fuel is observed in all the visited schools.
- j) Drinking water facility is available in all schools within the school premise and RO system was installed in majority of the school.
- k) Separate toilets for boys and girls are available in all schools.
- l) Tasting of meal register is maintained in all schools.
- m) Double fortified salt and fortified oil are being used in all the visited schools.

2. Areas of Concern

- a) Some children are not taking meals in few of the visited schools, State Govt may look-in to the reasons in this regard. State may put in place a system to closely monitor these schools and encourage children to take meals.
- b) State Government needs to ensure that the meals are provided as per the prescribed quantities under the guidelines of PM POSHAN Scheme.
- c) Monitoring requires attention at all levels right from State to school level. It was noticed at school level that the visiting officials i.e. PA Noon meal, BDOs, Deputy BDOs etc. in most of the cases need to record specific observations on important components of PM POSHAN Scheme.
- d) Only 40% schools are reporting on Automated Monitoring System.
- e) Cook cum helpers are not engaged as per prescribed norms of Govt. of India.
- f) Children in some schools do not like "Keerai Sadam" in menu. The menu may be revised as per the liking of the students.
- g) The entitlement of children under the Scheme is not displayed at a prominent place in many schools visited and almost all the teachers, organisers, SMC members /chairpersons were not aware of food norms and entitlements of children.
- h) PM POSHAN logo, Menu and emergency telephone numbers were not displayed at a prominent place in some of the visited schools.

3. Recommendations

- a) Breakfast provided in some schools is a good initiative to be extended to all.
- b) State may include Sambar rice for one more day per week as desired by the children of the visited schools in place of "Keerai Sadham".
- c) Inclusion of curd in the menu may also be explored as desired by all children in schools.
- d) The entitlement of children, logo, menu and important numbers viz., fire brigade, Police Station, Primary Health Centres etc., may be painted at a prominent place in schools.
- e) State may engage all the approved cook cum helpers as per the requirement.
- f) Millets may be included in the menu once in a week.
- g) Training and sensitization of officials at different levels.
- h) State may explore the feasibility of provision of Seasonal fruits to school children.

- i) State may put in place a system to closely monitor the schools where children are not taking meal on regular basis and ensure that all the eligible children are covered under this scheme.
- j) State should adopt stringent mechanism to ensure that children receive the prescribed quantities of food-grains, pulses, vegetables and other ingredients.
- k) Repair of existing kitchen-cum-stores to be completed, wherever required.
- l) The children suffering from Anaemia identified by RBSK may be taken special care and the parents may be made aware.
- m) The observations on the quality and taste of Meal may be recorded in the taste register by the Parents and community members also.
- n) Storage bins for safe storage of food grains and other ingredients to all schools.
- o) School Nutrition (Kitchen) gardens developed by some schools should be replicated in other schools to the extent possible.
- p) Testing of meals at frequent intervals through accredited labs needs to be done to comply with provisions of Rules in collaboration with FSSAI.
- q) Social Audit should be carried out in all the districts as per the guidelines.

Chapter 1: The Joint Review Mission of PM POSHAN

PM POSHAN is one of the **foremost rights based Centrally sponsored scheme** under the National Food Security Act, 2013 (NFSA) covering about 12 crore children studying in 10.84 lakh schools NFSA provides for **Right to Food**, i.e. food and nutritional security through human life cycle approach. Act mandates that **every child** within the age group of six to fourteen years or studying in class I to VIII, whichever is applicable, shall have one hot cooked meal, free of charge, every day, except on school holidays, in all schools run by local bodies, Government and Government aided schools, so as to meet specified nutritional standards.



Importance of school meal during the growing years of the children:

School Meal is critical to student health and well-being, especially for low-income students and ensures that students have nutrition they need throughout the day to



learn. Research shows that receiving free or reduced-price school meal reduces food insecurity, obesity rates, and poor health. In addition, school meal nutrition standards are having a positive impact on student food selection and consumption, especially for fruits and vegetables.

School meal programmes can play a crucial role in ensuring that all children, regardless of where they live, can eat healthy and nutritious foods — which in turn supports their ability to learn. School meal programmes are uniquely placed to address both under nutrition, overweight and obesity by promoting healthy diets. We know that diet has an impact on children’s physical and mental health as well as their food habits- which can carry over into adulthood whether healthy or not, showing how important a healthy diet at an early age is.



For the first time of the history of the Scheme schools were closed due to COVID-19 and to sustain the immunity and the nutritional status of the children one the directions of Govt. of India States Governments provided Food Security Allowance to all the eligible children in schools.



it was a stark reminder that they are not only an educational space, but also a source of much-needed meals for millions of children worldwide, especially when families struggle to make ends meet. Without government support, children could go hungry or be unable to access healthy foods.

Primary school age is a dynamic period of physical growth and mental development of the child. The PM POSHAN Program is the world's biggest school lunch programme and is being implemented all over India for primary and upper primary school children, emerging to address the multiple challenges of poverty, hunger, and access to education.

Under-nutrition is one of the most important constraints in achieving the Sustainable Development Goals. Consequences of under-nutrition and hidden hunger are very serious on health and nutrition status leading to negative economic growth of the country.

1.2 Objectives of Joint Review Mission

A programme of scale and magnitude of PM POSHAN requires close monitoring and evaluation at all levels. In 2010, the Ministry of Education, Govt. of India, decided to review implementation of the programme in all its aspects including the health aspects through the Review Missions.

The composition of the present JRM in Tamil Nadu is as under:

- a) Dr. Indrapal I Meshram, Scientist – F, National Institute of Nutrition – ICMR, Hyderabad, Team Leader.

- b) Shri. G. Vijaya Bhaskar, Director (PM POSHAN), DoSE&L, MoE, Govt. of India – Member
- c) Tmt. D. Rathna, Director, Social Welfare & Women Empowerment, Govt. of Tamil Nadu– Member
- d) Dr. Samarasimha Reddy, Scientist – E, National Institute of Nutrition – ICMR, Hyderabad -Member
- e) Dr Anindita Shukla, Chief Consultant, TSG-PM POSHAN – Member
- f) Shri Davander Kumar, Senior Consultant, TSG-PM POSHAN – Member

The JRM was also assisted by Mr. GL Stephen, Ms. Jeya Jeraldin, Mr. Sreenu Pagidoju and Ms. S. Nanthini Research Assistants for the Mission during its visit to Madurai and Ramanathapuram district for monitoring the implementation of Scheme as per the defined terms of reference.

1.3 Terms of References of 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 SwasthyaKaryakram for health check-up, supplementation of micronutrients under WIFS & de-worming against intestinal parasite under National de-worming 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 the scheme.
 - g. Tasting of meal 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

1.4 ToRs of Nutritional Aspects:

- a) To assess the anthropometric measurements of a sample of children availing meal
- b) i. Height ii. Weight
- 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 meal.
- f) To review the satisfaction of the children parents and community on the served meal in respect of quality and quantity.
- g) To suggest some nutritionally balanced region-specific recipes.

Chapter 2: Overview of the PM POSHAN

PM POSHAN Scheme is one of the foremost rights based Centrally Sponsored Schemes under the National Food Security Act, 2013 (NFSA). PM POSHAN Scheme earlier known as Mid-day meal was launched on 15th August 1995 as a Centrally Sponsored Scheme initially in 2478 blocks and later on in 1997-98 covering entire country for school going children. 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'. The Cabinet Committee on Economic Affairs (CCEA) has approved renaming of Mid-Day Meal Scheme to Pradhan Mantri Poshan Shakti Nirman (PM POSHAN) in its meeting held on October 2021 and also approved continuation of PM POSHAN Scheme for the five year period 2021-22 to 2025-26.

The **objectives of the 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 Balvatika and I – VIII in Government and Government-Aided Schools.
- 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 vacation and in disaster times.

1. Nutrition norms under the scheme

S. N.	Items	Bal Vatika & Primary	Upper Primary
A) Nutrition norm per child per day			
1.	Calorie	450	700
2.	Protein	12 gms	20 gms
B) Food norms per child per day			
1.	Food grains	100 gms	150 gms
2.	Pulses	20 gms	30 gms
3.	Vegetables (leafy also)	50 gms	75 gms
4.	Oil & fat	5 gms	7.5 gms
5.	Salt & condiments	As per need	As per need

PM POSHAN aims at achieving Sustainable Development Goals 2 – Zero Hunger, Goal 3 – Good health & well-being, and Goal 4 – Quality education.



Beneficiaries under the scheme are:

a) Balvatika Children

All children enrolled in Bal Vatika (i.e. just before class I) in Government and Government Aided primary schools and attending school are entitled for one hot cooked meal on all schools days.

b) All children enrolled in classes I-V

All children enrolled in classes I-V in Government and Government Aided schools and attending school are entitled for one hot cooked meal on all schools days.

c) All children enrolled in classes VI-VIII

All children enrolled in classes VI-VIII in Government and Government Aided schools and attending school are entitled for one hot cooked meal on all schools days.

d) All children enrolled in National Child Labour Project (NCLP) schools

All children enrolled in classes I-V in schools run under National Child Labour Project (NCLP) schools of Ministry of Labour & Employment, Government of India and attending school are entitled for one hot cooked meal on all schools days.

The Scheme aims for:

- i. **Preventing classroom hunger:** Many children belonging to disadvantaged sections of society reach school with an empty stomach. Even children, who have a meal before they leave for school, get hungry by the afternoon and are not able to concentrate. Hot cooked meal can help the children from families which cannot afford a lunch box or are staying far away from schools, to overcome “classroom hunger”.
- ii. **Promoting school participation:** PM POSHAN has big effect on school participation, not just in terms of getting more children enrolled in the registers but also in terms of regular pupil attendance on a daily basis.
- iii. **Facilitating healthy growth of children:** PM POSHAN can also act as a regular source of “supplementary nutrition” for children to facilitate their healthy growth.
- iv. **Intrinsic educational value:** A well-organized PM POSHAN can be used as an opportunity to impart various good habits to children (such as washing one’s hands before and after eating) and to educate them about the importance of clean water, good hygiene and other related matters.
- v. **Fostering social equality:** PM POSHAN can help spread egalitarian values, as children from various social backgrounds learn to sit together and share a common meal. In particular, hot cooked meal can help to break the barriers of caste and class among school children. Engaging cooks from SC/ST communities is another way of teaching children to overcome caste prejudices.
- vi. **Enhancing gender equity:** The gender gap in school participation tends to narrow, as PM POSHAN Scheme helps to erode the barriers that prevent girls from going to school. The scheme also provides a useful source of employment for women and helps liberate working women from the burden of cooking at home during the day.

2. Components of Pradhan Mantri Poshan Shakti Niraman Scheme are as under:

- i) **Food Grains:** Supply of food grains @ 100 grams



per child per school day for primary and 150 grams for upper primary at NFSA rate i.e. Rs 1 per kg for coarse grains, Rs 2 per kg for wheat and Rs 3 per kg for rice.

- ii) Cooking Cost:** It includes cost of ingredients, e.g. pulses, vegetables, cooking oil, other condiments and fuel. The per child per day cooking cost is Rs5.45 for primary and Rs8.17 for upper primary w.e.f. 1stOctober, 2022.
- iii) Engagement of cook-cum-helper and payment of Honorarium:** One cook-cum-helper can be engaged for upto 25 students, two cook-cum-helpers for schools with 26 to 100 students and one additional cook-cum-helper for every addition of up to 100 students. Each of them is entitled to a minimum honorarium of Rs 1,000 per month. The States are however free to give more honorarium over and above the prescribed minimum to the cooks-cum-helpers, from their own resources. The expenditure towards honorarium of cook-cum-helpers is shared between the Centre and States/UTs as per the approved funding pattern.
- iv) Construction of kitchen-cum-store:** The Central Assistance is being released to the States/UTs for the construction of Kitchen-cum-Store on the basis of plinth area norms and State Schedule of Rates prevalent in the State/UT. This Department has prescribed 20 sq. mt. plinth area for construction of Kitchen-cum-Store in schools having upto 100 children. For every addition of upto 100 children, additional 4 sq. mt. plinth area is added. States/UTs have the flexibility to modify the slab of 100 children depending upon local conditions. The cost of construction of Kitchen-cum-stores is shared between the Centre and States/UTs as per the approved funding pattern.
- v) Central Assistance for repair of Kitchen-cum-Stores:** Central Government has made a provision of assistance of Rs 10,000/- for repair of the kitchen-cum-stores constructed ten years ago under the Scheme on sharing basis. This assistance for repair of kitchen-cum-stores is to be shared between the Centre and States/UTs as per the approved funding pattern.

- vi) Kitchen Devices:** Central Government is providing assistance for kitchen devices by linking them to the enrolment in the schools as follows:

Enrolment (No. of Children) per school	Unit Cost (In Rs)
Up to 50	10,000
51-150	15,000
151-250	20,000
251 & above	25,000

This assistance for kitchen devices is shared between the Centre and States/UTs as per the approved funding pattern.

- vii) Transportation Assistance:** As per PDS rate for transportation of food grains from FCI godown to school door steps. Maximum Rs 1500 per MT for transportation of food grains from FCI godown to school door steps for States other than NER and 2 Himalayan States and 2 UTs.

- viii) Management, Monitoring and Evaluation (MME):** @ 3% of aggregate of cost of foodgrains, cooking cost, Honorarium to Cook-cum-Helpers and Transportation Assistance.

- ix) Innovation / Flexibility component with no separate budgetary support** :Five percent of the aggregate of the cost of foodgrains, cooking cost, transport assistance, honorarium to cook-cum-helpers, and MME with no separate additional budgetary support for this component. The requirement of funds under this component will be met from available funds.

- x) Convergence with Ministry of Health & Family Welfare:** Health screening of school children are being carried out under Rashtriya Bal Swasthya Karyakram (RBSK).

- a) To combat parasitic worm infections of school-age children, deworming medicine is provided under National Deworming Day. During NDD, albendazole 400 mg chewable tablets are administered to children biannually. The school teachers and peer leaders are involved during NDD.
- b) Weekly Iron and folic acid tablets are provided to children under WIFS to prevent anaemia.

3) Revision of scheme

Procedure for release of funds: The recurring central assistance under the scheme was released in two installments in the ratio of 60% and 40% of the approval of Programme Approval Board – PM POSHAN. Till 2021-22, the first installment was bi-furcated into two parts i.e. ad-hoc release and balance of first installment. The ad-hoc release was made @ 25% of the PAB approval for the number of children and working days in the month of April of each financial year in order to ensure uninterrupted implementation of the scheme without asking for any information on the unspent balance as on 1st April from the previous year's releases with the States. As per the instructions of Ministry of Finance regarding use of new procedure of release of funds under PFMS from 2022-23 onwards, there will be no ad-hoc release and no revalidation of funds. As the amount lying with the SNA at the closure of financial year may be used in the next Financial year without the need for any revalidation. However, If any amount of the central funds released during the financial year is still remaining with the State treasury, which has not been transferred to the SNA, the same will be returned to the Consolidated Fund of India (CFI) through RBI Advice.

4) Innovations

- i) **Monitoring of attendance** –The Ministry of Education has worked with States and UTs to implement a technology based (SMS, IVRS & Mobile App) Automated Monitoring System by which information on attendance at the PM POSHAN is collected every day from schools. At present, the level of daily uploading of data has reached 50% of all schools. All States and UTs have been directed to ensure that daily data from 100% schools is uploaded.
- ii) **Menu under PM POSHAN** – The guidelines envisage that the nodal implementing agency at district, taluk and school level is empowered to develop indicative menus using locally available and culturally acceptable food items. The guidelines further encourage local support for drawing out varied, but wholesome and nutritious menus.
- iii) **School Nutrition Kitchen Gardens :**
School Nutrition (Kitchen) Gardens are being developed in almost all schools. School Nutrition (kitchen) Gardens is a wonderful way to use the schoolyard

to reconnect the students to a natural world and make them aware about the true source of their food, and teach them valuable gardening and agriculture concepts and skills that integrate with several subjects, such as math, science, art, health and physical education, and social studies, as well as several educational goals, including personal and social responsibility.

iv. Community Involvement:

School managements are encouraged to draw on the support of the community. Gram Panchayats and School Management Committees are approached for arranging community members to monitor scheme regularly, on a rotation basis, to help the school management in ensuring efficient cooking, serving and cleaning operations.

v. Awareness Generation:

IEC activities in connection with the programme, are extremely important. It is being explained to parents belonging to weaker sections that School meal is meant to be in addition to, and not a substitute for meals which parents should in any case provide to children at home, importance of balanced and nutritious meals, and how to provide them economically, Safety, health & hygiene aspects and Community participation/contribution in, and supervision of the programme etc. Good storage, cooking, serving and eating practices.

vi. Tasting of school meals:

The tasting of the food by a teacher just before serving is mandatory. SMC member taste the food on a rotation basis along with the teachers before it is distributed to the children. School maintains record of tasting in a register.

vii. Testing of school meals:

The States/UTs engage CSIR Institutes and NABL / FSSAI accredited laboratories for undertaking testing of samples of meal for food safety and contamination.

viii. Capacity Building activities:

The Self Help Groups and cook-cum-helpers who are the pillars of the scheme, mainly come from the deprived sections of the society, where they have limited information about nutrition, cooking processes, health and hygiene, preparation of raw grains and vegetables, recipes, serving skills etc. These cook cum helpers are being trained on different aspects like cooking cutting vegetables etc.

ix. Fortification under PM POSHAN:

To address iron deficiency, Govt. of India has decided that three food articles i.e. double fortified salt (Iron and Iodine), wheat flour (Iron, Folic acid and Vitamin B-12) and edible oil (Vitamin-A&D) shall be considered for mandatory fortification through PM POSHAN Scheme.

Accordingly, fortified rice is being provided under PM POSHAN scheme by Ministry of Consumer Affairs, Food & Public Distribution. This initiative shall be helpful in reducing the levels of anemia among children. Dept. of Food & Public Distribution has started allocating fortified rice to D/o SE&L under PM POSHAN Scheme from 2021-22 for distribution all over the country which is to be continued further subject to review by June, 2024. The States and UTs have been requested to explore the feasibility of the use of millets under the Scheme where the production and consumption of millets are in practice.

3. Social Audit of the Scheme: State Government, conduct periodic social audits on the functioning of the scheme and publicize its findings and take necessary action, in such manner as may be prescribed by the State Government. The Central Government may, if it considers necessary, conduct or cause to be conducted social audit through independent agencies having experience in conduct of such audits.

4. Central and State Partnership:

Central Government bears entire cost of food grains, transportation



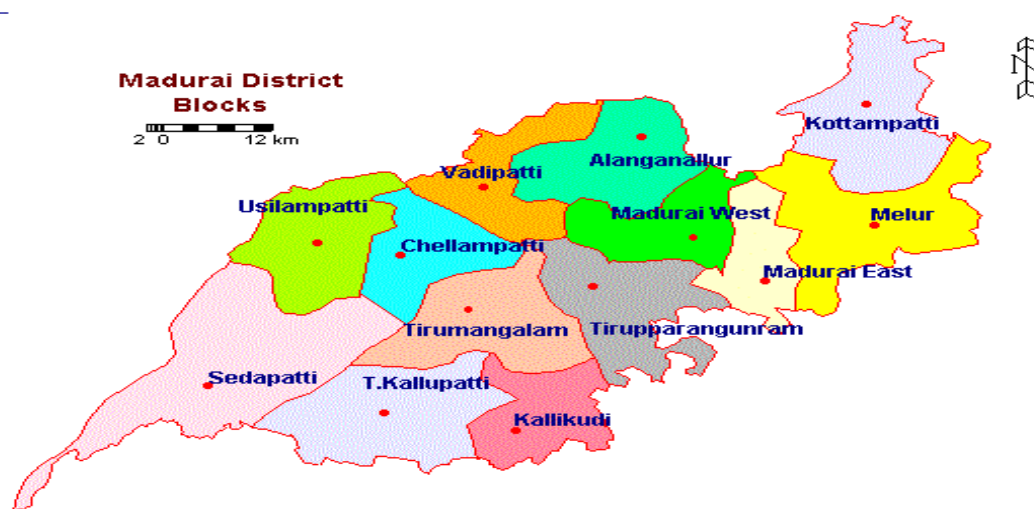
malnutrition among the children in the long term and thereby serves as one of the most effective entry points for human development.

Basic information on the implementation of PM POSHAN during 2022-23

S. N.	Indicator	PAB Approval / Total	Coverage / Utilisation
1	No. of Institutions	43190	43190
2	Enrolment (pry)	2641063	2641063
3	Enrolment (Up. pry)	1923088	1923088
4	Children (Pry): PAB Approval	2238780	2425031
5	Children (U Pry): PAB Approval	1480743	1554722
6	Working Days	220/312	220/312
7	No. of cook-cum-helpers	128130	78263
8	Food Grain Lifted (in MTs)	98165.93 (Allotment)	40658.37
9	Food Grain utilised (in MTs)	40658.37	40658.37
10	Payment to FCI (Rs in lakh)	2944.98	484.61
11	Cooking Cost utilized (Rs in lakh)	29253.45	11083.01
12	Hon. to CCH (Rs in lakh)	7867.80	3287.05
13	MME (Rs in lakh)	1116.69	50.09
14	TA (Rs in lakh)	1472.49	242.31s
15	Implementation of RBSK		
15.1	Institutes covered under RBSK	46559	46559
15.2	Health checkup (no. of children)	2421904	2421904
15.3	IFA administered (no. of children)	125977	125977
15.4	De-worming tablets (no. of children)	4833529	4833529
16	Infrastructure facility available		
16.1	LPG facility	43190	40763
16.2	Drinking Water	43190	43190
16.3	Toilets	43190	43190
17	Schools having LPG facility		40763
18	Annual Data Entry into MIS portal	43190	42234
19	Monthly Data Entry into MIS portal	43190	38341
20	Number of schools uploading data through AMS	43190	20852
21	Number of children having Aadhaar	4560647	3719523
22	Cook-cum-helpers having bank a/c	128130	78263
23	CCH receiving hon. through bank a/c	128130	78263

District -1 Madurai

Districts at a glance: Madurai District consists of three Revenue Divisions viz., Madurai, Melur and Usilampatti Eleven Taluks viz., Madurai North, Madurai West, Thirupparankundram, Vadipatti, Melur, Madurai East, Madurai South, Usilampatti, Thirumangalam, Peraiyur and Kalligudi comprising of 665 Revenue Villages. The District has Thirteen blocks viz. Madurai East, Madurai West, Thirupparankundram, Melur, Kottampatti, Vadipatti, Alanganallur, Usilampatti, Chellampatti, T.Kallupatti, Sedapatti, Thirumangalam and Kallikudi comprising of 420 Village Panchayats. There are three Municipalities viz. Melur, Thirumangalam and Usilampatti Nine Town Panchayats viz. A.Vallalapatti, Alanganallur, Elumalai, Palamedu, Paravai, Peraiyur, Sholavandan, T.Kallupatti and Vadipatti and one Madurai Corporation.



I. Coverage on important indicators vis-à-vis PAB-PM POSHAN approval

Sl.No.	Major Indicators	PAB Approval	Coverage
1	Coverage of existing schools		
1.1	Primary	855	855
1.2	Upper Primary	590	590
2	Coverage of Children		
2.1	Primary	84342	89570
2.2	Upper Primary	54673	57912
3	Working Days		
3.1	Primary	220	220
3.2	Upper Primary	220	220
4	Engagement of Cook-cum-Helpers		
4.1	Primary	2621	2621
4.2	Upper Primary	1736	1736

II. Food-grains

- 1) Total quantity allocated to the district :3653.66

2) Total quantity lifted :1480.29

III. Utilization of central assistance (Rs. in Lakh)

S.N.	MajorIndicators	Allocation	Utilization
1	Cost of Food grains	109.61	44.41
2	Material Cost	1148.64	490.77
3	Honorarium to CCH	261.42	182.99
4	Transportation Assistance	54.81	22.20
5	MME(SALARY ONLY)	21.60	16.74

iv. Social Audit

a. Social Audit has not been conducted.

v. Management information System (MIS) & Automated (Daily) Monitoring System(AMS)

S.No.	Major Indicators	Total schools	No. of schools completed Data entry
1	Annual data entry in MIS	1445	1138
2	Monthly data entry (upto previous Month of visit)	1445	310
3	Daily data submission	1445	1200

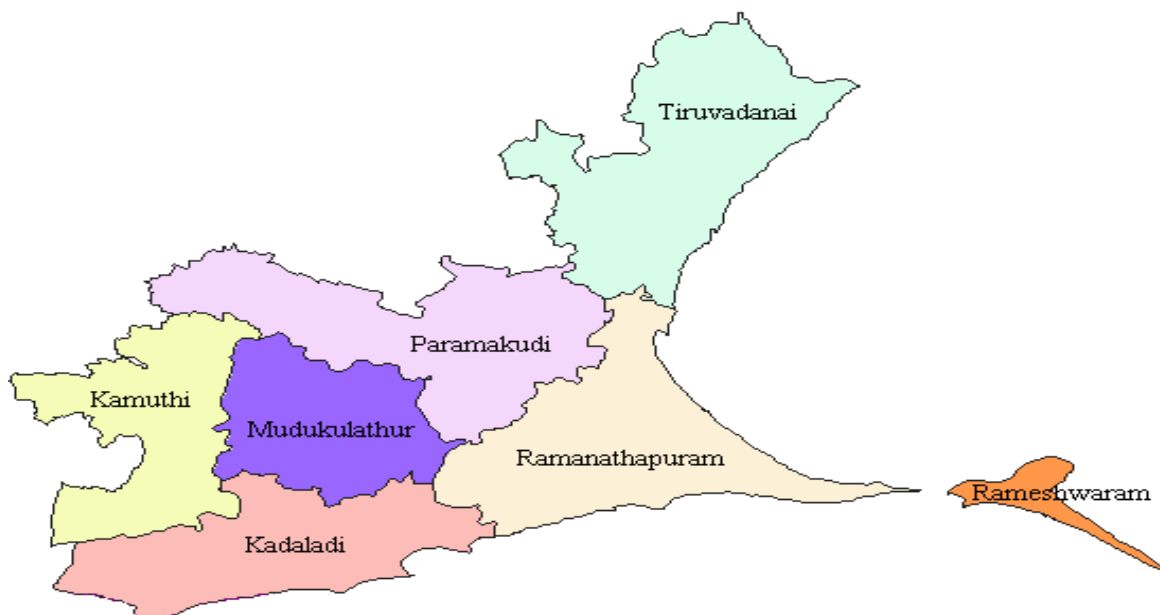
vi. Quality interventions

District is providing additional food items viz.Egg, Green Gram, Black Gram, Fried Potato etc.

District -2 Ramanathapuram

Ramanathapuram District consists of two Revenue Divisions viz., Ramanathapuram and Paramakudi, Nine Taluks viz., Ramanathapuram, Rameswaram, Tiruvadana, Keelakarai, Kadaladi, Kamuthi, Mudukulathur, Paramkudi and Rajasingamangalam comprising of 400 revenue villages. The district has eleven blocks viz., Mandapam, Ramanathapuram, Raja Singa Mangalam, Thiruppullani, Thiruvadana, Bogalur, Kadaladi, Kamudhi, Mudukulathur, Nainarkoil and Paramakudi.

I. Coverage on important indicators vis-à-vis PAB-PM POSHAN approval



Sl. No.	Major Indicators	PAB Approval / Total	Coverage / Utilisation
1	Coverage of existing schools		
1.1	Primary	850	850
1.2	Upper Primary	373	373
2	Coverage of Children		
2.1	Primary	52732	54275
2.2	Upper Primary	28241	27170
3	Working Days		
3.1	Primary	220	91
3.2	Upper Primary	220	91
4	Engagement of Cook-cum-Helpers		
4.1	Primary	2552	2552
4.2	Upper Primary	1143	1143

II. Food grains

1. Total quantity allocated to the district : 2034.54
2. Total quantity lifted : 830.76

III. Utilization of central assistance (Rs. in Lakh) (2022-2023)

S. No.	Major Indicators	Allocation	Utilization
1	Cost of Foodgrains	61.04	24.92
2	Material Cost	656.63	280.54
3	Honorarium to CCH	221.70	155.19
4	Transportation Assistance	30.52	12.46
5	MME	19.44	12.84

IV. Physical Infrastructure

S. N.	Major Indicators	PAB approval	Completed
1	Kitchen cum stores	1223	1223
2	Kitchen Devices	1223	1223
3	Repair of kitchen-cum-stores	-	-
4	School Nutrition (kitchen) Garden	1223	985

V. School Health Programme

S.N	Major Indicators	Enrollment	Covered
1	No. of children - Health Check up	97581	55511
2	No. of children - IFA dosage	97581	3592
3	No. of children - de-worming tablets	97581	91880

VI. Social Audit: Social Audit has not been conducted.

VII. Quality interventions: District is providing additional food items from its own resources.

CHAPTER 3

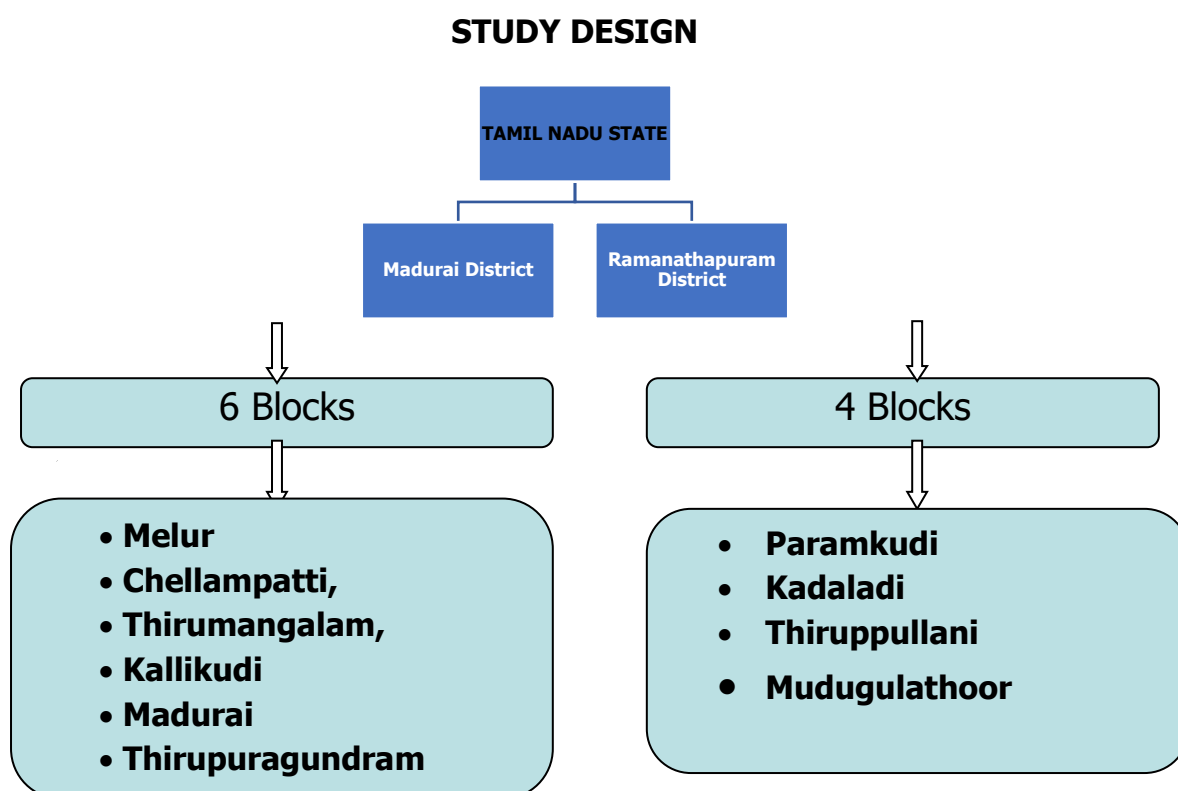
Methodology for the visit of Joint Review Mission

The study was conducted in the primary and upper primary government run schools, where the meal under PM-POSHAN is in operation. Two districts namely Madurai and Ramanathapuram were selected for the visit.

In Madurai district, six blocks were randomly selected namely Melur, Chellampatti, Thirumangalam, Kallikudi, Thirupuragundrum and Madurai urban block. In Ramanathapuram district, the selected four blocks were Paramakudi, Mudugulathur, Kadaladi and Thiruppullani.

3.2. Sample Size:

In order to get required sample for statistical analysis, 1248 children were covered from 42 schools (Madurai 22; Ramanathapuram 20). 584 children from Ramanathapuram and 664 children from Madurai were covered. Various aspects of the implementation of the PM-POSHAN program was studied in detail from the children enrolled in the classes' I-VIII as well as their parents, teachers, members of SMC and other functionaries.



5 schools were covered from each block including primary and Middle schools. In primary schools, 3 boys and 3 girls were covered from each class. In upper primary schools, 2 boys and 2 girls from each class were covered. Anthropometric measurements and clinical examination was conducted for all the selected children.

Institutional diet survey was carried out in 3 primary and 2 upper primary schools in both the districts.

3.3. Investigations

3.3.1. Nutritional Status Assessment:

Anthropometry: Anthropometric measurements such as height, weight and mid upper arm circumference (MUAC) were carried out by the ICMR-NIN team using standard procedure and equipment. Clinical examination for any nutritional deficiency signs such as Bitot's spot, fluorosis, angular stomatitis, goiter was carried out. Height for age and BMI for age z-scores were used for assessing nutritional status of children as per WHO 2007 growth standards.

Weight: SECA weighing scale was used for measuring weight (Kg) of children at an accuracy of 100g. The balances were calibrated and standardized daily before weighing the children. Children were asked to remove their shoes and stand straight on the weighing balance.

Height: Height of the children was measured using stadiometer. Children were asked to remove their shoes and headgear and were asked to stand straight with heels touching together and looking straight ahead, head held comfortable erect, and arms hanging loosely by the sides.

MUAC: Mid Upper Arm Circumference (MUAC) was measured on left arm using a fiber reinforced non-elastic tape. The child was asked to keep the arm relaxed. Midpoint between acromion process of the scapula and the olecranon process of the ulna was marked with the help of a marker. The MUAC tape was then wrapped around the arm at that point gently but firmly to avoid compression of tissue in straight hand. The circumference was taken to nearest mm.

Picture showing Height Measurement using stadiometer



Age: It is important to know the child's age in complete months for calculating the anthropometric indices in order to assess their nutritional status using anthropometry. This information was collected from the school admission registers.

3.3. Anthropometric Indices:

Height-for-age: Height-for-age reflects long term nutritional status. Low height for age is known as stunting. Thus, stunting indicates chronic under nutrition.

BMI for age: Low BMI for age is known as thinness. Thinness serves as an indicator of short-term under nutrition.

Table 3.1: Anthropometric Indicators for Nutritional Status Assessment

Anthropometric Indices	Nutritional grades
Height for Age	<-3SD- Severe Stunting
	-3SD to -2SD- moderate Stunting
BMI for Age	<-3 SD- Severe Thinness
	-3SD to -2SD- Moderate Thinness
	-2SD to +1SD- Normal
	+1SD to +2SD- Overweight
	>+2SD Obese
	>+3SD Morbidly Obese

Diet survey and children's perceptions regarding meal:

Institutional diet survey was conducted in 5 schools to measure the quantity and quality of food intakes by the school children. The data pertaining to the number of meals consumed and the dietary pattern was collected for 77 children.

The following information was collected about meal of PM-POSHAN:

- The children's perceptions regarding the PM-POSHAN program and their preferences of various foods served under the scheme was collected through a detailed questionnaire.
- A Semi structured proforma was used for obtaining information regarding the menu, quality as well as quantity of hot cooked meal served in the schools.
- The parents (who came on request) as well as the teachers' perceptions of the PM-POSHAN scheme was assessed using a structured and pretested questionnaire
- The cook-cum-helpers (CCH) were also interviewed about the quality and quantity of ingredients used for the preparation as well as serving of food on a daily basis.
- The views of teachers and the principals' on the implementation of the PM-POSHAN was collected.
- Data pertaining to the number of children enrolled and the attendance of the students in the school along with the number of beneficiaries of PM-POSHAN was collected.
- Information was also collected about the taste of the meals by the teachers, maintenance of the tasting and other registers, kitchen facilities, storage of the grains and quantity of food cooked on the day of the visit.
- Information was collected from the head teachers as per the records maintained for cook-cum-helpers maintained at schools. Spot observations were also made regarding the aspects related to safety, hygiene, cleanliness etc.
- **Data Analysis:** Data analysis was done using Microsoft Excel and SPSS Version 22. WHO Anthro Plus software used for analysis of anthropometric data. Continuous variables are presented as Mean± SD, frequencies and proportions were used for Categorical variables.

**Picture showing data collection from Parents and supervisory level
functionaries**



Picture showing data collection from Teachers



**Picture showing cereal and millet based preparations by the
students**



Picture of JRM team and functionaries with school children and teachers



Chapter 4:

Trend analysis of implementation of PM POSHAN Scheme in Tamil Nadu - 2017-18 to 2021-22

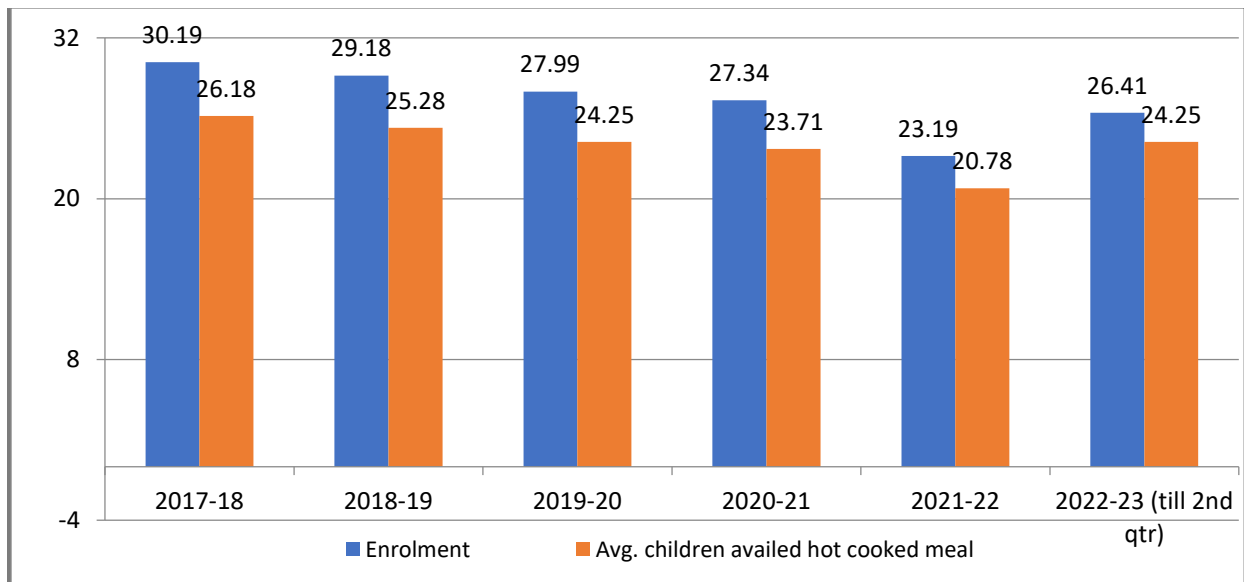
4.1 Coverage of children

The data on coverage of children reveals that on an average 92% of the enrolled children in the State have availed meal on an average basis during 2022-23. Although there is a sharp decline of more than 3 lakh children in the enrolment in 2022-23 from 2017-18, the proportionate coverage has increased from 87% to 92%.

Coverage of Children: Primary

Year	Enrolment	Coverage	% Coverage
2017-18	3018654	2618063	87%
2018-19	2918479	2528269	87%
2019-20	2799310	2425043	87%
2020-21	2734392	2371316	87%
2021-22	2319409	2077851	90%
2022-23 *	2641063	2425031	92%

* till 2nd Qtr



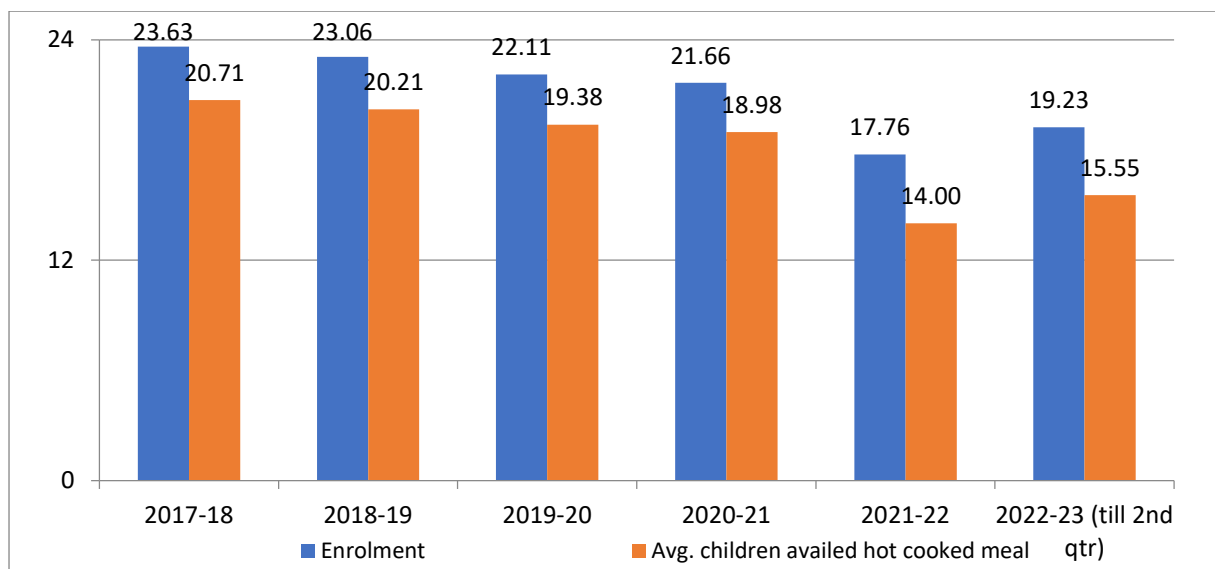
The reduction of enrolment is of about 4.40 lakh children in upper primary and the proportion of children availed hot cooked meal on an average basis has also decreased from 88% to 81%.

Coverage of Children: Upper Primary

Year	Enrolment	Coverage	% Coverage
------	-----------	----------	------------

2017-18	2363259	2071378	88%
2018-19	2306066	2021173	88%
2019-20	2211473	1938157	88%
2020-21	2166204	1897534	88%
2021-22	1775568	1399900	79%
2022-23 *	1923088	1554722	81%

* till 2nd Qtr



4.2 Coverage of working days:

Coverage of working days: Primary and Upper Primary

Year	PAB approval		Coverage		% Coverage	
	Primary	Upper Primary	Primary	Upper Primary	Primary	Upper Primary
2017-18	220	220	220	220	100%	100%
2018-19	210	220	210	220	100%	100%
2019-20	210	220	210	220	100%	100%
2020-21	220	220	220	220	100%	100%
2021-22	220	220	220	220	100%	100%
2022-23 *	220	220	99	99	45%	45%

* till 2nd Qtr

State has done considerably well in terms of coverage of working days and covered 100% school days in each academic year against the PAB approval.

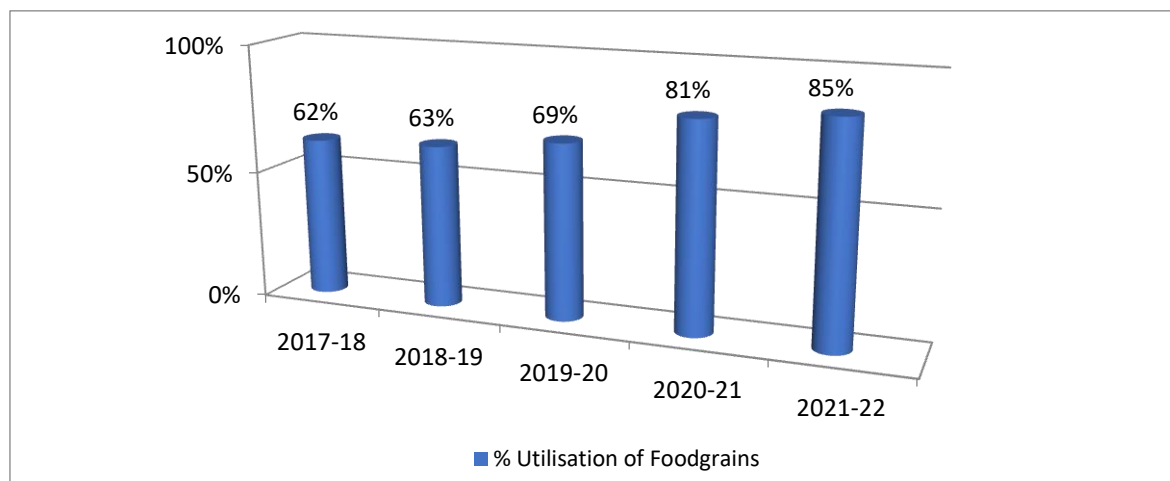
4.3 Utilisation of food grains

Utilization of Food Grain: Primary

(in MTs)

Year	Allocation	Utilization	% Utilization
2017-18	57597	35714	62%
2018-19	53094	33645	63%
2019-20	50926	34932	69%
2020-21	52169	42361	81%
2021-22	49825	42584	85%
2022-23 *	49253	20188	41%

* till 2nd Qtr

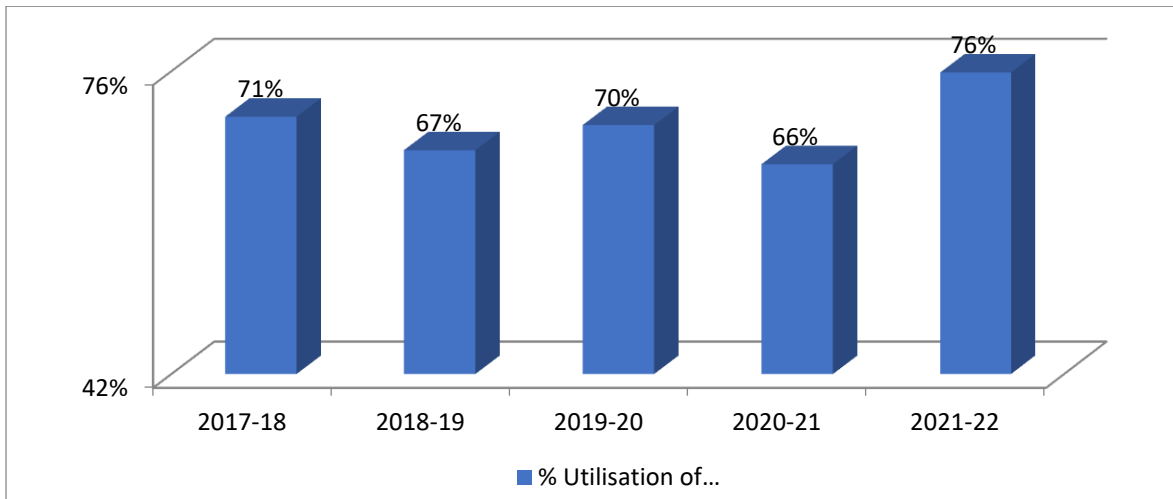


Utilization of Food Grain: Upper Primary

(in MTs)

Year	Allocation	Utilization	% Utilization
2017-18	68461	48543	71%
2018-19	66791	44865	67%
2019-20	64035	44811	70%
2020-21	62585	41060	66%
2021-22	47528	36047	76%
2022-23 *	48913	20470	42%

* till 2nd qtr



The utilisation the food grains is quite less in primary level as well as upper primary. On an average over the years only 71% of the allocated food grains have been utilised in primary and upper primary.

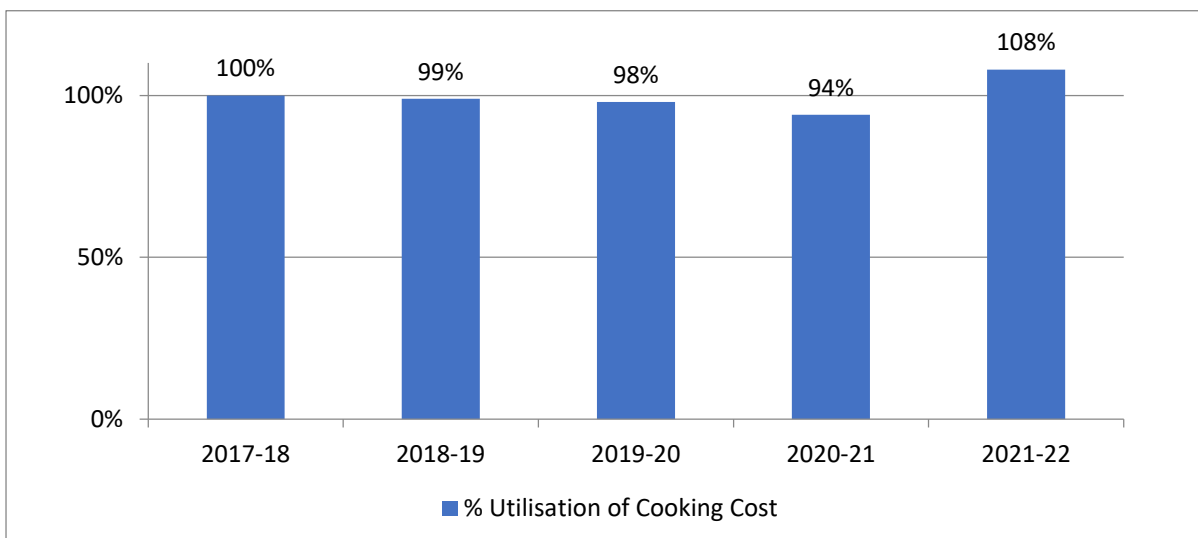
4.4 Utilisation of cooking cost

Utilization of Cooking Cost: Primary

(Rs. in lakh)

Year	Allocation	Utilization	% Utilization
2017-18	14284.15	14270.62	100%
2018-19	14140.5	14016.92	99%
2019-20	13857.44	13549.42	98%
2020-21	13598.41	12763.05	94%
2021-22	13965.7	15026.22	108%
2022-23*	14677.44	7100.27	48%

* till 2nd qtr

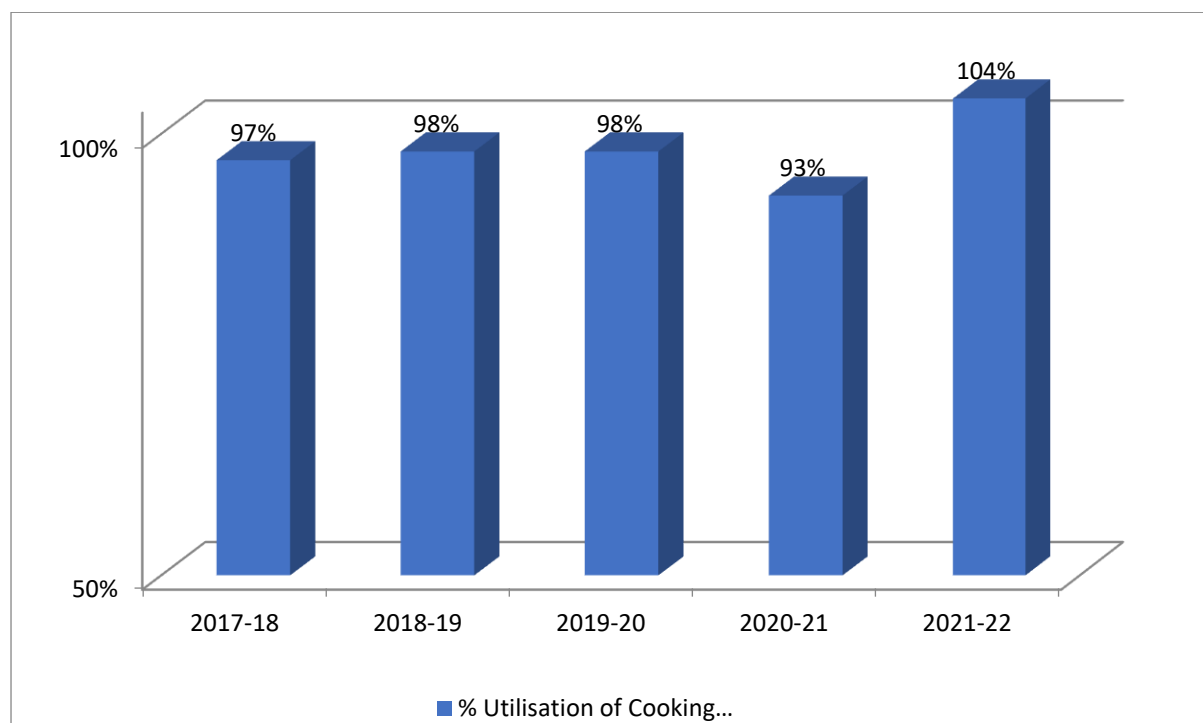


Utilization of Cooking Cost: Upper Primary

(Rs. in lakh)

Year	Allocation	Utilization	% Utilization
2017-18	16932.57	16454.1	97%
2018-19	17076.23	16707.8	98%
2019-20	17410.19	17041.76	98%
2020-21	17304.86	16152.55	93%
2021-22	14163.28	14787.4	104%
2022-23*	14576.01	3982.75	27%

* till 2nd Qtr



As per the data submitted by the State, utilization of cooking cost shows improvement as State has almost utilised the fully available funds. The utilisation of cooking cost is not in sync with the utilisation of food grains, as there is wide gap in the utilisation of cooking cost and foodgrains. JRM observed that the State is using more than 100% of the allocated funds under cooking cost.

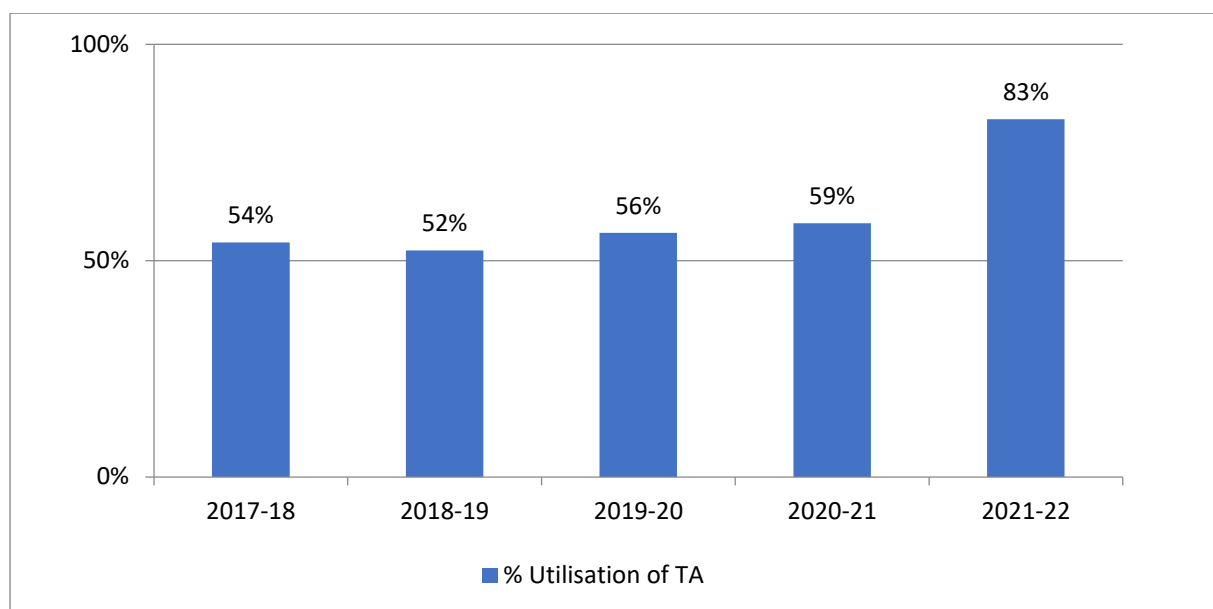
4.5 Utilisation of Transportation Assistance

(Rs in Lakh)

Year	Allocation	Utilisation	% Utilisation
2017-18	945.43	512.82	54%

2018-19	899.13	470.57	52%
2019-20	1724.42	972.73	56%
2020-21	1721.30	1009.40	59%
2021-22	1372.5	1135.07	83%
2022-23*	1472.49	242.31	16%

* till 2nd Qtr



As per the data submitted by State JRM observed that State has made progress in utilizing the funds provided under Transportation Assistance for the delivery of food-grains up to school doorsteps. State has utilized about 83% of the allocated funds towards Transportation Assistance. The above graphs depict that during 2017-18 the utilization of transportation is only 54%. But over the years there is an improvement in making the payment to the transportation agencies for transporting the Food grains.

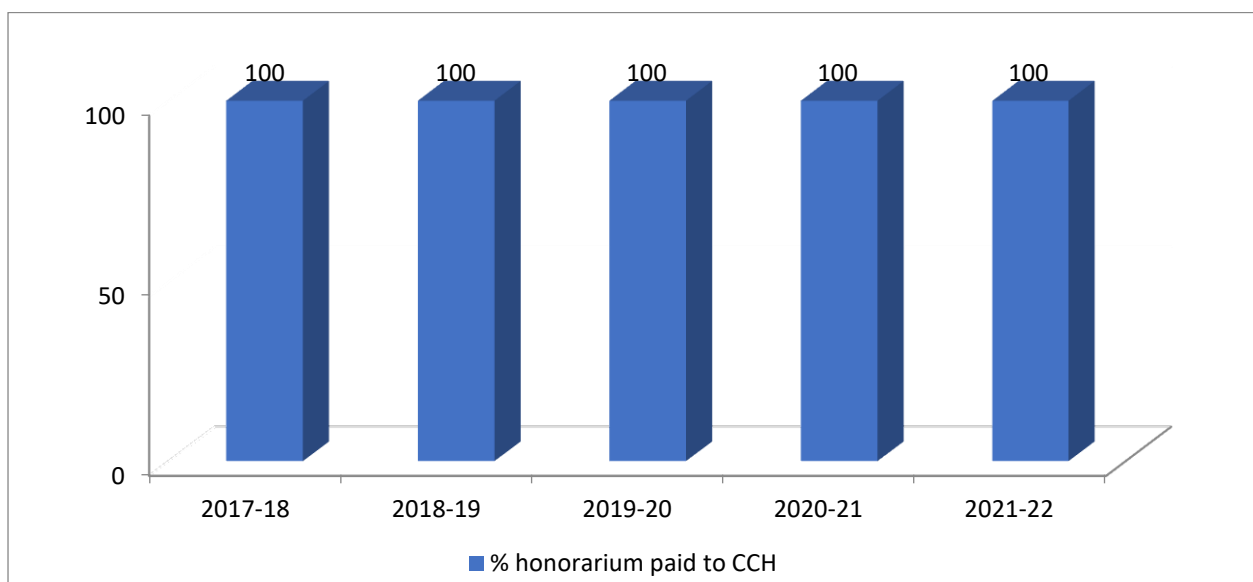
4.6 Engagement and payment of honorarium to cook-cum-helper

The Programme Approval Board-PM POSHAN has approved the engagement of 128130 cook-cum-helpers against which State government have engaged 78263 (61%) Cook-cum-helpers till September, 2022 for cooking and serving of meal to children under PM POSHAN Scheme. JRM observed that the State Government is not following the norms prescribed by Government of India for engagement of the Cook-cum-Helpers on the basis of the enrolment in the schools. In some of the

visited schools the post of cook- cum-helper were vacant. The CCH in both the districts informed that they have been paid honorarium up to November, 2012 in their bank account through e-payment. Most of the CCH in visited schools have received training for preparing nutritious recipes.

Year	No. of Cooks-cum-Helpers - PAB Approval	No. of Cooks-cum-Helpers Engaged	% Engaged	Honorarium Allocation (Central Share)	Honorarium paid	% honorarium paid
2017-18	128130	128130	100%	7680.80	7680.80	100
2018-19	128130	128130	100%	7680.80	7680.80	100
2019-20	128130	128130	100%	7680.80	7680.80	100
2020-21	128130	128130	100%	7680.80	7680.80	100
2021-22	128130	128130	100%	7680.80	7680.80	100
2022-23*	128130	78263	61%	7680.80	3287.05	43

* till 2nd qtr



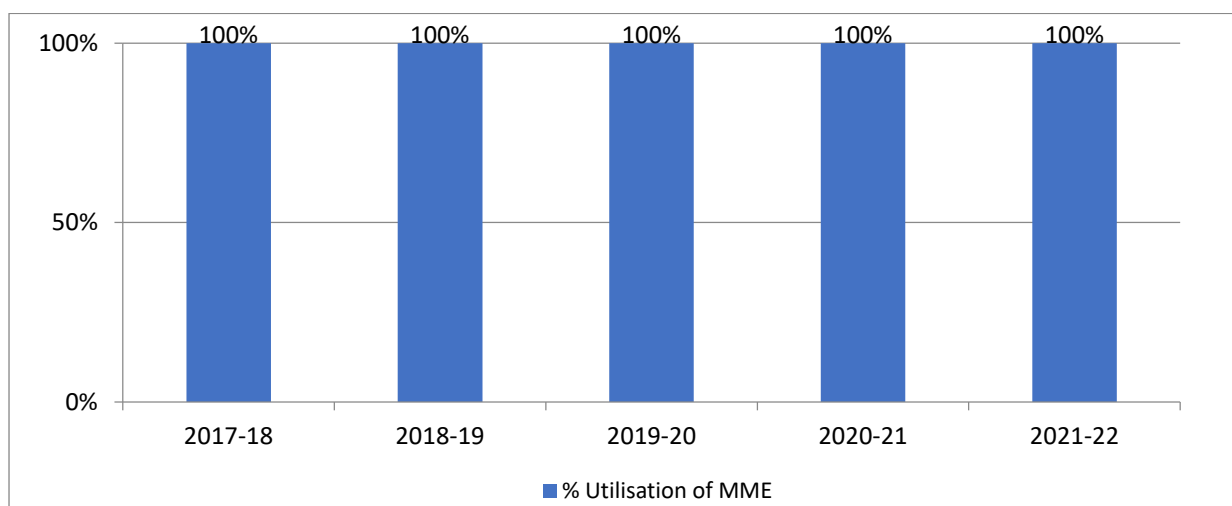
The State has engaged all the Cook-Cum-Helpers approved by the PAB-PM POSHAN in previous years. However, during 2022-23 State engaged only 78263 (61%) cook-cum-helpers against PAB approval of 128130 CCH. State is providing Special time scales per CCH from its own resources.

JRM recommends that state may engaged all the Cook-Cum-Helpers approved by PAB during the year 2022-23 as per the guidelines issued by Government of India.

4.7 Utilisation of MME

S. No.	Allocation	MME Utilization	% TA Utilization
2017-18	793.92	793.92	100%
2018-19	785.37	785.37	100%
2019-20	782.11	782.11	100%
2020-21	1181.64	1181.64	100%
2021-22	1078.23	1078.23	100%
2022-23 *	1116.69	50.09	4%

* till 2nd Qtr



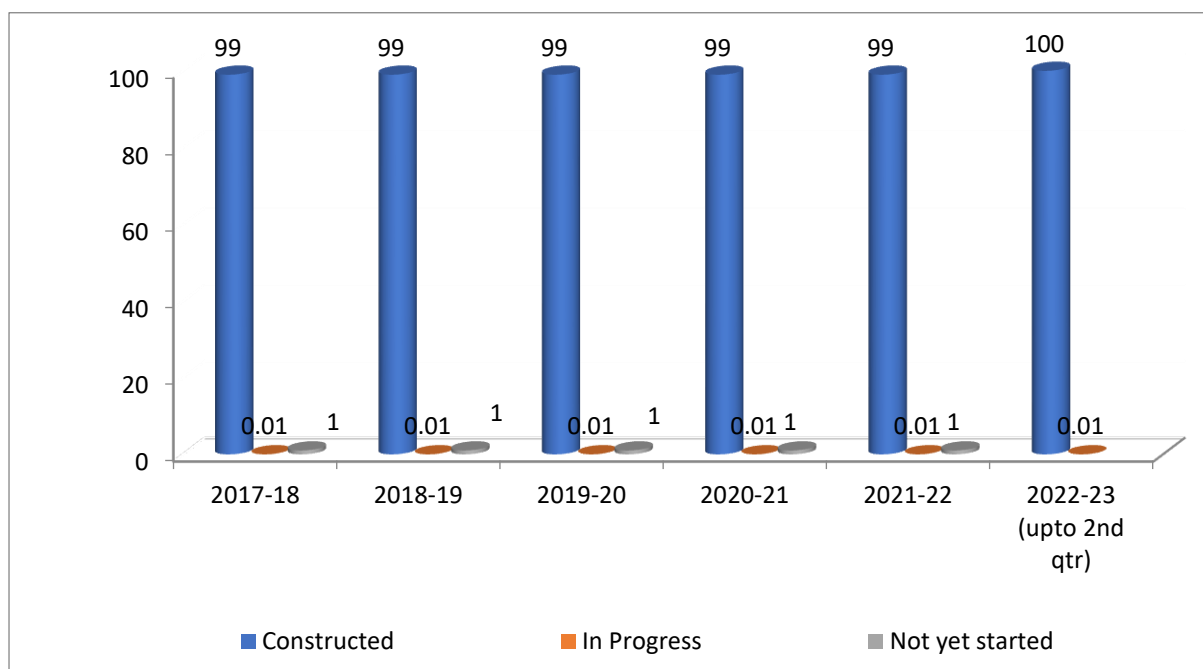
State has done considerably well on the front of utilization of funds meant for Management, Monitoring and Evaluation (MME) and used 100% of the available funds.

4.8 Construction of Kitchen-cum-stores

Sl. No.	No. of Kitchen - cum-stores sanctioned(2006-07 to 2012-13)	Physical Progress of Kitchen cum stores					
		Constructed		In Progress		Not yet started	
		No.	%	No.	%	No.	%
2017-18	28470	28136	99	37	0.01	297	1
2018-19	28470	28136	99	37	0.01	297	1
2019-20	28470	28136	99	37	0.01	297	1

2020-21	28470	28136	99	37	0.01	297	1
2021-22	28470	28136	99	37	0.01	297	1
2022-23*	28470	28434	100	36	0.01	-	-

* till 2nd Qtr

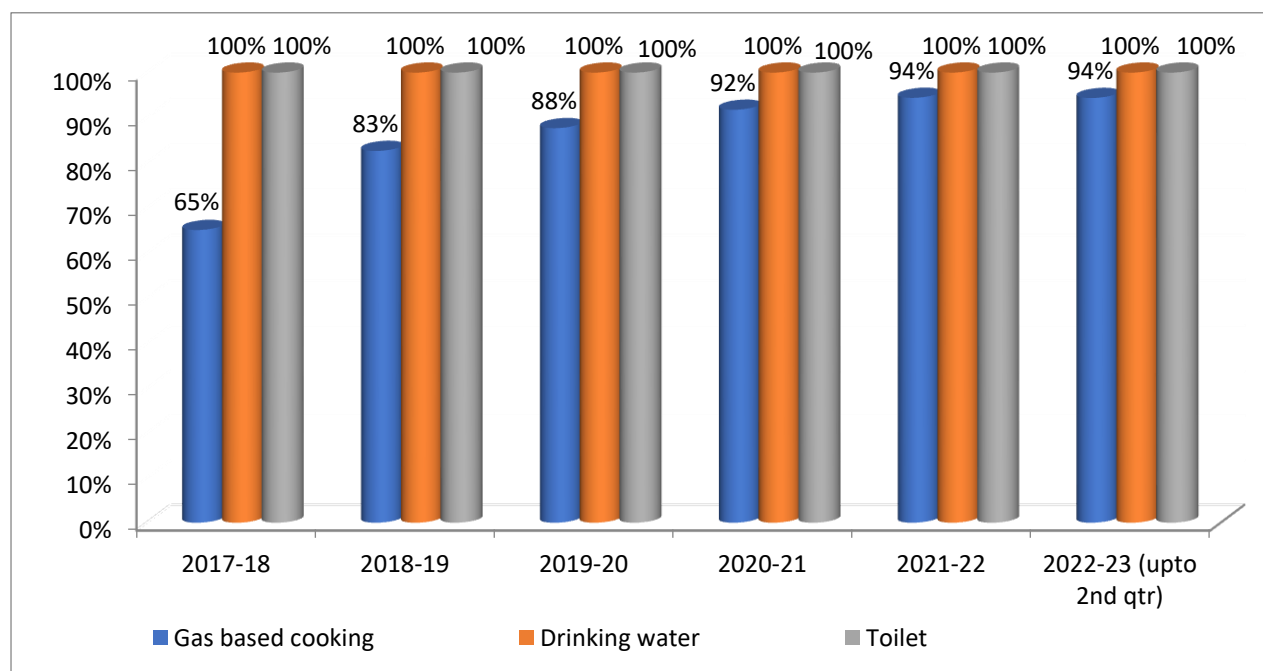


State has performed very well on construction of kitchen-cum-stores, as almost sanctioned works have been completed. Construction work is in process of 36 units of kitchen-cum-stores.

4.9 Infrastructure facilities

Year	Total institution	Infrastructure					
		Gas based cooking		Drinking water		Toilet	
2017-18	43143	28104	65%	43143	100%	43143	100%
2018-19	43205	35713	83%	43205	100%	43205	100%
2019-20	43283	37962	88%	43283	100%	43283	100%
2020-21	43246	39691	92%	43246	100%	43246	100%
2021-22	43174	40763	94%	43174	100%	43174	100%

2022-23*	43190	40763	94%	43190	100%	43190	100%
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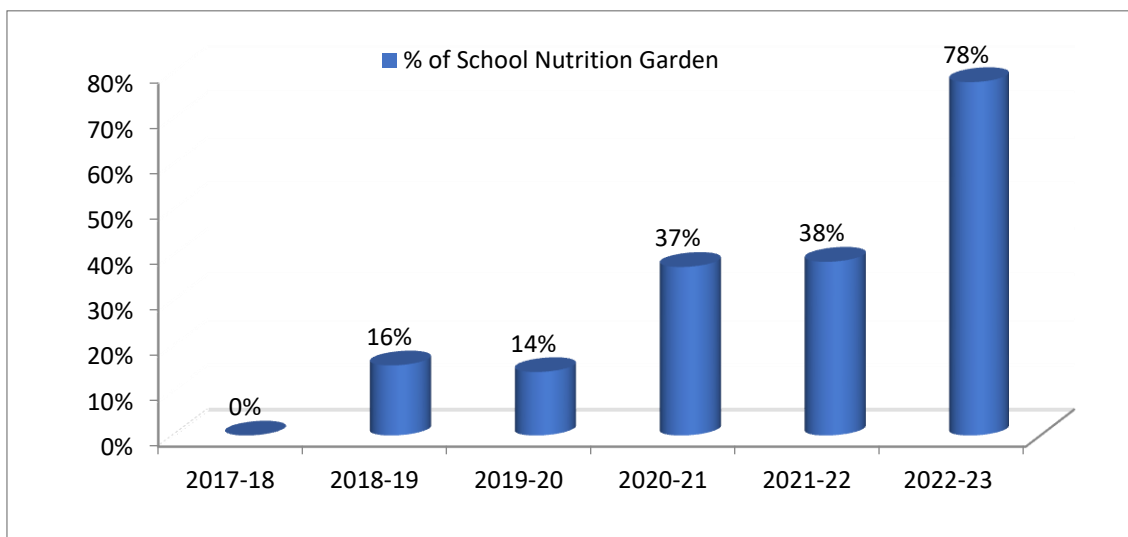
JRM observed that, the quality of rice, dal, oil and condiments were very good in most of the visited schools. Fortified oil and salt are being used for preparing meal including fortified rice. In all the schools, separate kitchen building was available. LPG was being used in all visited schools for the preparation of meal. The utensils to cook meal were found in adequate quantities in all visited schools. JRM also observed clean toilets and potable drinking water facility available in all visited schools. In few of these schools storage area was found to be damp with no ventilation facility. In few schools it was observed that ingredients such as pulses, condiments etc. were also not stored in the moisture free containers and stacked properly.

4.10 Development of Nutrition Kitchen Garden

JRM observed that SNGs are set up in almost all the schools visited. JRM suggests that vegetables and fruits may be roped as per season as per the topography and weather conditions and may also be used in the preparation of meal. State may obtain the advice of experts from local KVK, in this regard. Vegetables especially dark green leafy vegetables are rich in micronutrients and vitamins essential for the physical and mental growth and development of the children. Fruits especially yellow or orange viz., pumpkin, are rich in many vitamins and minerals which helps to protect our immunity and health (viz. papaya, mango, carrots).

Year	Total School	Schools having SNG	%
2017-18	43143	0	0%
2018-19	43205	6724	16%
2019-20	43283	6099	14%
2020-21	43246	16123	37%
2021-22	43174	16586	38%
2022-23 *	43190	33618	78%

* till 2nd Qtr



State has developed 33618 (78%) School Nutrition (Kitchen) Gardens. Rest of the schools may be encouraged to develop kitchen gardens with the active participation from school students. Various kinds of vegetables like radish, carrot, spinach, Moringa, drumstick etc are being grown and are being used in the preparation meals for children. In case, there is no space in the school to set up kitchen gardens, SNGs may be grown in boris, broken sink, or any other waste basket etc. this will help the create and nurture a habit to grow their own vegetables by the children.

Therefore, JRM recommends that all schools may be encouraged to set up kitchen gardens where vegetables can be grown irrespective of availability of land. This may help the children to understand the importance of eating green in the daily diet.

CHAPTER: 5 - Observations from the Field as per the ToR

5.1 Review of the Fund flow mechanism

State Government is providing sufficient funds in the State Budget (Central share and State share) and distribute to districts and from districts to Block Development Officer who in turn distributes to Nutritious Meal Organizers.



State Government releases funds in advance to different levels without waiting for the release of central share or when funds are awaited from Govt. of India in order to ensure smooth and uninterrupted supply of hot cooked meals to children under the PM POSHAN Scheme. Nutritious Meal Organizers are authorized to draw money required for food grains, Vegetables and fuel charges one week in advance to incur the above expenditure.



State Government have completed all procedures for implementation of new system of release of funds in line with the revised procedure prescribed by Department of Expenditure, Ministry of Finance, Govt. of India. The SNA / IA accounts have been opened in an identified nodal bank (RBL Bank Ltd.,) and mapped with PFMS. The entire 1st instalment release of Central Assistance (Rs. 250.27 Crore) for the year 2022-2023 and the corresponding State Share (Rs. 147.77 Crore) has been duly transferred into the SNA Account within the stipulated period. Now the transactions are being carried out through SNA Account as per the revised financial procedures / SNA Guidelines.



Further, utmost care has been taken to ensure availability of funds at schools, however in case of delay, all schools have been directed to utilize any available fund with the Nutritious Meal Organizers as per government order towards the provision hot cooked meal if any delay or shortage of fund observed in the school. The details of Central share released and corresponding State share transferred to SNA account during 2022-23 is given below:

State Name	Total Amount Released by GOI to State (cash + Commodity)	Amount Released by GOI to State After SNA marking	Release Date (Released by GOI to State After SNA Marking)	Total Amount Released By State Treasury to SNA	Date of release from treasury to SNA account	Amount of Central share Released by Treasury to SNA	Date of Central share Released by Treasury to SNA	Deficit in Release of Center Share	Amount of State share Released by Treasury to SNA	Date of State share Released by Treasury to SNA
3	4 = (4a+4b+4c)	4c	5	6	7	8	9	10 = (4b+4c-8)	11	12
TAMIL NADU	2,50,26,75,000.00	-	-	5,60,66,000.00	20-05-2022	-	-	-	5,60,66,000.00	20-05-2022
		64,31,87,000.00	13-09-2022	Data not received from State				64,31,87,000.00		
		1,85,94,88,000.00	15-09-2022	16,19,42,000.00	29-09-2022	8,63,79,000.00	29-09-2022	1,77,31,09,000.00	7,55,63,000.00	29-09-2022
				3,81,83,83,000.00	28-09-2022	2,13,37,35,000.00	28-09-2022	-27,42,47,000.00	1,68,46,48,000.00	28-09-2022

It would be observed from the SNA 06 report in PFMS that there was delay in the release of funds by the State to the implementing agencies. The Joint Review Mission (JRM) observed during its visit to the schools that almost all the schools had positive balance of cooking cost in Madurai district. However, some schools had



negative balance of cooking cost in Ramanathapuram district.

JRM recommends that fund flow system may be streamlined for ensuring that all schools get funds in time .

District Madurai - The details of allocation of funds and utilization upto October, 2022 are given below: **(Rs. in lakh)**

S.N.	Major Indicators	Allocation	Utilization	% of funds utilization against allocation
1	Cost of Food grains	109.61	44.41	41%
2	Material Cost	1148.64	490.77	43%
3	Honorarium to CCH	261.42	182.99	70%
4	Transportation Assistance	54.81	22.20	41%
5	MME(SALARYONLY)	21.60	16.74	78%

District Ramanathapuram – The details of allocation of funds and utilization upto October, 2022 are given below: **(Rs. in lakh)**

S.N.	Major Indicators	Allocation	Utilization	% of funds utilization against allocation
1	Cost of Food grains	255.8	65.72	26%
2	MaterialCost	172.3	72.14	42%
3	HonorariumtoCCH	226	131.8	58%
4	TransportationAssistance	17.45	17.45	100%
5	MME(SALARYONLY)	1.62	1.32	81%

The JRM observed that honorarium to Cook-cum-Helpers is paid regularly on monthly basis. All the CCH informed that they have received honorarium up to the month of November, 2022.



5.2. Review of the coverage of the scheme

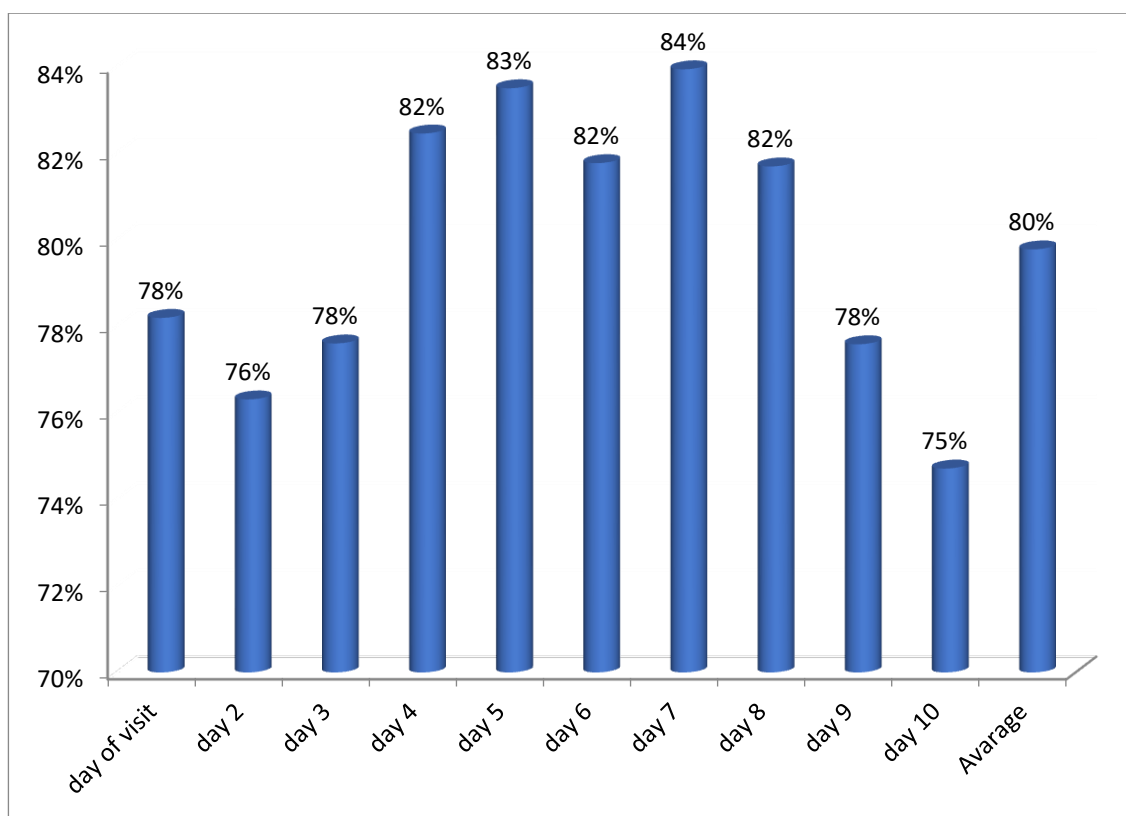
The Joint Review Mission visited 49 schools from 21st to 24th November, 2022 in both the districts.

District Madurai

In the 27 visited schools in Madurai, 5253 children were enrolled. Out of these 4190 (80%) children have availed hot cooked meal on an average basis during the last ten days of the day of visit. However the attendance rate in these schools was 85%.

All the children, who are attending school were availing hot cooked meal in visited schools except in 2 schools namely Panchayat union primary school Chellampatti and R.C. Primary School, East Madurai. The day wise average students availing hot cooked meal in the visited schools in both the districts is given below:

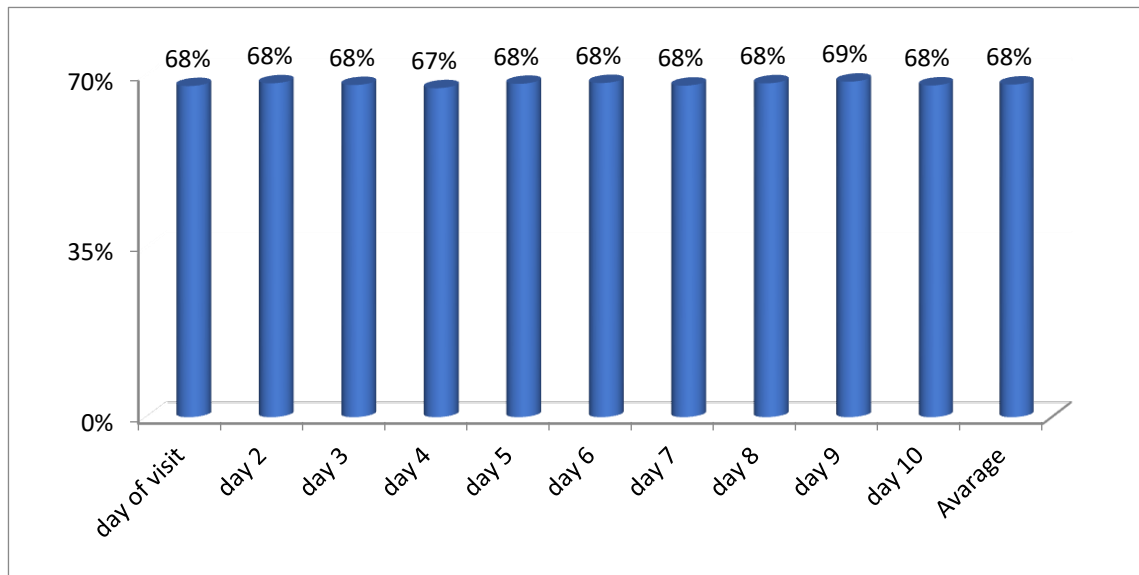
Day wise average students availing hot cooked meal in the visited schools in district – Madurai



District Ramanathapuram

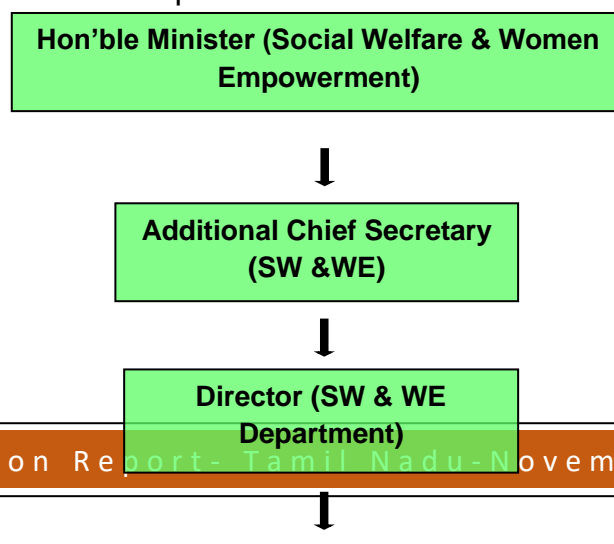
In the 22 visited schools in Ramanathapuram district , 4815 children were enrolled. Out of these only 3271 (68%) children have availed hot cooked meal on an average basis during the last ten days of the day of visit. However, the attendance rate in these schools was 94%.

Day wise average students availing hot cooked meal in the visited schools in district – Ramanathapuram



The average daily coverage is very good in Madurai district and is significantly higher than the national average of 78%. However, the average daily coverage in Ramanathapuram district is quite sharp and below the State average coverage also. All the children, who are attending school were availing hot cooked meal in visited schools except in 11 schools i.e. 50% schools in Ramanathapuram district. State may put in place a system to monitor these schools and ensure that all the eligible children are taking meals on regular basis. JRM recommended that State Government need to ensure that all the eligible children are taking meals on regular basis because as per the National Food Security Act, 2013, Rules, Guidelines and Instructions issued under the PM POSHAN Scheme from time to time, provide that every child attending an eligible institution is to be covered under the Scheme and shall be served hot cooked meals or provided with Food Security Allowance, as applicable, on all school days.

5.3 Review of the Management Structure: Organizational chart showing the Management structure from top to bottom level



- i. At the State Level the Hon'ble Minister who is having the port polio of the Minister of Social Welfare & Women Empowerment Department is looking after the implementation of PM POSHAN scheme. The Additional Chief Secretary to Government, Social Welfare & Women Empowerment is the administrative head of the entire Department who is monitoring the effective implementation of the scheme.



- ii. The Director of Social Welfare and Women Empowerment is the head of the Department who is shouldering the responsibility of supervision and monitoring of the programme implementation with the assistance and support of Joint Director (NMP) at State / Directorate level.
- iii. At District level, the Personal Assistant (NMP) to District Collector is the nodal officer for the implementation of the programme and supervision in District level. The Implementation Committee under the chairmanship of District Collector shoulders the responsibility of programme implementation and the supervision. The Personal Assistant (NMP) to District Collector assist and co-ordinate with the district Collector at the district level in the implementation of PM POSHAN Scheme.
- iv. At Block level, the Block Development Officer is the Nodal officer for the implementation of scheme.. At school level Scheme is managed, monitored, and supervised by the "School Monitoring committee" (SMC). The cooking is being done in the kitchen at every school level. of the organizers, Headmaster, Teacher (on rotation basis) and representatives of SMC.
- v. Supervision of PM POSHAN in schools is done by Headmaster, Organizer, Teacher on (on rotation basis) besides the zonal Deputy BDOs, Deputy BDO (NMP) and SMC members.

The Joint Review Mission observed that schools were being inspected regularly on monthly basis by the Block Education Officers and deputy BDOs. 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 PM POSHAN scheme. There is an urgent need to train them

for the parameters of the scheme. State may also form a group of 10-12 officers from Blocks and Districts, who may be sensitized and then used as resource persons or monitoring the implementation of scheme in other districts.

A uniform register for information on implementation of scheme may also be developed and conveyed to all schools in the State for uniformity of data maintenance at the school level.

Level	No. of regular personnel		No. of contractual personnel	
	Required	Deployed	Required	Engaged.
State	15	10	24	24
District	96	80	76	62
Block	770	547	385	347

5.4 Review of the Delivery Mechanism of food grains from State to schools:

Tamil Nadu Civil Supplies Corporation, once in a quarter lifts the food grains (Rice) from FCI and stores in its regional go-downs. The PAs (NMP), by 5th of every month places indent with Tamil Nadu Civil Supplies Corporation. From 5th to 10th TNCSC consolidates the indent and starts supplying the food grains to the Nutritious Meal centers from 15th to 20th of every month. The same procedure is followed for Pulses, Oil and Salt. The 100% share of GOI funds towards setting the cost of food grains is settled to FCI, TNCSC after release of funds by getting separate Government orders. Now the revised financial procedures / SNA guidelines the funds received under 100% Central Assistance have been transferred to SNA Account, and the bills towards the cost of Food Grains and Transportation Assistance are being settled to FCI and TNCSC from SNA Accounts.

During the field visit it was observed that registers are maintained at the school level showing details about the quantity of rice received and consumed every day. The JRM team appreciated that buffer stock of food grains was maintained in



most of the school. However, storage bins for food grains were available in few schools only. It is recommended that storage bins may be provided to schools for safe and hygienic storage of food grains.

5.4 Review the smooth implementation of the scheme with particular reference to Interruptions

JRM team did not observe any interruption in the scheme.

5.5 Creation of Capital Assets:

GOI has sanctioned 28,470 kitchen-cum-stores from 2006-2007 to 2012-2013 as per the information given below:-

Year wise progress	No. of Kitchen - cum-stores sanctioned (2006-07 to 2012-13)	Physical Progress of Kitchen cum stores					
		Constructed		In Progress		Not yet started	
		No.	%	No.	%	No.	%
2017-18	28470	28136	99	37	0.01	297	1
2018-19	28470	28136	99	37	0.01	297	1
2019-20	28470	28136	99	37	0.01	297	1
2020-21	28470	28136	99	37	0.01	297	1
2021-22	28470	28136	99	37	0.01	297	1
2022-23*	28470	28434	100	36	0.01	-	-

*till 2nd qtr

5.6 Construction of Kitchen-cum stores.

The amount for construction of Kitchen cum Stores is entrusted with Rural Development and Panchayat Raj Development. Through the Panchayat Rural Development agencies tenders have floated and the L1 tenderer is entrusted with the work of Construction of KCS. The estimate of cost for construction of KCS is fixed for every year by the Commissioner of Rural Development Department. The JRM observed that all the visited schools had kitchen-cum-stores for cooking of meal in safe and hygienic conditions.

5.7 Procurement/Replacement of Kitchen Devices

Central assistance of Rs. 2714.80 lakh has been released towards procurement of 54296 new units of kitchen devices during 2006-07 to 2021-22. Further, Central assistance of Rs. 2612.99 lakh has been released towards replacement of 47602

units of kitchen devices to State Government. Centralized purchase has been done by following the Tamil Nadu Transparency in Tender Act 1998 and Rules 2000 and all the sanctioned units of kitchen devices have been procured. The JRM found that all the visited schools had adequate number of cooking and serving utensils. It is also appreciated that eating plates were also available for all the children in visited schools by providing by State own resources. JRM recommends that to provide storage bins for safe storage of food grains and other ingredients to each school from the funds raised through the auction of gunny bags.

5.8 Review of Payment of Cost of food grains to FCI, Govt. of India:

Tamil Nadu Civil Supplies Corporation lifts rice from FCI once in a quarter for which FCI raises bills once in a quarter only. The District Collector (except Chennai) settles the bills to FCI directly once in a quarter through ECS. In Chennai the bills are forwarded to the Commissionerate of Social Welfare and the bills are settled to FCI by the Commissioner of Social Welfare through ECS and up to September 2022, the bills have been settled to FCI. The District Collector (Except Chennai) settles the bills to FCI directly once in a quarter through ECS up to September, 2022. In Chennai the bills are forwarded to the Commissionerate of Social Welfare and the bills are settled to FCI by the Commissioner of Social Welfare through ECS September, 2022.

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

The MoE has constituted a District level committee under the chairpersonship of the senior most Member of Parliament (Lok Sabha) in the district. The meetings under the Chairmanship of Senior most Member of Parliament of the District are being conducted at District level to monitor the scheme and to discuss the various issues in connection with the effective implementation of the scheme. In the year 2021-22, 10 number of such meetings were conducted by the District authorities under the Chairmanship senior most of the Member of Parliaments of the respective districts. Besides the above 23 meetings under the Chairmanship of District Collector have also been conducted during the year 2021-2022 Following issues were discussed :

- a) The supply of food commodities to the Nutritious Meal Centres with Senior Regional Manager, Tamil Nadu Civil Supplies Corporation, Inspections carried out by the BDOs and the District Officials.

- b) Formation of kitchen Garden with the help of Horticulture/ Agriculture Department Officials.
- c) Supply of food commodities to centres by TNCSC.
- d) Distribution of dry ration to beneficiaries/parents by following SOP.
- e) Training of Nutritious Meal Employees
- f) Activities carried out for awarding the Nutritious Meal Employees.
- g) Auditing of Nutritious Meal Centres for ISO purpose.
- h) COVID-19 Awareness through Nutritious Meal Programme.
- i) Instructions are being issued by the District level Committee / District Collectors to all the Monitoring Committee Members to carry out inspections to implement the programme effectively.

5.10. Review the Management Information System (MIS)

Government of India have launched MIS web portal online monitoring system for online monitoring of the Scheme during January 2012. All States and UTs are entering the annual as well as monthly data for vital components of PM POSHAN Scheme such as enrolment, coverage, cooking cost, MME, infrastructures etc. on monthly basis for the easy monitoring tool. The Government of Tamil Nadu has been entering the data into the web portal regularly. District wise annual data entry status of the Tamil Nadu is given below: -



SN	District	Total Schools	Completed Schools	Completed Percentage	Pending Schools
1	ARIYALUR	574	574	[100 %]	
2	CHENNAI	599	599	[100 %]	
3	COIMBATORE	1287	1286	[99.92 %]	1
4	CUDDALORE	1585	1585	[100 %]	
5	DHARMAPURI	1375	1375	[100 %]	
6	DINDIGUL	1520	1425	[93.75 %]	95
7	ERODE	1312	1312	[100 %]	
8	KANCHEEPURAM	1563	1563	[100 %]	
9	KANNIYAKUMARI	665	665	[100 %]	
10	KARUR	785	785	[100 %]	
11	KRISHANAGIRI	1728	1723	[99.71 %]	5

12	MADURAI	1444	1364	[94.46 %]	80
13	NAGAPATTINAM	1171	1055	[90.09 %]	116
14	NAMAKKAL	984	983	[99.9 %]	1
15	PERAMBALUR	376	376	[100 %]	
16	PUDUKKOTTAI	1649	1649	[100 %]	
17	RAMANATHAPURAM	1221	1221	[100 %]	
18	SALEM	1823	1823	[100 %]	
19	SIVAGANGA	1292	1292	[100 %]	
20	THANJAVUR	1603	1602	[99.94 %]	1
21	THE NILGIRIS	496	493	[99.4 %]	3
22	THENI	712	712	[100 %]	
23	THIRUVALLUR	1514	1514	[100 %]	
24	THIRUVARUR	984	984	[100 %]	
25	TIRUCHIRAPPALLI	1567	1567	[100 %]	
26	TIRUNELVELI	2051	2051	[100 %]	
27	TIRUPPUR	1338	1337	[99.93 %]	1
28	TIRUVANNAMALAI	2014	1650	[81.93 %]	364
29	TUTICORIN	1494	1493	[99.93 %]	1
30	VELLORE	2327	2322	[99.79 %]	5
31	VILUPPURAM	2413	2401	[99.5 %]	12
32	VIRUDHUNAGAR	1454	1453	[99.93 %]	1
	Total	42920	42234	[98.4 %]	686

From the above table depict that in some districts viz. Tiruvannamalai(82%), NAGAPATTINAM(90%) Dindigul(93%), are below the State average.

Monthly Data Entry Status

Similarly, monthly utilization data of various components under PM POSHAN Scheme should be entered into the web portal within every 10 day for the month. In Tamil Nadu, 80% of schools have been completed monthly data entry on an average basis. The districts wise monthly data entry status is placed below:-

No.	District	Total Schools	Freeze Schools	April	May	June	July	August	September	October
1	ARIYALUR	574	574	573	573	573	573	573	573	573
2	CHENNAI	599	599	437	203	28	2			
3	COIMBATORE	1287	1286	1205	1205	1205	1205	1205	1205	1205
4	CUDDALORE	1585	1585	1585	1585	1585	1585	1585	1585	1585
5	DHARMAPURI	1375	1375	1375	1375	1375	1375	1375	1375	1375

6	DINDIGUL	1520	1425	1372	1371	1371	1371	1371	1371	1371
7	ERODE	1312	1312	1312	1312	1312	1312	1312	1312	1312
8	KANCHEEPURAM	1563	1563	1563	1563	1563	1563	1563	1563	1563
9	KANNIYAKUMARI	665	665	665	665	665	665	665	665	665
10	KARUR	785	785	785	785	785	785	785	785	785
11	KRISHANAGIRI	1728	1723	1643	1643	1633	1633	1627	1614	1613
12	MADURAI	1444	1364	1222	1222	1220	1215	1208	1168	1128
13	NAGAPATTINAM	1171	1055	1043	797	589	467	466	395	369
14	NAMAKKAL	984	983	983	983	983	983	983	983	981
15	PERAMBALUR	376	376	376	376	376	376	376	376	376
16	PUDUKKOTTAI	1649	1649	1649	1649	1649	1649	1649	1649	1649
17	RAMANATHAPURAM	1221	1221	1221	1221	1221	1221	1221	1221	1221
18	SALEM	1823	1823	1823	1823	1823	1823	1823	1823	1823
19	SIVAGANGA	1292	1292	1189	1163	1123	1122	1118	1111	1104
20	THANJAVUR	1603	1602	1600	1600	1600	1599	1598	1595	1594
21	THE NILGIRIS	496	493	487	487	487	487	487	487	487
22	THENI	712	712	712	712	712	712	712	712	712
23	THIRUVALLUR	1514	1514	1473	1473	1473	1473	1473	1473	1410
24	THIRUVARUR	984	984	984	984	984	984	984	984	979
25	TIRUCHIRAPPALLI	1567	1567	1563	1548	1546	1545	1533	1529	1526
26	TIRUNELVELI	2051	2051	1966	1935	1930	1843	1812	1803	1686
27	TIRUPPUR	1338	1337	1181	1181	1181	1161	1161	1151	1151
28	TIRUVANNAMALAI	2014	1650	1453	1385	1385	1385	1384	1334	1307
29	TUTICORIN	1494	1493	1479	1479	1403	1386	1383	1343	1225
30	VELLORE	2327	2322	2206	2172	2161	2156	2151	2150	2150
31	VILUPPURAM	2413	2401	2400	2400	2400	2400	2400	2400	2400
32	VIRUDHUNAGAR	1454	1453	1381	1246	1245	1245	1148	1148	1016
	TOTAL	42920	42234	40906	40116	39586	39301	39131	38883	38341

% Monthly data entry

SN	Districts	April	May	June	July	August	September	October
1	ARIYALUR	100	100	100	100	100	100	100
2	CHENNAI	73	46	14	7	0	#DIV/0!	#DIV/0!

3	COIMBATORE	94	100	100	100	100	100	100
4	CUDDALORE	100	100	100	100	100	100	100
5	DHARMAPURI	100	100	100	100	100	100	100
6	DINDIGUL	96	100	100	100	100	100	100
7	ERODE	100	100	100	100	100	100	100
8	KANCHEEPURAM	100	100	100	100	100	100	100
9	KANNIYAKUMARI	100	100	100	100	100	100	100
10	KARUR	100	100	100	100	100	100	100
11	KRISHANAGIRI	95	100	99	100	100	99	100
12	MADURAI	90	100	100	100	99	97	97
13	NAGAPATTINAM	99	76	74	79	100	85	93
14	NAMAKKAL	100	100	100	100	100	100	100
15	PERAMBALUR	100	100	100	100	100	100	100
16	PUDUKKOTTAI	100	100	100	100	100	100	100
17	RAMANATHAPURAM	100	100	100	100	100	100	100
18	SALEM	100	100	100	100	100	100	100
19	SIVAGANGA	92	98	97	100	100	99	99
20	THANJAVUR	100	100	100	100	100	100	100
21	THE NILGIRIS	99	100	100	100	100	100	100
22	THENI	100	100	100	100	100	100	100
23	THIRUVALLUR	97	100	100	100	100	100	96
24	THIRUVARUR	100	100	100	100	100	100	99
25	TIRUCHIRAPPALLI	100	99	100	100	99	100	100
26	TIRUNELVELI	96	98	100	95	98	100	94
27	TIRUPPUR	88	100	100	98	100	99	100
28	TIRUVANNAMALAI	88	95	100	100	100	96	98
29	TUTICORIN	99	100	95	99	100	97	91
30	VELLORE	95	98	99	100	100	100	100
31	VILUPPURAM	100	100	100	100	100	100	100
32	VIRUDHUNAGAR	95	90	100	100	92	100	89
	Total	97	98	99	99	100	99	0

5.10.2. Review of implementation of Automated Monitoring System

State has informed that AMS been implemented in all the schools. Since the school Nutritious Meal Centres have been closed due to COVID-19 the details regarding cooking and food served to the children is not done and hence SMS is not sent. The data under AMS is collected by the HMs and is sent through SMS to the BSNL portal.

The tentative unit cost is 0.177 per SMS. But the same is not applicable for the period from March 2020 to Jan.2022. The Headmaster/Headmistress or authorized person (2 teachers) by the Headmasters of respective school alone is responsible for reporting of the daily feeding strength of students under SMS reporting system. JRM observed that during, November 2022 only on an average basis 17279 schools

(40%) had reported to the AMS portal at State level. However, Madurai district only 627 (43%) schools and Ramanathapuram district 673 (55%) schools on an average basis are reporting data on AMS portal. **JRM recommended that State may ensure the entries on AMS portal on regular basis**

5.11 Convergence with Rastriya Bal SwasthyaKaryakram for health check-up, supplementation of micronutrients under WIFS & de-worming medicine under National de-worming day and health check-ups and supply of spectacles to children suffering from refractive errors.

Guidelines envisage health check-up of the students through Rashtriya Bal SwasthyaKaryakaram (RBSK) under National Health Mission of the Ministry of Health & Family Welfare. Deworming medicine is provided to children biannually on National Deworming Day (NDD). Iron & Folic Acid (IFA) tablets are also provided to children under Weekly Iron & Folic acid Supplementation Programme (WIFS).



JRM team observed that 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 distributed to the children. School Health Cards (SHC) of the students were kept in the visited schools. JRM observed many children have been identified anaemic in the both Madurai and Ramanathapuram district by RBSK team during their visit in August- September 2022. State may take steps to inform the parents of these children to take care and support through primary health centres.

The name of the students are mentioned below.

1. Lamboishka , Class -5 Panchayat Union Primary school Melur Block, Madurai.
2. Prethi, class -8th Govt. H.S, Manyandipatti, Madurai East.

3. Kopika, Class 8th and Janarthan Class 6th standard Municipal Primary school ParamkudiRamand.
4. Deepika Class 7th HB 4.6 and Anusuya, Class 7th HB. 7.8,RC High secondary school East Madurai.
5. J Arya Class 3rd and Hirubana Class 5th Corporation Primary school Adimoolam No .2, Madurai South Madurai.
6. 15 Students were found anemic in Principal Municipal Primary school Sivanathapuram, Parmakoti Ramand.

State Government may also think of calculating BMI of children studying in schools with the help of teachers, which may give a fair idea about the children's nutrition status.

JRM observed that NGO FPAI is helping in check up in schools viz. EVRN Corporation girls HS school, Madurai South.



5.12. 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.

However, JRM observed that in almost all visited schools, most of the teachers and block officials were unaware of the provisions of scheme rules. It is recommended that the stakeholders may be sensitized about the provisions of scheme rules by conducting State level workshop or meeting.

5.13 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 95% of the enrolled children and 100% cook-cum-helpers are having Aadhaar card.

Joint Review Mission recommends that the remaining children may also be enrolled under Aadhaar.

5.14 Payment of Honorarium to Cook-cum-Helpers

The Cook cum helpers(Noon Meal Employees) are being paid with special time scale of pay as indicated below

a) Organizer	–	Rs. 7700/-	–	Rs.24200/-
b) Cook	–	Rs. 4100/-	–	Rs.12,500/-
c) Cook Assistant	–	Rs. 3000/-	–	Rs.9000/-

All Employed staff working in Nutritious Meal Centres have bank account since the salary payment is made through Electronic Clearing System [ECS]. The Nutritious Meal Employees are paid salary on the last working day of every month through ECS (Electronic Clearing System).

The payments of honorarium to CCHs and Cooking Cost are being made through Centralized Payment System directly into Bank Accounts. The SNA / IA accounts have been opened in an identified nodal bank (RBL Bank Ltd.,) and mapping with PFMS has been completed. The entire 1st installment release of Central Assistance (Rs. 250.2675 Crore) for the year 2022-2023 and the corresponding State Share (Rs. 147.7650 Crore) has been duly transferred into the SNA Account within the stipulated period. Now the transactions are being carried out through SNA Account as per the revised financial procedures / SNA Guidelines.

Tamil Nadu State is unique in recruiting employees who work in a Nutritious Meal Centres. There are three categories of personnel working in a centre namely Organizer, Cooks and Cook Assistants [Helper] and engaging the employees is done through the norms prescribed by the State Government. Their monthly salary is fixed under Special time scale of pay along with

1. New Health Insurance Scheme
2. Special monthly pension
3. Maternity leave
4. Lumpsum amount

5. Family benefit fund
6. Special provident fund
7. Compassionate ground Appointment
8. General provident
9. Pongal bonus
10. Festival advance.

JRM found that the no of cooks engaged by the State was not as per the norms prescribed by GOI. Many schools are facing difficulties in preparing meal because the post of cook- cum-helper were vacant, only one or two cooks are there.

Madurai : Number of CCH engaged against enrolment in the visited schools			
Sl.No.	School	Enrolment	CCH Engaged
1	ST.Claret's.P.S.Pulithevanpatti, Chellampatti	55	3
2	Panchayat Union Primary School Chellampatti	120	1 (last 5 years post of CCH is vacant)
3	Govt. High School Chellampatti	86	2
4	Panchayat Union Middle schoolValandurChellampatti	55	3
5	Government Kallar Middle School, Kuppenampatti	244	3
6	Panchayat Union Middle School, Uchapatti, Thirumangalam	142	2
7	Govt., Kallar Primary School Kappalur, Thirumangalam	230	2
8	Thiagarajar mills primary school kappalur, thirumangalam	178	3
9	Thiagarajar mills higher secondary school kappalur, thirumangalam	40	2
10	Panchayat union primary school kallikudi	148	2
11	Panchayat Union Primary School, Perungudi	204	2
12	Government High School, Perungudi, Thirupparankundarm	182	2 (1-Vacant)
13	Madurai Corporation Middle School, Sathamangalam	169	2
14	Corporation Primary School, Aadhimoolam No.2	600	3
15	R.C. High School, East Madurai	566	2
16	R.C. Primary Schoo, East Madurai	225	2
17	Panchayat Union Middle	76	2

	School, A.Valayapatti		
18	ArulmiguSundararaja Primary School	88	3
19	ArulmiguSundararaja High School, Melur	54	2
20	Corporation Primary School, Subramaniapuram, Madurai North	301	2
21	E.V.R.N.Corporation Primary School, South Veli Street, Madurai South	648	4
22	E.V.R.N.Corporation Girls High School	74	2
23	Panchayat Union Primary School, Mayandipatti, Madurai East	284	2
24	Government High School, Mayandipatti, Madurai East	181	2
25	Panchayat Union Primary School, TherkuTheru, Melur Block	109	2
26	Panchayat Union Middle School, Vellaripatti	74	3
27	Panchayat Union Primary School, Narasingampatti	120	2

Ramanathapuram : No. of CCH engaged against enrolment in visited schools			
Sl.No.	School	Enrolment	CCH Engaged
1	Municipal Primary School, Mani nagar, Paramakudi-Block	25	2
2	R.C.Yadhava Primary School, Paramakudi	296	4
3	Alangaramadha Higher Secondary School, Paramakudi	720	3
4	Municipal Primary School, Emaneswaram, Paramakudi	88	2
5	Jeeva Nagar Paramakudi Municipal Primary School,	383	3
6	Municipal Primary School, Emaneswaram, Paramakudi	268	2
7	Municipal Higher Secondary School, Emaneswaram, Paramakudi	285	3
8	Principal Municipal Primary School, Sivananthapuram	240	3
9	Municipal Primary School, Melachatram	111	3
10	Panchayat Union Primary School, Valantharavai	74	2
11	Government High School, Valantharavai	86	3
12	Panchayat Union Primary	193	2

	School, Mandapam		
13	Panchayat Union Primary School, Kaizhkalichlrry	50	2
14	Panchayat Union Primary School, Selvanayagapuram	185	3
15	Govt., Higher Secondary School, Selvanayagapuram	167	3
16	Pallivasal Primary School, Selvanayagapuram	305	2
17	Pallivasal Higher Secondary School, Selvanayagapuram	684	3
18	Panchayat Union Primary School, Ramalingapuram	39	2
19	Panchayar Union Primary School, Khakur	71	2
20	Government Middle School, Kadaladi	128	2
21	Panchayat Union Primary School, Sikkal	90	2
22	Panchayat Union Primary School, Thotiapatti, Kadaladi	327	3

The Review Mission recommended that State Government may follow the norms prescribed by Government of India for engagement of the Cook-cum-Helpers in the schools under the scheme.

5.15 System of Storage food grains and other ingredients

The food grains are stored in the Regional godowns of the Tamil Nadu Civil Supplies Corporation. Based on the indent, every month the food commodities are issued to the Nutritious Meal Centres. The food grains, pulses and condiments are stored in kitchen cum stores. Storage bins were not found in the schools. In some of the schools storage area was found to be damped, dark and dingy with no ventilation facility.

The JRM noticed the absence of storage bins in the visited schools. The ingredients such as pulses, condiments etc. were also not stored in the moisture free containers and did not stack properly.

JRM recommended that State may provide storage bins for safe storage of food grains and other ingredients to each school from the funds rising through the auction of gunny bags.



5.16 Role of Teachers in PM POSHAN.

As per the PM POSHAN guidelines, the role of the teacher is to organize, supervise and ensure that the meal is served in an orderly manner. JRM observed that in every school, a roster is being maintained by the organizers which every day the implementation of the scheme is being monitored. In addition, the mothers of the children are also requested to monitor the programme by participating in checking of the quality of dry ration and distribution of the same during Covid period besides tasting of food in regular period.

The JRM interacted with the teachers in the visited schools. Almost all the teachers informed that they are free from record keeping of the PM POSHAN and is being done by the organizers. This has relieved them for attending to their teaching and learning activities. In most of the schools of both the district's teachers were found to be unaware about the food & nutrition norms of PM POSHAN.

5.17 Tasting of Meals:

The meals are being tasted every day on rotation basis by two nos. of teachers before serving the meals to the Nutritious meal Beneficiaries by making necessary entries in a roster maintained by each school. Parents and Community member are also engaged in tasting of the food before serving wherever necessary.



5.18 Testing of meals

The meal usually 500 grams are drawn in the food safety container by the food safety officer and ensures that the samples reach the lab within 2 hours. The protocol given by FSSAI is being followed by the Food Safety Officer. Monthly 2 to 3 samples are drawn randomly from the block Nutritious Meal Centres of the Districts. Micro Biological Analysis for total plate count, E.Coli, staphylococcus aureus, salmonella is being done. JRM observed that testing meals has not been carried out during 2018-19 and 2019-20. It is recommended to get the testing of cooked meal done as envisaged in scheme Rules.

5.19 Awareness of the Scheme



Awareness generation and Information Education and Communication (IEC) activities are carried out to make a change or reinforce a set of behaviors among the targeted audience. In order to create awareness about the PM POSHAN scheme various types of Educational and awareness materials - Short film, Jingles, Display boards, Banners, Stickers, Pamphlets, Hand books etc.,

have been planned and the districts were instructed to adapt according to their needs..



Accordingly, Districts have made display boards, Banners, Masks etc., Also a booklet on "**Hand book for Food handling safely and**

hygienically” has been printed in vernacular language which is distributed to all the Nutritious Meal centres.

The handbook on **“School Nutrition Garden – Kitchen Garden”** which was sent by the GOI has also been translated and printed in vernacular language and distributed to all the block level officers.



Posters on **“I Serve Safe Food – Follow these 12 Golden Rules”** and **“We stand by our standards Health Hygiene & Quality”** are being printed and distributed to all Nutritious meal centres. JRM

observed that Entitlement of children under the scheme Menu of PM POSHAN and logo were displayed about 50% 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 scheme. 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 PM POSHAN logo, menu and entitlement of children under scheme at a visible place, preferably on the outer walls of the school, so that these are visible to all.

5.19 School Nutrition Gardens

State Government of Tamil Nadu has done very well on development of School Nutrition (Kitchen) Gardens. JRM observed in most of the visited schools have developed Nutrition Gardens, which are supplying fresh vegetables and fruits to the children. JRM observed that Moringa, papaya, ladyfinger, spinach, brinjal and other vegetables were grown and being used in preparation of sambar and bisibelebhat.

JRM recommends that State may record some success stories and use them as case studies for encouraging the schools, which have yet to develop school nutrition gardens.

5.20 Cooking Competitions

Cooking Competitions have been held throughout the State, to discover new culinary talents with the locally available raw materials which increase taste and palatability using the right cooking method, with a minimum loss of colour and nutrition. Cash prizes are awarded to the winners of the cooking competition as an incentive for the betterment of the services of the Noon Meal Employees. The JRM team is informed that Cooking competitions have been organised in both the districts.

millet food festivals were organized in 8 schools visited by JRM to popularize the concept during the celebration of International Year of Millets.



JRM observed that in view of the International year millets the awareness programmes and millet food exhibition programmes are arranged to create awareness among the parents and public so as to induce them to start using millets regularly. During the JRM visits organization of such programmes in some schools namely E.V.R. Maniyammai Hr. Sec School, Madurai, PUPS, Chikkal in Ramnad district, Municipal Panchayat Primary School, Emaneswaram, Paramakudi, Ramnad district, Panchayat Union Primary School, Pudumadam (South) etc., During the visits it has been seen that various menus based on Millets were prepared and served. Among the above said schools the Millet celebration held at E.V.R. Maniyammai Hr Sec. School, Madurai on 23.11.2022 was conducted effectively involving community participation.

S.No	Food Items
1	Millet Idly (Horse tail millet)
2	Horse tail millet venpongal
3	Millet Veg Briyani
4	Ragi rotti
5	Millet laddo& sprouted dhal salad

6	Ragi Porridge
7	Ragi halwa, Carrot laddu, ragi vermicelli
8	Pearl Millet seasoning (All dhal mixed)
9	Kodo Veg Briyani Millet
10	Millet paruthi pal
11	Green gram aviyal, Black Bengal gram fried
12	Ground nut sundal

5.21 Mode of Fuel

JRM observed that all the visited schools are using LPG as fuel, which is praise worthy.

5.22 Involvement Of Ngo / Trust / Centralized Kitchen In This Scheme

The scheme of PM POSHAN is implemented through school level kitchen centers. The Government of Tamil Nadu has recently introduced an innovative and pioneer scheme of provision of Breakfast to Primary School Children.

In the 1st phase this scheme has been implemented in 1,545 Primary schools covering 1,14,095 beneficiaries by engaging SHG / PLF in Rural areas and by using Centralized kitchen in urban areas. Proposed Menu for the Breakfast are as under:

Monday Uppuma	Tuesday Kitchadi	Wednesday Pongal	Thursday Uppuma	Friday Sweet
RavaUppuma + Vegetable Sambar	Rava Vegetable Kitchadi	RavaPongal + Vegetable Sambar	Vermicelli Uppuma + Vegetable Sambar	Any one of the kitchadi as per Tuesday menu Sweet Pongal
Vermicelli Uppuma + Vegetable Sambar	Vermicelli Vegetable Kitchadi	Pongal + Vegetable Sambar	Rice Uppuma+ Vegetable Sambar	RavaKesari
Rice Uppuma+ Vegetable Sambar	Sorghum Vegetable Kitchadi		RavaUppuma + Vegetable Sambar	Vermicelli Kesari
Wheat RavaUppuma+ Vegetable Sambar	Wheat Rava Vegetable Kitchadi		Wheat RavaUppuma+ Vegetable Sambar	

JRM team visited one school in Madurai district and it observed that Ravauppuma & vermicelli Uppuma was being served to children in breakfast.

5.21 Contingency Plan.



Under contingency plan State has informed that necessary important phone numbers have been entitled in all Nutritious Meal Centre's to avoid any untoward incidents. Printing of important Phone numbers, ie. Primary Health Centre, Hospitals, Police, Fire etc., are exhibited in a flex board in all the Nutritious Meal Centres.

JRM observed that the important Phone numbers, ie. Primary Health Centre, Hospitals, Police, Fire etc. are not painted or placed at a prominent place in schools in both the districts.

4.22 training programme conducted for cook-cum-helpers, State level officials, SMC members, schoolteachers and others stakeholders

Training programmes were conducted for CCHs in 300 batches in the respective blocks. Training sessions were handled by eminent catering institutes, Food Safety Officers, Nutrition specialist and Yoga trainers.

One day orientation virtual training programme for the District Officers - Personal Assistant to District Collectors, who is in charge of Nutritious Meal Programme of 31 districts and Additional Education Officer Greater Chennai Corporation totaling to 32 was conducted on Food Safety by the FSSAI. Training programmes were also conducted for the State and District officials including Accounts Officers on revised financial procedures and SNA guidelines for opening and maintenance of SNA / IA accounts. Arrangements have also been made for imparting training to the officials on Public Financial Management System.

Training programmes are organized at regular intervals to orient the employees on nutrition, health, personal hygiene like regular cutting of nails, washing their hands, cleaning of cooking and serving utensils, disposal of wastage, safety usage of LPG etc.,











- ➔ The Deputy Block Development Officers from 31 Districts and Assistant Educational Officers and Block Educational Officers of Greater Chennai Corporations being the Implementers of the Scheme at Block/Zone Levels were imparted an orientation training about the different scheme activities and how to carry about in a successful manner.
- ➔ A three day residential training programme has also been planned to be conducted at Anna Institute of Management Chennai to the Noon Meal Organisers.
- ➔ Three sessions were conducted by the faculty members of Anna Institute of Management [Office & Disciplinary Procedure in General, Litigation and Right to Information Act, 2005],[Time and Stress Management] and [Yoga, Nutrition & Health including a raising of Kitchen Gardens]while the other three session [Duties & Responsibilities, Inspection of Block Office relating to NMP, Submission of Reports, Maintenance of registers, and food Safety Rules], [Data Management & Analysis, DBT, MIS and IFHRMS Entry, SMS, FSSAI – Registration, NME-DBMS & Grievance Redressal] and [Preparation



& Submission of vouchers, were conducted by the training team of Nutritious Meal Programme from Head Office.

5.23 Local for Vocal

- i. The main aim of the campaign of “Vocal for local” is to achieve and ensure “ self-reliance.” To boost ‘vocal for local’ the practice of using locally grown food items like millets, vegetables, condiments etc., in the nutritious meal centres is highly encouraged.
- ii. In most of the centres the Nutri kitchen gardens are very well maintained and the yield of vegetables / greens from the gardens are used in the mid day meal. In some schools the vegetables / leaves yielded from the kitchen gardens are exhibited in the block office as a model shandi which not only creates awareness about the local resources but also boost the principle of vocal for local.

Days	Images	First & Third Week	Images	Second & Fourth Week
Monday		Vegetable Biryani with Pepper Egg		Sambar Sadham (Bisibelabath) with Onion Tomato Masala Egg.
Tuesday		Black Bengal Gram Pulav with Tomato Masala Egg.		Mixed Meal Maker with Vegetable Rice and Pepper Egg
Wednesday		Tomato Rice with Pepper Egg		Tamarind Rice with Tomato Masala Egg
Thursday		Rice, Sambar and Boiled Egg		Lemon Rice, Sundal and Tomato Egg
Friday		Curry Leaf Rice / Keerai Sadham with Masala Egg and Chilly Fried Potato.		Rice, Sambar and Boiled Egg with Fried Potato.

- iii. Moreover, the menu fixed for the nutritious variety meal itself provides for the inclusion of locally grown vegetables / greens etc., according to the desire of the children.

CHAPTER 6

DIET AND NUTRITIONAL STATUS OF SCHOOL CHILDREN: RESULTS

Coverage particulars

A total of 1248 school children were covered for anthropometry, clinical examination from 42 schools from both the districts (Ramanathapuram: 20; Madurai: 22). Institutional diet survey was done in 5 schools covering 94 children from both the districts. 37 In-charge PM-POSHAN teachers, 106 parents, 31 SMC members, 32 cook-cum helpers and 15 functionaries were interviewed for their opinion about PM-POSHAN (**Table 1**).

Particulars of schools covered

Total 42 schools (Ramanathapuram: 20; Madurai: 22) were covered for physical facilities available at school. About 88% schools (Ramanathapuram: 100%; Madurai: 77%) were located in rural areas. About 57% were primary while 43% were upper primary schools. Majority (95%) of the buildings were pucca in nature and were government buildings.

It was observed that the food was prepared as per menu on the day of visit in all the schools in the school kitchen. Drinking water facility was present in 98% of school in the school premises of which 44% were tap water. The water has been stored in steel container in 80% of schools and 49% children were using ladle to draw water from the pot. Majority (77.8%) schools were storing raw food in jute bags either in kitchen (42%) or in classroom (33.3%), 18% had separate store room for storage of raw food. Teachers (In-charge PM-POSHAN) were mostly involved in supervising food preparation, its distribution to children, testing of food and maintenance of records. (97.8%) schools had separate kitchen facilities, 93% had sufficient plates for eating, 82% had hand washing facilities, and 78% children were washing hands with soap before taking foods. Toilet facility was available in 91% schools, and 89% had separate toilet for girls, kitchen garden was observed in 42% schools and first aid kit was available in 80% schools (**Table 3**).

Only 44% schools had displayed entitlement of children, 60% had PM-POSHAN logo, 80% displayed menu on the walls. Only 44% had telephone number of PHC

displayed on walls, 38% displayed number of fire services and 36% had displayed police number in case of emergency (**Table 3**).

6.2.1 Food and Nutrient intakes through PM-POSHAN:

Institutional diet surveys

Madurai district

The meal was prepared as per prescribed quantities, however some children opted for 78.5g at primary and 86.73g at upper primary level on the on the day of visit in Madurai district. The mean consumption of pulses among both the group children was 11.8g for primary and upper primary children respectively. Fats and oils intakes among primary school children was 2.61g as against 5g as per norms. Fats and oils intakes among upper primary school children was 4.1g as against 7.5g as per norms. Average vegetable intake was 78.1g against 50 g in primary and 33.18g against 75 g among upper primary school children (**Table 4.1**).

Ramanathapuram district

The meal was prepared as per prescribed quantities, however some children opted for 90.1g at primary and 118.67g at upper primary level on the on the day of visit in Ramanathapuram district. The mean consumption of pulses among both the group children was 20g as against 20 and 30g for primary and upper primary children respectively. Fats and oils intakes among primary school children was 3.5g as against 5g as per norms. Fats and oils intakes among upper primary school children was 2.17g as against 7.5g as per norms (**Table 4.1**).

6.2.2 Nutrient intake of School children through PM-POSHAN: Institutional diet surveys

Madurai district

The intake of energy was 481 Kcal/child/day and protein (16.8g/child/day) through hot cooked meal among primary school children was comparable to the PM-POSHAN nutrition norms (energy: 450 Kcal and 12g protein) while among upper primary children, it was 593 Kcal/child/day and 21g protein (PM-POSHAN norms 700 Kcal and 20g proteins) (**Table 4.2 & Figure 6.1 & 6.2**).

Ramanathapuram district

The intake of energy was 480 Kcal/child/day and protein (17.41g/child/day) through hot cooked meal among primary school children was comparable to the PM-POSHAN nutrition norms (energy: 450 Kcal and 12g protein) while among upper primary children, it was 531 Kcal/child/day and 15.9g protein (PM-POSHAN norms 700 Kcal and 20g proteins) (**Table 4.3 & Figure 6.1 & 6.2**).

6.2.3 Food intake of School children through PM-POSHAN: Individual diet surveys

Madurai district

The meals were prepared as per the prescribed quantities. However, from the prepared quantities some children of primary sections took around 86.5g and some upper primary children took around 153.4g at upper primary level on the day of visit. The consumption of pulses among both the groups was lower than the recommendations among primary and upper primary schools (20 & 30 g). Fat and oil intake was less 3.8g as against 5g among primary children while it was 6.7 g as against 7.5g among upper primary children. Vegetables intakes was higher than suggested norms among primary school children (78.5 g) and lower than suggested norms among upper primary children (62.8g) (**Table 5.1**).

Ramanathapuram district

The meals were prepared as per the prescribed quantities. However, from the prepared quantities some children of primary sections took around 104.4 and some upper primary school children took 167.8g during the day of visit. The consumption of pulses among both the groups was lower than the recommendations among primary and upper primary schools. Fat and oil intake was 4g as against 5g among primary children while it was 3.7g as against 7.5g among upper primary children. Vegetables intakes was lower than suggested norms among primary school children (48.9g) and upper primary children (52.58g) (**Table 5.1**).

6.2.4 Nutrient intake of School children through Hot Cooked Meal: Individual diet surveys

Madurai district

The actual intake of energy (482 Kcal/child/day) and protein (16.6g/student/day) through hot cooked meal among primary school children was higher than the PM-

POSHAN nutrition norms (energy: 450 Kcal; protein: 12g), while it was 733 kcal and 22.3g proteins among upper primary school children which is higher than the suggested under PM-POSHAN (700Kcal and 20 g protein) (**Table 5.2**).

Ramanathapuram district

The actual intake of energy (507 Kcal/child/day) and protein (16.01g/student/day) through hot cooked meal among primary school children was higher than the PM-POSHAN nutrition norms (energy: 450 Kcal; protein: 12g), while it was 737 kcal and 20.2g proteins among upper primary school children which is higher than the suggested under PM-POSHAN (700Kcal and 20 g protein) (**Table 5.3**).

Figure 6.1: Mean consumption of foods through PM-POSHAN (Primary) at Institutional level

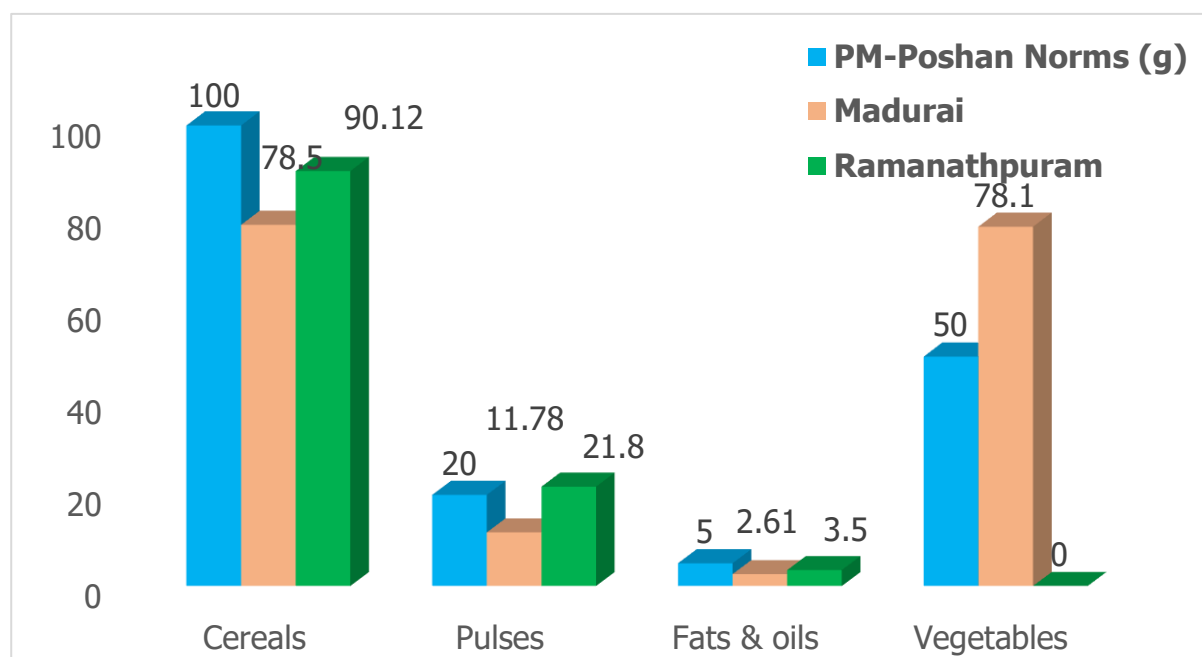
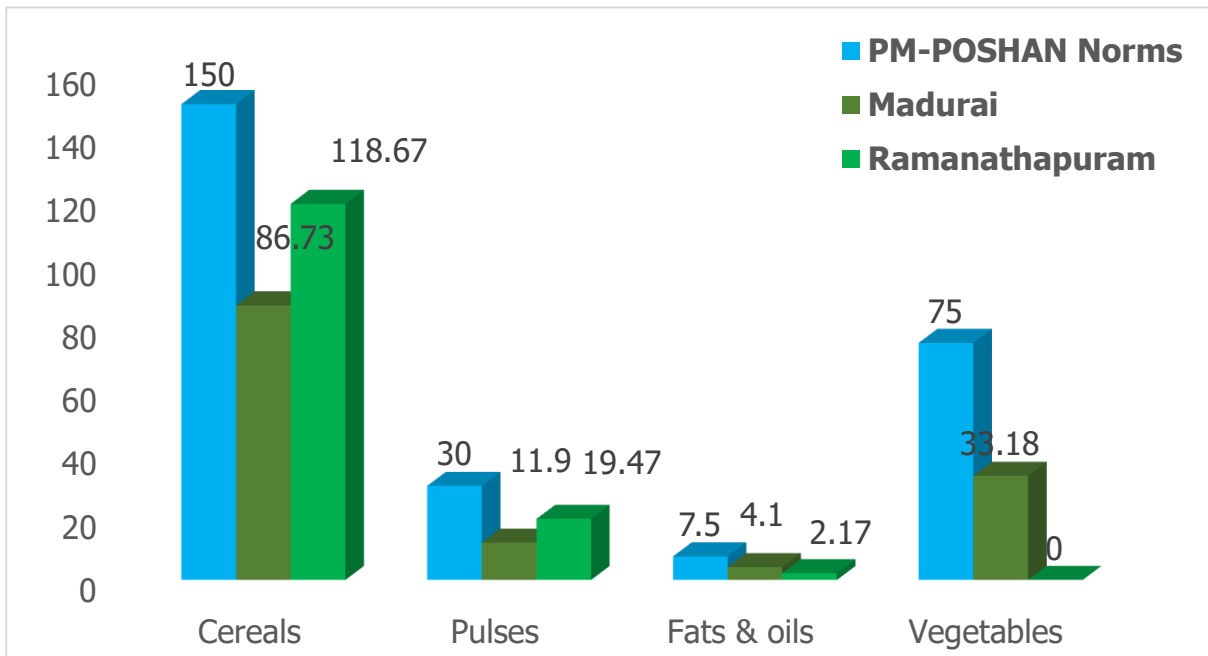


Figure 6.2. Mean consumption of foods through PM-POSHAN (upper primary) at Institutional level



6.3 Organoleptic characters of hot cooked meal through PM-POSHAN

The quality of hot cooked meal through PM-POSHAN was also assessed by Sensory Evaluation. The parameters included were appearance of meal, colour, odour, texture, taste and overall palatability of recipes prepared as a part of PM-POSHAN. The evaluation was carried out on the school site by PM-POSHAN team using 5-point Hedonic rating scale. Four batches of students were served hot cooked meal (rice, Sabji, dal) in five separate schools and in each school about 15-16 students were covered. Each student was served vegetable biryani with pepper egg, black Bengal gram pulao with tomato masala egg, tomato rice with pepper egg, rice sambar and boiled egg, curry leaf rice/ keerai sadham with masala egg and chilly fried potato, (green leafy vegetables) on first and third week of the month. On second & 4th week of the month, children were served with sambar sadham (bisi balabath) with onion tomato masala egg, mixed meal maker with vegetable rice and pepper egg, tamarind rice with tomato masala egg, lemon rice, sundal and tomato egg, rice, sambar and boiled egg with fried potato (**Table 6**). Organoleptic evaluation was done with help of structured schedule with respect to food served. All the students stated that the meal appearance, colour, odour, texture, taste and overall palatability were either good or very good for Rice (97.8%), 100% for dhal, 98% stated satisfactory for subji and 99% for egg. Overall palatability for rice was 96% for rice, 99% for Dal, 100% for subji and eggs (**Table 7**).

Knowledge and practices of students about PM-POSHAN and hygiene practices

About 99% children stated that the served quantity of meal was sufficient to meet their hunger and about 29% children aware of weekly menu of PM-POSHAN, 99% stated that they get food hot and 96% stated that they liked the taste of food. Only 31% stated that they were washing their hands before taking the meal, and 97% were washing their glasses and plates before taking the meal and 62% were washing hands after defecation. All the children stated that they were bathing and brushing teeth daily, while 78% stated wearing washed clothes daily.

About 61% stated that they were consuming food in school corridor, and 29% in school ground (**Table 8**).

Anthropometry

The anthropometric measurements such as weight, height and mid upper arm circumference (MUAC) were carried out among all the selected school children. The mean height and weight were similar among boys (126.2 cm and 24.0 kg) and girls (125.8cm and 24.3 kg). All the mean anthropometric parameters of these children were less, when compared to the WHO standards (**Table 9**).

Prevalence of stunting, thinness overweight and obesity

Overall prevalence of stunting (Height for age < Median-2SD) among school children was about 9.5% (95% CI=7.95-11.2). The prevalence was higher in Ramanathapuram (10.5%) as compared to Madurai district (8.6%).

The prevalence of thinness (BMI for age < Median-2SD) among school children was about 24.5% (95% CI=22.2-26.9). The prevalence was higher in Ramanathapuram (26%) as compared to Madurai district (23%).

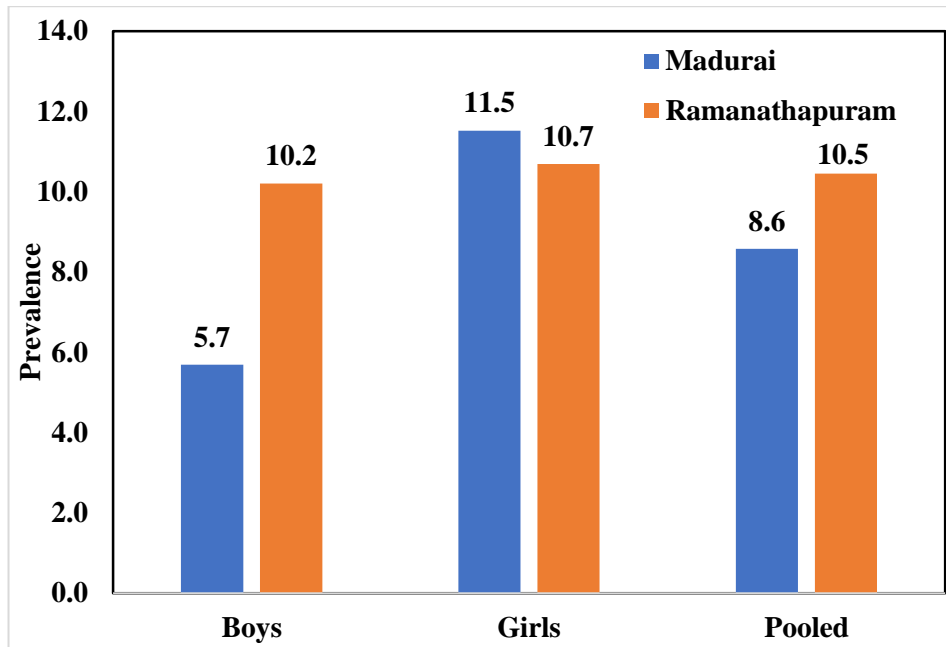
The prevalence of overweight (BMI for age >1SD and <2 SD) among school children was about 6.3% (95% CI=5.1-7.8). The prevalence was higher in Ramanathapuram (7.4%) as compared to Madurai district (5.4%).

The prevalence of obesity (BMI for age \geq 2 SD) among school children was about 2% (95% CI=1.4-3.0). The prevalence was similar in both the districts 2% each (**Table 10**).

Prevalence of stunting according to age and gender

The prevalence of stunting was slightly higher among girls (11.1%) as compared to boys (7.8%). The prevalence was higher among 10-14 years children (11.9%) as compared to 5-9 year children (8.7%) among both the districts (**Table 11**).

Figure 6.3. Prevalence (%) of stunting among adolescents by districts and gender



Prevalence of Thinness, overweight and obesity according to age and gender

The prevalence of thinness was higher among boys (28.8%) compared to girls (20.1%) and was similar in both the districts (Madurai; Boys 28.8%, Girls: 17.3%) Ramanathapuram, Boys: 28.9%, Girls: 23.5%). The prevalence of thinness was higher among 5-9 year children (25.5%) compared to 10-14 years (21.5%). The prevalence of overweight and obesity was higher among boys (9.1%) compared to girls (7.7%). The prevalence was higher among 10-14 years children (13.6%) as compared to 5-9 year children (6.8%) (**Table 12 Fig.12 & 13**).

Figure 6.4. Prevalence (%) of Thinness among adolescents by districts

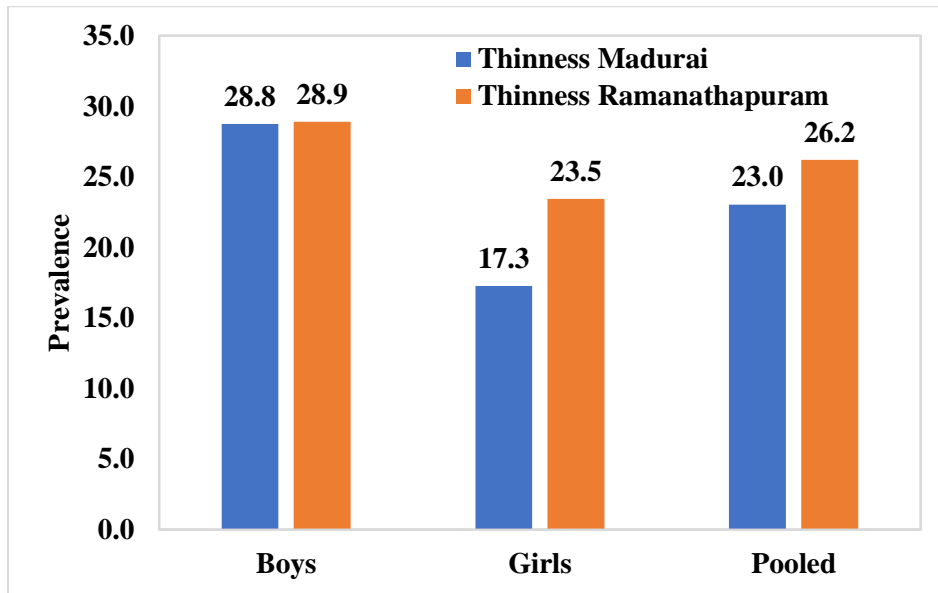
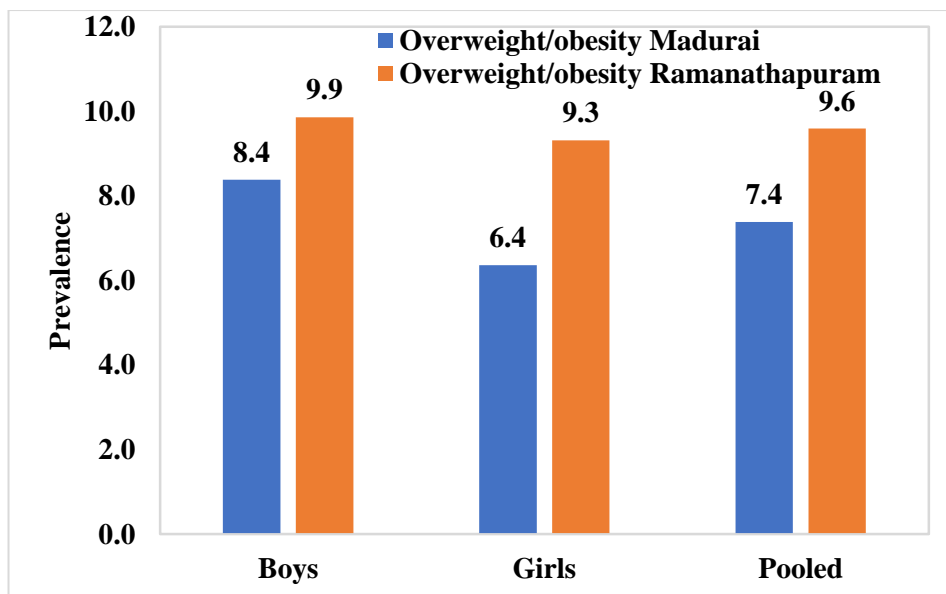


Figure 6.5. Prevalence (%) of overweight/obesity among adolescents by gender



Clinical Examination: Nutritional deficiency signs

The prevalence of goitre was about 1%, which was similar among girls (0.6%) and boys (0.5%). The prevalence was higher among children from Ramanathapuram (1%) as compared to Madurai district (0.3%). The prevalence of conjunctival xerosis and Bitot’s spots, cardinal signs of Vitamin A deficiency was 0.6% in Madurai district. Dental fluorosis was 1% in Madurai district (**Table 13**).

6.4. In Depth interviews (IDIs)

6.4.1 In depth interview were conducted to the PM-POSHAN in-charges/ head master in all the schools visited in both the districts)

Madurai district – A total of 22 PM-POSHAN in-charges were interviewed to know their knowledge and practices on hot cooked meals served through PM-POSHAN. Among the interviewed, 23% were 40-49 years age and 77% were more than 50 yrs. About 73% of the teachers were post graduate with B.Ed, 14% were graduate and with B.Ed., 5% were post graduate and 8% were having intermediate with TTC **(Table 14)**.

45% of the teachers were aware of all the objectives of PM-POSHAN. About 18% were aware of at least one objective, 14% were aware of at least 2 objectives and 18% were aware of at least 3 objectives like 'PM-POSHAN to improve the Nutritional & Health status of the children' and 'PM-POSHAN to improve the school attendance.

In all the schools visited, hot cooked meal was observed served food to all children present on all the working days in the previous academic year. In nearly all the schools visited, the attendance of the children was >85% to the students' enrolment.

All the teachers interviewed expressed that the children like the taste of hot cooked meals served through PM-POSHAN. Also, all the teachers informed that the local community is feeling the need of the programme and there is one village committee existing in the village to monitor the PM-POSHAN.

In the previous month, PM-POSHAN was supervised by block development officer (41%), deputy BDO (41%) and local committee (14%). Majority (95%) were checking cooked food, 80% were checking hygiene, and about 90% were verifying records and registers during supervision. Nearly all the teachers reported that they don't have encountered any problems in implementing the PM-POSHAN in their schools. Some of the issues encountered were

- Problems of the cooks-cum-helpers vacancy

All the teachers stated that they were getting the food material directly delivered to schools from block level every month. All the teachers stated that health check-up was done under School health programme. About 50% teachers suggested include breakfast in morning, and sambar with rice (70%) **(Table.14)**

Ramanathapuram district – A total of 15 PM-POSHAN in-charges were interviewed to know their knowledge and practices on PM-POSHAN. Among the interviewed, 20% were 40-49 years and 80% were more than 50 yrs. About 47% of the teachers were post graduate, 33% were graduate with B.Ed. and 7% each were graduate and post graduate with B. Ed. ((**Table 14**))

In all the schools visited, hot cooked meal was found serving food to all children present on all the working days in the previous academic year. In nearly all the schools visited, the attendance of the children was >80% to the students' enrolment.

All the teachers interviewed expressed that the children like the taste of hot cooked meals served through PM-POSHAN. Also, all of the teachers informed that the local community is feeling the need of the programme and there is one village committee existing in the village to monitor the PM-POSHAN.

In the previous month, PM-POSHAN was supervised by local committee (40%), and block development officer (27%) and deputy BDO (20%). Majority (80%) were checking cooked food, 80% were checking hygiene, and 90% were verifying records and registers during supervision. In two schools, iron & folic acid supplementation was not observed. Nearly all the teachers reported that they don't have encountered any problems in implementing the PM-POSHAN in their schools. Some of the issues encountered were

- Vacancy of cook cum helper and also organizers as one person is looking after 2-3 schools

All the teachers stated that they were getting the food material directly delivered to schools from block level every month. All the teachers stated that health check-up was done under School health programme. About 50% teachers suggested include breakfast in morning, and sambar with rice (67%) (**Table 14**).

6.4.2 In depth interviews was conducted on parents on their views about PM-POSHAN in both the districts.

Madurai district – A total of 61 parents were interviewed to know their knowledge on PM-POSHAN. Among the interviewed, 85% were below ≤ 40 year's age, and 15% were more than 40 years of age. About 7% parents were illiterate, 7% had primary

education, 8% had middle school education, 44% were having secondary education, 20% had higher secondary level of education while 15% were graduate and above.

All the parents stated that PM-POSHAN is beneficial for children, about 98% stated that it improve health & nutritional status, 84% each stated that it provide additional food, and increase in attendance, 85% stated increase enrollment, 84% stated increase in scholastic performance, and 77% stated for reducing drop out. Majority of the parent stated that their children were participating in PM-POSHAN, and the children like the taste of food, and that the quantity is adequate for children. About 11.5% parents stated that children took 2 meals while 88% stated 3 meals at home on working days. All the parent stated that they will send their children to school if PM-POSHAN is stopped. About 82% parents stated that they observed improvement in the nutritional status of children, 77% stated improvement in health, 62% stated regularity in going to schools, 59% stated improve in scholastic performance while 23% stated that there is no change in children. All the parents were aware of shiksha committee in the village, while 34% were member in the committee. About 25% suggested to change current menu while 21% suggested to improve quality and 10% stated quantity (**Table 15**).

Ramanathapuram district – A total of 45 parents were interviewed to know their knowledge on PM-POSHAN. Among the interviewed, 87% were below ≤ 40 year's age, and only 13% were more than 40 years of age. Only 4% had middle school education, 13% had primary school education, 38% were having secondary education, 27% were higher secondary (10+2) level of education while, 18% were graduate and above.

All the parents stated that PM-POSHAN is beneficial for children, 60% stated for increase enrolment, 53% stated increase attendance, 87% stated improve health & nutritional status, 64% stated reduce drop out, and 58% stated that it provides additional food. All the parent stated that their children were participating in PM-POSHAN, and that the children like the taste of food, and that the quantity is adequate for children. All the parents stated that children took 3 meals at home. All the parent stated that they will send their children to school if PM-POSHAN is stopped. About 60% parents stated that they observed improvement in the nutritional status of children, 56% stated improvement in health, 47% each stated

regularity in going to schools, and improve in scholastic performance while 36% stated that there is no change in children. All the parents were aware of shiksha committee in the village, while 33% were member in the committee. About 2% suggested to change menu, while 13% suggested to improve quality and 7% stated quantity (**Table 15**).

6.4.3 In depth interviews were carried out on different functionaries of PM-POSHAN about their knowledge & practices on PM-POSHAN in both the districts.

Functionaries

Ramanathapuram and Madurai district – A total of 15 functionaries of which 8 was BDO including district level managers, and 7 Dep BDO, were interviewed to know their knowledge on PM-POSHAN. Among the interviewed, majority (73%) of the functionaries were post graduate and 27% were graduate. About 27% of the functionaries were aware of at least 2 objectives, 13% were aware of at least 3 objectives while 60% were aware of all the objectives. Activities carried out during supervisory and monitoring visits include verification of records (100%), check hygienic practices (87%), identify problems and solve them (47%) and cooking foods (100%). About 80% functionaries stated that nutritional status has improved in their area, 80% stated increase in enrollment, 60% stated decrease drop out and 53% stated increased in scholastic performance of the children. About 13% suggested to provide breakfast in the morning and 47% suggested to include sambar daily and 7% suggested to include idli and vada to children. All the functionaries were ware of rice entitlement to children, 93% were aware of dal entitlement and none were aware of entitlement of oil. Only 53% were aware of total calories and 27% about proteins provided through PM-POSHAN (**Table 16**).

SMC Members

Ramanathapuram and Madurai district – A total of 31 SMC members (20% male; 80% female) were interviewed to know their knowledge on PM-POSHAN. About 3% had primary education, 16% had middle education, 35% were having secondary, 16% higher secondary education and 29% were graduate & above. Among the interviewed, majority (82) were belong to Hindu religion and 61% belong to Other Backward Community while 30% were Schedule caste.

About 74% SMC members were aware of cereal entitlement of the children, 68% were aware of pulses entitlement, 32% were aware of oil entitlement. Majority (93.5%) were attending meeting regularly at schools. None of them were monitoring the fund flow. All stated that they were testing the cooking food and observe the process of cooking. About 65% stated that they were mobilizing the community to contribute to PM-POSHAN (**Table 17**).

Cook Cum Helpers (CCH)

In-depth interviews were conducted among 33 Cook-Cum-Helpers (CCH) in the schools visited in both the districts.

About 15% were illiterates, 27% had primary education, while 55% had middle level of education. About 430% CCH were working for <10 years, 58% had 10-20 years and 12% were working since 20 years as CCH.

All the CCH stated that hot cooked meal was regularly served in the school and were testing food before serving to children. In all the schools, it was observed that the food was cooked as per the number of children present on that day and majority were weighing the food grains.

All the CCH had undergone health check-up at the school. Cleanliness of CCH was good in 73% and satisfactory in 27% of schools. Cleanliness of kitchen was good in 55%, satisfactory in 45%. Cleanliness of utensils was good in 76% and satisfactory in 24% (**Table.18**).

Kitchen Environment & Hygiene

Observation of the kitchen environment and pre-preparatory methods of the cooks was assessed in all the schools visited in both the districts. A total of 33 kitchens were observed for food quality supplied under PM-POSHAN. About 97% rice, 73% dal and 76% vegetables observed were good quality, while 3% rice, 27% dal and 24% vegetables was satisfactory in quality. 97% were sieving rice and dal before cooking. All the cooks were washing rice, dal and vegetables before cooking. About 94% were preparing food in closed kitchen, while 6% preparing in open. All the cook-cum helper (CCH) stated that they were washing their hand before cooking, wash utensils, before and after cooking and prepare foods covered with lid. All the kitchens were observed clean and 97% had sufficient vessels for cooking. Drinking water was available in all the school premises mostly RO water. Majority (91%) were

using LPG gas for cooking purpose and 9% were using firewood. All the schools were using iodized salt and were storing in closed containers. All the schools have storage room facility and 76% had dunnage facility. Almost all the schools were using the closed gunny bags for storing of the rice. Insects were observed in none of the store rooms while 64% were following insecticidal measures (**Table 19**).

6.7 Recipes

1. COCONUT RICE AND VEGETABLE KURMA-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
P. Rice	100	7.8	0.6	351.9
Coconut	15	0.6	6.2	61.4
Bengal gram dhal	5	1.1	0.3	16.5
Black gram dhal	5	1.2	0.1	16.2
Groundnut	5	1.2	2.0	26.0
Dry chilly	2.5	0.3	0.2	5.9
Green chilly	6	0.1	0.0	2.5
Oil	2	0.0	2.0	18.0
Coriander leaves	0.4	0.0	0.0	0.1
curry leaves	0.4	0.0	0.0	0.3
Asofoetida	0.2	0.0	0.0	0.7
mustard seeds	0.4	0.1	0.2	2.0
Total		12.4	11.5	501.6

Upper Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
P. Rice	150	11.7	0.8	527.9
Coconut	15	0.6	6.2	61.4
Bengal gram dhal	7.5	1.6	0.4	24.7
Black gram dhal	7.5	1.7	0.1	24.3
Groundnut	7.5	1.8	3.0	39.0
Dry chilly	4	0.5	0.3	9.5
Green chilly	9	0.2	0.1	3.8
Oil	3	0.0	3.0	27.0
Coriander leaves	0.6	0.0	0.0	0.2
curry leaves	0.6	0.0	0.0	0.4
Asofoetida	0.3	0.0	0.0	1.0
mustard seeds	0.6	0.1	0.2	3.1
Total		18.3	14.1	722.0

VEGETABLE KURMA-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Potato	20	0.3	0.0	14.0

Cabbage	10	0.1	0.0	2.2
Carrot	10	1.1	0.0	4.5
Beans	5	0.1	0.0	2.1
Onions	5	0.1	0.0	2.4
Tomato	5	0.0	0.0	0.9
Oil	1.5	0.0	1.5	13.5
Coriander leaves	0.4	0.0	0.0	0.1
curry leaves	0.4	0.0	0.0	0.3
cumin seeds	0.3	0.0	0.0	0.9
mustard seeds	0.4	0.1	0.2	2.0
Total		1.9	1.9	42.9

Upper Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Potato	30	0.5	0.1	21.0
Cabbage	15	0.2	0.0	3.2
Carrot	15	1.6	0.0	6.7
Beans	7.5	0.2	0.1	3.2
Onions	7.5	0.1	0.0	3.6
Tomato	7.5	0.1	0.0	1.4
Oil	2	0.0	2.0	18.0
Coriander leaves	0.6	0.0	0.0	0.2
curry leaves	0.6	0.0	0.0	0.4
cumin seeds	0.5	0.1	0.1	1.5
mustard seeds	0.6	0.1	0.2	3.1
Total		2.9	2.5	62.3

2. Curd rice, Raw banana fry- Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
P. Rice	100	7.8	0.6	351.9
Milk	15	0.5	0.7	10.9
Curd	5	0.2	0.2	3.0
Ginger	5	0.1	0.0	2.8
Oil	2	0.0	2.0	18.0
Coriander leaf	0.4	0.0	0.0	0.1
Curry leaf	0.4	0.0	0.0	0.3
Asofoetida	0.2	0.0	0.0	0.7
Mustard seeds	0.4	0.1	0.2	2.0
Total		8.7	3.6	389.7

Upper Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
P. Rice	150	11.7	0.8	527.9
Milk	22.5	0.7	1.0	16.4
Curd	7.5	0.2	0.3	4.5
Ginger	7.5	0.2	0.1	4.1
Oil	3	0.0	3.0	27.0
Coriander leaf	0.6	0.0	0.0	0.2
curry leaf	0.6	0.0	0.0	0.4
Asofoetida	0.3	0.0	0.0	1.0
mustard seeds	0.6	0.1	0.2	3.1
Total		13.0	5.5	584.5

Raw banana fry-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
G.banana	20	0.2	0.0	16.0
RCP	1	0.1	0.1	2.4
Garam masala	0.5	0.0	0.0	0.8
Oil	1.5	0.0	1.5	13.5
Mustard	0.4	0.1	0.2	2.0
Curry leaf	0.4	0.0	0.0	0.3
Black gram dhal	5	1.2	0.1	16.2
Turmeric	0.1	0.0	0.0	0.3
Total		1.7	1.9	51.5

Upper Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
G. banana	30	0.4	0.1	24.0
RCP	1	0.1	0.1	2.4
Garam masala	1.2	0.1	0.1	2.0
Oil	2	0.0	2.0	18.0
Mustard	0.6	0.1	0.2	3.1
Curry leaf	0.6	0.0	0.0	0.4
Black gram dhal	7.5	1.7	0.1	24.3
Turmeric	0.2	0.0	0.0	0.6
Total		2.5	2.6	74.7

3. Egg Biryani- Primary

Foods	Quantity(g)	Protein (g)	Total fat (g)	Energy (Kcal)
Rice	100	7.9	0.5	356.7
Egg	44	5.8	4.0	59.4

Onion	10	0.2	0.0	4.8
Tomato	10	0.1	0.0	1.9
Spices	1	0.1	0.1	1.7
Oil	3	0.0	3.0	27.0
Coriander leaves	3	0.1	0.0	0.8
curry leaves	3	0.2	0.0	1.6
cumin seeds	0	0.0	0.0	0.9
mustard seeds	0	0.1	0.2	2.0
Potato	10	0.2	0.0	7.0
Cabbage	5	0.1	0.0	1.1
Carrot	5	0.5	0.0	2.2
Beans	5	0.1	0.0	2.1
Onions	5	0.1	0.0	2.4
Tomato	5	0.0	0.0	0.9
Oil	2	0.0	2.0	18.0
Coriander leaves	0	0.0	0.0	0.1
curry leaves	0	0.0	0.0	0.3
cumin seeds	0	0.0	0.0	0.9
mustard seeds	0	0.1	0.2	2.0
Sum		15.7	10.2	493.9

4.Egg Biryani- Upper Primary

Foods	Quantity(g)	Protein (g)	Total fat (g)	Energy (Kcal)
Rice	150	11.7	0.8	527.9
Egg	44	5.8	4.0	59.4
Onion	10	0.2	0.0	4.8
Tomato	10	0.1	0.0	1.9
Spices	1	0.1	0.1	1.7
Oil	3	0.0	3.0	27.0
Coriander leaves	3	0.1	0.0	0.8
curry leaves	3	0.2	0.0	1.6
cumin seeds	0	0.0	0.0	0.9
mustard seeds	0	0.1	0.2	2.0
Potato	20	0.3	0.0	14.0
Cabbage	10	0.1	0.0	2.2
Carrot	10	1.1	0.0	4.5
Beans	5	0.1	0.0	2.1
Onions	5	0.1	0.0	2.4
Tomato	5	0.0	0.0	0.9

Oil	2	0.0	2.0	18.0
Coriander leaves	0	0.0	0.0	0.1
curry leaves	0	0.0	0.0	0.3
cumin seeds	0	0.0	0.0	0.9
mustard seeds	0	0.1	0.2	2.0
sum		20.2	10.6	675.3

4. Sambar Rice with Groundnut ladoo-Primary

Foods	Quantity(g)	Protein (g)	Total fat (g)	Energy (Kcal)
Rice	100	7.9	0.5	356.7
Red gram dhal	15	3.3	0.2	49.7
Drumstick	10	0.3	0.0	2.9
Ladies finger	6	0.1	0.0	1.7
Bottle gourd	6	0.0	0.0	0.7
Radish	6	0.0	0.0	1.9
Onion	6	0.1	0.0	2.9
Tomato	6	0.0	0.0	1.1
Oil	4	0.0	4.0	36.0
Coriander leaves	0	0.0	0.0	0.0
curry leaves	0	0.0	0.0	0.0
cumin seeds	0	0.0	0.0	0.0
mustard seeds	0	0.0	0.0	0.0
Spices	0	0.0	0.0	0.0
Groundnut	20	4.7	7.9	104.1
Jaggery	10	0.2	0.0	35.4
Sum		16.7	12.8	593.1

Sambar Rice with Groundnut ladoo -Upper Primary

Foods	Quantity(g)	Protein (g)	Total fat (g)	Energy (Kcal)
Rice	150	11.7	0.8	527.9
Red gram dhal	30	6.5	0.5	99.3
Drumstick	15	0.4	0.0	4.4
Ladies finger	15	0.3	0.0	4.1
Bottle gourd	15	0.1	0.0	1.7
Raddish	10	0.1	0.0	3.2
Onion	10	0.2	0.0	4.8
Tomato	10	0.1	0.0	1.9
Oil	4	0.0	4.0	36.0
Coriander leaves	0	0.0	0.0	0.0
curry leaves	0	0.0	0.0	0.0
cumin seeds	0	0.0	0.0	0.0
mustard seeds	0	0.0	0.0	0.0
Spices	0	0.0	0.0	0.0
Groundnut	20	4.7	7.9	104.1
Jaggery	10	0.2	0.0	35.4
Sum		24.2	13.4	822.8

5. Pulikulambu (tamarind curry) +Egg-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
P. Rice	100	7.8	0.6	351.9
Brinjal	25	0.4	0.1	6.3
Tamarind	2	0.1	0.0	5.8
Big onion	5	0.1	0.0	2.4
Tomato	5	0.0	0.0	1.0
Garlic	1	0.1	0.0	1.2
Green chilly	1	0.0	0.0	0.4
Oil	3	0.0	3.0	27.0
Mustard	0.2	0.0	0.1	1.0
Turmeric	0.1	0.0	0.0	0.3
Cumin	0.1	0.0	0.0	0.2
Fenugreek	0.1	0.0	0.0	0.2
Curry leaves	0.2	0.0	0.0	0.1
Kolambu powder	3	0.2	0.2	5.0
Total		8.8	4.0	402.9

Upper Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
P. Rice	150	11.7	0.8	527.9
Brinjal	30	0.4	0.1	7.6
Tamarind	3	0.1	0.0	8.7
Big onion	10	0.2	0.0	4.8
Tomato	10	0.1	0.0	2.0
Garlic	2	0.1	0.0	2.5
Green chilly	2	0.0	0.0	0.8
Oil	2	0.0	2.0	18.0
Mustard	0.3	0.1	0.1	1.5
Turmeric	0.2	0.0	0.0	0.6
Cumin	0.2	0.0	0.0	0.3
Fenugreek	0.1	0.0	0.0	0.2
Curry leaves	0.3	0.0	0.0	0.2
Kolambu powder	4	0.3	0.2	6.6
Total		13.1	3.4	582

1.Egg curry, Aviyal-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Egg	45	6.0	4.1	60.7
Big onion	5	0.1	0.0	2.4
Tomato	5	0.0	0.0	1.0

Garam masala	0.1	0.0	0.0	0.2
Oil	1.5	0.0	1.5	13.5
mustard seeds	0.4	0.1	0.2	2.0
Cinnamon	0.2	0.0	0.0	0.3
Cumin	0.1	0.0	0.0	0.3
Clove	0.05	0.0	0.0	0.1
Ginger	0.1	0.0	0.0	0.1
Garlic	0.1	0.0	0.0	0.1
Green chilly	0.2	0.0	0.0	0.1
Turmeric	0.1	0.0	0.0	0.3
RCP	1	0.1	0.1	2.4
Coriander powder	1	0.1	0.1	1.7
Coconut	5	0.2	2.1	20.5
Coriander leaf	0.4	0.0	0.0	0.1
Total		6.6	8.1	105.7

Upper Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Egg	45	6.0	4.1	60.7
Big onion	7.5	0.1	0.0	3.6
Tomato	7.5	0.1	0.0	1.5
Garam masala	0.3	0.0	0.0	0.5
Oil	3	0.0	3.0	27.0
mustard seeds	0.4	0.1	0.2	2.0
Cinnamon	0.3	0.0	0.0	0.5
Cumin	0.2	0.0	0.0	0.6
Clove	0.1	0.0	0.0	0.2
Ginger	0.15	0.0	0.0	0.1
Garlic	0.15	0.0	0.0	0.2
Green chilly	0.3	0.0	0.0	0.1
Turmeric	0.2	0.0	0.0	0.6
RCP	1.5	0.2	0.1	3.6
Coriander powder	1.5	0.1	0.1	2.5
Coconut	7.5	0.3	3.1	30.7
Coriander leaf	0.4	0.0	0.0	0.1
Total		6.9	10.7	134.4

2-Rasam, Kootu (veg, dhal)-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Tamarind	1	0.0	0.0	2.9
Garlic	1	0.1	0.0	1.2
RCP	0.7	0.1	0.0	1.7
Coriander leaf	0.4	0.0	0.0	0.1
Cumin seed	0.2	0.0	0.0	0.6
Pepper	0.2	0.0	0.0	0.4

Asafoetida	0.1	0.0	0.0	0.2
Tomato	10	0.1	0.0	2.0
Oil	2	0.0	2.0	18.0
Mustard seeds	0.4	0.1	0.2	2.0
curry leaf	0.6	0.0	0.0	0.4
Turmeric	0.1	0.0	0.0	0.3
Total		0.5	2.3	29.8

Upper primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Tamarind	1.5	0.0	0.0	4.3
Garlic	1.5	0.1	0.0	1.9
RCP	1.2	0.2	0.1	2.8
Coriander leaf	0.6	0.0	0.0	0.2
Cumin seed	0.3	0.0	0.0	0.9
Pepper	0.3	0.0	0.0	0.7
Asafoetida	0.2	0.0	0.0	0.4
Tomato	3	0.0	0.0	0.6
Oil	3	0.0	3.0	27.0
mustard seeds	0.6	0.1	0.2	3.1
curry leaf	0.6	0.0	0.0	0.4
Turmeric	0.2	0.0	0.0	0.6
Total		0.6	3.4	42.8

3.Kootu (veg,dhal)-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Bengal gram dhal	5	1.1	0.3	16.5
Bottle guard	25	0.1	0.0	2.8
Green chilly	6	0.1	0.0	2.5
Dry chilly	0.1	0.0	0.0	0.2
Oil	2	0.0	2.0	18.0
Mustard seeds	0.4	0.1	0.2	2.0
Curry leaf	0.6	0.0	0.0	0.2
Turmeric	0.1	0.0	0.0	0.3
Total		1.5	2.5	42.5

Upper primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Bengal gram dhal	7.5	1.6	0.4	24.7
Bottle guard	40	0.2	0.1	4.4
Green chilly	9	0.2	0.1	3.8
Dry chilly	0.2	0.0	0.0	0.5
Oil	3	0.0	3.0	27.0
mustard seeds	0.6	0.1	0.2	3.1
Curry leaf	0.6	0.0	0.0	0.2
Turmeric	0.2	0.0	0.0	0.6

Total		2.2	3.8	64.2
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4- Keerai curry (Green leafy veg)-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Green	20	0.7	0.1	6.1
Red gram dhal	15	3.3	0.2	49.7
G.chilly	6	0.1	0.0	2.5
Tomato	5	0.0	0.0	1.0
Big onion	5	0.1	0.0	2.4
Tamarind	1	0.0	0.0	2.9
Oil	1.5	0.0	1.5	13.5
Coriander leaf	0.4	0.0	0.0	0.3
curry leaves	0.4	0.0	0.0	0.1
Turmeric	0.2	0.0	0.0	0.6
mustard seeds	0.4	0.1	0.2	2.0
Total		4.3	2.1	81.1

Upper Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
GREEN	25	0.8	0.2	7.7
Red gram dhal	22.5	4.9	0.4	74.5
G.chilly	9	0.2	0.1	3.8
Tomato	7.5	0.1	0.0	1.5
Big onion	7.5	0.1	0.0	3.6
Tamarind	1.5	0.0	0.0	4.3
Oil	3	0.0	3.0	27.0
Coriander leaf	0.4	0.0	0.0	0.3
curry leaves	0.4	0.0	0.0	0.1
Turmeric	0.3	0.0	0.0	0.8
mustard seeds	0.4	0.1	0.2	2.0
Total		6.3	3.8	125.6

5. Sundal-Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Bengal gram whole	20	3.8	1.0	57.5
Oil	1	0.0	1.0	9.0
Mustard seeds	0.1	0.0	0.0	0.5
Curry leaves	0.2	0.0	0.0	0.1
Total		3.8	2.1	67.1

Upper Primary

Ingredients	Quantity (g)	Protein (g)	Total fat (g)	Energy (Kcal)
Bengal gram whole	30	5.6	1.5	86.2

Oil	2	0.0	2.0	18.0
Mustard seeds	0.2	0.0	0.1	1.0
Curry leaves	0.3	0.0	0.0	0.2
Total		5.7	3.6	105.4

Table 1: Coverage Particulars of JRM in Madurai and Ramanathapuram districts of Tamilnadu State

		Districts		Total
		Ramanathapuram	Madurai	
Number of Schools covered		20	22	42
No. of students covered for Anthropometry	Boys	294	334	628
	Girls	290	330	620
	Total	584	664	1248
No. of Schools covered for Institutional Diet survey		2	3	5
No. of children covered for individual Diet Survey		31	46	77
No. of PM-POSHAN in-charge teachers interviewed		15	22	37
No. of Parents interviewed		45	61	106
No. of SMC Members interviewed		17	14	31
PM-POSHAN Functionaries (block/district level officers) interviewed		9	6	15
No. of Cook Cum Helpers (CCH) interviewed		19	14	33

Table 2– Particulars of schools covered for JRM in Madurai and Ramanathapuram districts of Tamilnadu State

Description		Ramanathapuram (N=20)		Madurai (N=22)		Total	
		n	%	n	%	n	%
Location of school	Rural	20	100	17	77	37	88
	Urban	0	0	5	23	5	12
Type of school	Primary	11	55	13	59	24	57
	Middle	9	45	9	41	18	43
Type of Building	Pucca	19	95	21	95	40	95
	Semi pucca	1	5	1	5	2	5
Ownership of building	Government	20	100	20	91	40	95
	Private	0	0	2	9	2	5
No. of Rooms in primary schools	Less than 5	9	82	4	31	13	54
	5 or more	2	18	9	69	11	46
Rooms in MS	More than 3	8	89	9	100	17	94
P:T Ratio in PS	< 30	6	55	7	54	13	54
	≥ 30	5	45	6	46	11	46
P:T Ratio in MS	< 35	4	44	6	67	10	56
	≥35	5	56	3	33	8	44

Table 3 – Infrastructure facilities in the Schools in Madurai and Ramanathapuram districts of Tamilnadu State

Description		MADURAI N=20	RAMANATHAPU RAMN=20
Time spent approximately by teacher on PM-POSHAN activity per day	30 minutes	90	80
	45 minutes	5	0
	1 hour	5	20
Teachers who felt PM-POSHAN affects their teaching activities		3	15
Availability of Facilities			
Kitchen		100	100
Sufficiency of plates for Eating		90	90
Hand washing facilities		90	95
Availability of Soap for hand wash		15	10
Toilets		100	100
Separate toilets for girls		95	90
Dining hall		10	0
Kitchen garden		75	75
Fire extinguisher		100	100
First aid kit		100	100
Display on Kitchen wall			
Entitlements of Children		50	80
PM-POSHAN Logo		60	60
Menu		85	90
Telephone number of PHC		80	40
Telephone number of Fire services		80	35
Telephone number of police		80	35

Table 4.1: Mean Consumption of Foodstuffs (g/student/day) by school children in the districts of Madurai and Ramanathapuram

Foods	Primary			Upper primary		
	PM-Poshan Norms (g)	Madurai	Ramanathapuram	PM-POSHAN Norms (g)	Madurai	Ramanathapuram
Cereals	100	78.5	90.1	150	86.7	118.7
Pulses	20	11.8	21.8	30	11.9	19.5
Fats & oils	5	2.6	3.5	7.5	4.1	2.2
Vegetables	50	78.1	0	75	33.2	0

Table 4.2: Average intake of Nutrients (per child /day) through PM-POSHAN meal among the school children in the districts of Madurai: Institutional diet survey

Nutrient intake - PM-POSHAN	Energy (Kcal)	Protein (g)	Total fat (g)	Thiamine [mg]	Riboflavin [mg]	Niacin [mg]	Total B6 [mg]	Total Folate s [ug]	Vitamin C [mg]	Retinol [ug]	Calcium [mg]	Iron [mg]	Zinc [mg]	Vitamin B12 [mg]
Primary	481	16.8	10.8	0.29	0.20	3.14	0.40	78.6	22.7	233.4	74.4	2.94	2.12	0.81
PM-Poshan Recommended	450	12	-	-	-	-	-	-	-	-	-	-	-	-
Secondary	593	21	17	0.3	0.2	3.2	0.5	88.2	16.8	409.0	86.3	3.22	2.52	1.30
PM-POSHAN Recommended	700	20	-	-	-	-	-	-	-	-	-	-	-	-

Table 4.3: Average intake of Nutrients (per child /day) through PM-POSHAN meal among the school children in the districts of Ramanathapuram: Institutional diet survey

Nutrient intake - PM-POSHAN	Energy (Kcal)	Protein (g)	Total fat (g)	Thiamine [mg]	Riboflavin [mg]	Niacin [mg]	Total B6 [mg]	Total Folate [ug]	Vitamin C [mg]	Retinol [ug]	Calcium [mg]	Iron [mg]	Zinc [mg]	Vitamin B12 [mg]
Primary	480	17.4	8.55	0.29	0.19	2.91	0.35	65.2	5.02	131.8	53.4	2.6	2.1	0.6
PM-Poshan Recommended	450	12	-	-	-	-	-	-	-	-	-	-	-	-
Secondary	531	15.9	7.2	0.2	0.1	3.3	0.3	39.7	5.6	158.4	51.4	2.7	1.9	0.82
PM-POSHAN Recommended	700	20	-	-	-	-	-	-	-	-	-	-	-	-

Table 5.1: Mean Consumption of Foodstuffs (g/student/day) by school children in the districts of Madurai and Ramanathapuram state through hot cooked meal: Individual diet surveys

Foods	Primary			Upper primary		
	PM-Poshan Norms (g)	Madurai	Ramanathapuram	PM-POSHAN Norms (g)	Madurai	Ramanathapuram

Cereals	100	86.5	104.4	150	153.4	167.89
Pulses	20	9.23	15.44	30	11.78	0
Fats & oils	5	3.81	4.01	7.5	6.77	3.70
Vegetables	50	78.5	8.93	75	62.78	52.58

Table 5.2: Average intake of Nutrients (per child /day) through PM-POSHAN meal among the school children in the Madurai district : Individual diet surveys

Nutrient intake PM-POSHAN	Energy (Kcal)	Protein (g)	Total fat (g)	Thiamine [mg]	Riboflavin [mg]	Niacin [mg]	Total B6 [mg]	Total Folate s [ug]	Vitamin C [mg]	Retinol [ug]	Calcium [mg]	Iron [mg]	Zinc [mg]	Vitamin B12 [mg]
Primary	482	16.6	10.41	0.28	0.19	3.01	0.40	75.22	16.40	240.71	69.05	2.75	2.06	0.74
PM-POSHAN Recommended	450	12	-	-	-	-	-	-	-	-	-	-	-	-
Secondary	733	22.3	12.78	0.40	0.23	4.54	0.57	86.97	13.79	296.41	76.38	3.26	2.82	0.77
PM-POSHAN Recommended	700	20	-	-	-	-	-	-	-	-	-	-	-	-

Table 5.3: Average intake of Nutrients (per child /day) through PM-POSHAN meal among the school children in the Ramanathauram District : Individual diet surveys

Nutrient intake - PM-POSHAN	Energy (Kcal)	Protein (g)	Total fat (g)	Thiamine [mg]	Riboflavin [mg]	Niacin [mg]	Total B6 [mg]	Total Folate s [ug]	Vitamin C [mg]	Retinol [ug]	Calcium [mg]	Iron [mg]	Zinc [mg]	Vitamin B12 [mg]
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Primary	507	16.01	8.91	0.27	0.18	3.11	0.36	50.22	8.68	176.84	51.03	2.54	1.98	0.74
PM-POSHAN Recommended	450	12	-	-	-	-	-	-	-	-	-	-	-	-
Secondary	737	20.22	9.13	0.38	0.22	4.82	0.51	51.70	14.81	255.76	67.72	3.56	2.57	0.80
PM-POSHAN Recommended	700	20	-	-	-	-	-	-	-	-	-	-	-	-

Table 6: Menu of PM-POSHAN in Tamil Nadu











Days	Images	First and Third Week	Images	Second & Fourth Week
Monday		Vegetable Biryani with Pepper Egg		Sambar Sadham (Bisibelabath) with Onion Tomato Masala Egg.
Tuesday		Black Bengal Gram Pulav with Tomato Masala Egg.		Mixed Meal Maker with Vegetable Rice and Pepper Egg
Wednesday		Tomato Rice with Pepper Egg		Tamarind Rice with Tomato Masala Egg
Thursday		Rice, Sambar and Boiled Egg		Lemon Rice, Sundal and Tomato Egg
Friday		Curry Leaf Rice / Keerai Sadham with Masala Egg and Chilly Fried Potato.		Rice, Sambar and Boiled Egg with Fried Potato.

Table 7: Level of satisfaction of school children (class 6th to 8th) about the food stuffs served in PM-POSHAN

Menu	Level of Satisfaction	Food stuffs served (N=94)			
		Rice	Dhal	Sabji	Eggs
Appearance	Good/very good	97.8	100.0	97.9	98.9
	Satisfactory	2.2	-	2.1	1.1
Colour	Good Good/very good	91.6	98.9	95.8	95.8
	Satisfactory	8.4	1.1	4.2	4.2
Odour/Aroma	Good	91.6	98.9	97.9	94.7
	Satisfactory	8.4	1.1	2.1	5.3
Texture	Good Good/very good	85.3	98.9	94.7	94.7
	Satisfactory	14.7	1.1	5.3	5.3
Taste	Good Good/very good	95.8	98.9	93.7	92.6
	Satisfactory	4.2	1.1	6.3	7.4
Overall Palatability	Good	95.8	98.9	100.0	100.0
	Satisfactory	4.2	1.1	-	-

Table 8: Hygiene Practices of Students covered under JRM

SL No	About PM-POSHAN	Per cent
1	Sufficiency of food served	98.9
2.	Knowledge about PM-POSHAN menu	28.7
3.	PM-POSHAN served hot cooked meal	98.9
4.	Like taste	95.7
5.	Hand wash practice before taking the food	30.9
6.	Washing of plates and glasses before taking the food	96.8
7.	Hand washing after defecation	62.1
8.	Ask for second serving	60.6
9.	Get second serving	98.9
10.	Brushing teeth with Brush	98.8
11.	Daily bathing	97.8
12.	Wearing washed clothes daily	77.7
13.	Using plates	95.7
14.	Take breakfast before coming to school	90.4
15.	Place where PM-POSHAN is consumed	
a	School varanda	60.8
b	School ground	28.7
c	Classroom	5.3
d	Anywhere	5.3

Table 9: Mean and SD of Heights and weights of students covered under JRM in Tamil Nadu by Age and Gender

Boys					Age Groups (Yrs)	Girls				
N	Height		Weight			N	Height		Weight	
	Mean (Cm)	SD	Mean (Kg)	SD			Mean (Cm)	SD	Mean (Kg)	SD
74	109.75	5.97	17.18	3.34	5	70	108.38	4.53	16.34	2.29
100	115.25	5.96	18.44	3.17	6	91	112.64	5.38	17.49	3.05
101	121.13	6.32	20.48	3.55	7	101	118.90	5.14	20.30	3.61
109	126.69	5.93	23.65	4.50	8	99	125.84	5.59	23.37	5.01
97	131.81	6.57	26.18	5.58	9	113	132.23	6.66	26.58	4.98
60	137.29	6.43	29.37	6.49	10	60	136.98	8.59	30.56	7.31
41	140.64	8.04	33.54	9.77	11	36	142.19	9.34	33.47	8.48
33	146.62	8.03	35.22	6.92	12	38	148.57	6.88	37.49	7.34
12	147.3	10.35	36.65	10.32	13	11	148.55	6.11	41.50	8.79
1	156.5	-	35.3	-	14	1	136.2	-	28.2	-
481	121.57	9.75	21.42	5.26	5-9	474	120.77	10.20	21.32	5.53
147	141.26	8.62	32.48	8.32	10-14	146	142.15	9.54	33.89	8.42
628	126.18	12.64	24.01	7.70	Total	620	125.81	13.54	24.28	8.27

Table-10: Prevalence of Malnutrition among Children in Madurai & Ramanathapuram Districts of Tamilnadu covered under JRM

District	N	Stunting N,%(95%CI)	Thinness N,%(95%CI)	Overweight N,%(95%CI)	Obesity N,%(95%CI)
Madurai	664	57, 8.58% (6.67–10.97)	153, 23.04% (20–26.41)	36, 5.42% (3.93-7.42)	13, 1.96% (1.13-3.34)
Ramanathapuram	584	61, 10.45% (8.21-13.21)	153, 26.2% (22.78-29.92)	43, 7.36% (5.50-9.78)	13, 2.23% (1.29-3.79)
Total	1248	118, 9.46% (7.95 – 11.21)	306, 24.5% (22.2-26.98)	79, 6.33% (5.1-7.82)	26, 2.08% (1.42-3.04)

Table 11: Distribution of School Children (%) by Nutritional Status (Stunting - Height /Age)

Districts	Age Group (Yrs)	Gender	Severely Stunted (< -3SD)		Moderately Stunted (-2SD to -3SD)		Normal (> -2 SD)		Overall Stunting (Median < -2SD)	
			N	%	N	%	N	%	N	%
Madurai (N=664)	5-9	Boys	1	0.40	13	5.14	239	94.47	14	5.53
		Girls	2	0.79	24	9.52	226	89.68	26	10.32
		Pooled	3	0.59	37	7.33	465	92.08	40	7.92
	10-14	Boys	0	0	5	6.17	76	93.83	5	6.17
		Girls	2	2.56	10	12.82	66	84.62	12	15.38
		Pooled	2	1.26	15	9.43	142	89.31	17	10.69
	District Pooled	Boys	1	0.3	18	5.39	315	94.31	19	5.69
		Girls	4	1.21	34	10.30	292	88.48	38	11.52
		Pooled	5	0.75	52	7.83	607	91.42	57	8.58
Ramanathapuram (N=584)	5-9	Boys	3	1.32	19	8.33	206	90.35	22	9.65
		Girls	1	0.45	20	9.01	201	90.54	21	9.46
		Pooled	4	0.89	39	8.67	407	90.44	43	9.56
	10-14	Boys	1	1.52	7	10.61	52	87.88	8	12.12
		Girls	5	7.35	5	7.35	58	85.29	10	14.71
		Pooled	6	4.48	12	8.96	116	86.57	18	13.43
	District Pooled	Boys	4	1.36	26	8.84	264	89.80	30	10.20
		Girls	6	2.07	25	8.62	259	89.31	31	10.69
		Pooled	10	1.71	51	8.73	523	89.55	61	10.45
Districts Pooled (N=1248)	5-9	Boys	4	0.83	32	6.65	445	92.52	36	7.48
		Girls	3	0.63	44	9.28	427	90.08	47	9.92
		Pooled	7	0.73	76	7.96	872	91.31	83	8.69
	10-14	Boys	1	0.68	12	8.16	134	91.16	13	8.84
		Girls	7	4.79	15	10.27	124	84.93	22	15.07
		Pooled	8	2.73	27	9.22	258	88.05	35	11.95
	Districts Pooled	Boys	5	0.8	44	7.04	579	92.20	49	7.80
		Girls	10	1.61	59	9.52	551	88.87	69	11.13
		Pooled	15	1.20	103	8.25	1130	90.54	118	9.46

Table 12: Distribution of School Children (%) by Nutritional Status (BMI Z Scores)

Districts	Age Group (Yrs)	Gender	Severe Thinness (< -3SD)		Moderate Thinness (-2SD to -3SD)		Normal (> -2 SD to + 1SD)		OW & Obesity (> + 1 SD)	
			N	%	N	%	N	%	N	%
Madurai (N=664)	5-9	Boys	18	7.11	54	21.34	163	64.43	18	7.11
		Girls	4	1.59	41	16.27	193	76.59	14	5.56
		Pooled	22	4.36	95	18.81	356	70.50	32	6.34
	10-14	Boys	7	8.64	17	20.99	47	58.02	10	12.35
		Girls	3	3.85	9	11.54	59	75.64	7	8.97
		Pooled	10	6.29	26	16.35	106	66.67	17	10.69
	District Pooled	Boys	25	7.49	71	21.26	210	62.87	28	8.38
		Girls	7	2.12	50	15.15	252	76.36	21	6.36
		Pooled	32	4.82	121	18.22	462	69.58	49	7.38
Ramanathapuram (N=584)	5-9	Boys	18	7.89	53	23.25	137	60.09	20	8.77
		Girls	12	5.41	43	19.37	154	69.37	13	5.86
		Pooled	30	6.67	96	21.33	291	64.67	33	7.33
	10-14	Boys	6	9.09	8	12.12	43	65.15	9	13.64
		Girls	3	4.41	10	14.71	41	60.29	14	20.59
		Pooled	9	6.72	18	13.43	84	62.69	23	17.16
	District Pooled	Boys	24	8.16	61	20.75	180	61.22	29	9.86
		Girls	15	5.17	53	18.28	195	67.24	27	9.31
		Pooled	39	6.68	114	19.52	375	64.21	56	9.59
Districts Pooled (N=1248)	5-9	Boys	36	7.48	107	22.25	300	62.37	38	7.90
		Girls	16	3.28	84	17.72	347	73.21	27	5.70
		Pooled	52	5.45	191	20	647	67.75	65	6.81
	10-14	Boys	13	8.84	25	17.01	90	61.22	19	12.93
		Girls	6	4.11	19	13.01	100	68.49	21	14.38
		Pooled	19	6.48	44	15.02	190	64.85	40	13.65
	Districts Pooled	Boys	49	7.80	132	21.02	390	62.10	57	9.08
		Girls	22	3.55	103	16.61	447	72.10	48	7.74
		Pooled	71	5.69	235	18.83	837	67.07	105	8.41

Table 13: Prevalence (%) of Nutritional Deficiency Signs *

	Madurai			Ramanathapuram			Districts Pooled		
	Boys (N=334)	Girls (N=330)	Pooled (N=664)	Boys (N=294)	Girls (N=290)	Pooled (N=584)	Boys (N=628)	Girls (N=620)	Pooled (N=1248)
NAD	327 (97.9)	325 (98.48)	652 (98.19)	291 (99)	286 (98.6)	577 (98.8)	621 (98.89)	615 (99.19)	1236 (99.04)
Bitot's Spots	3 (0.9)	1 (0.3)	4 (0.6)	0	0	0	3 (0.48)	1 (0.16)	4 (0.32)
Dental Fluorosis	3 (0.9)	4 (1.21)	7 (1.05)	0	0	0	3 (0.48)	4 (0.65)	7 (0.56)
Goitre	1 (0.3)	0	1 (0.3)	3 (1.0)	4 (1.4)	7 (1.2)	4 (0.6)	4 (0.6)	8 (0.6)
Children with at least one Nutritional Deficiency Sign	7 (2.1)	5 (1.52)	12 (1.81)	3 (1)	4 (1.4)	7 (1.2)	10 (1.5)	9 (1.5)	19 (1.5)

*Multiple Answers

Table 14 Knowledge and perceptions of Teachers/In-charges of PM POSHAN

Variables	Category	Ramanathapuram (n=15)		Madurai (n=22)		Pooled (n=37)	
		N	%	N	%	N	%
Age Group	30-39 Yrs	0	0	0	0	0	0
	40-49 Yrs	3	20.00	5	22.73	8	21.62
	50-59 Yrs	12	80.00	17	77.27	29	78.38
Education	Intermediate	1	6.67	0	0.00	1	2.70
	Inter & TTC	0	0.00	2	9.09	2	5.41
	Graduate	1	6.67	1	4.55	2	5.41
	Graduate & B.Ed	5	33.33	2	9.09	7	18.92
	Post Graduate	7	46.67	1	4.55	8	21.62
	PG & B.Ed	1	6.67	16	72.73	17	45.95
Supervision by	BDO	4	26.67	9	40.91	13	35.14
	Deputy BDO	3	20.00	9	40.91	12	32.43
	Block education Officer	2	13.33	0	0.00	2	5.41
	Local committee	6	40.00	3	13.64	9	24.32
	Others (CAC, ABO)	1	6.67	1	4.55	2	5.41
Activities undertaken during supervision	Verification of records	14	90.00	21	90	35	90
	Identify problems & solve it	0	0.00	3	13.64	3	8.11
	Community mobilization	5	33.33	8	36.36	13	35.14
	Check hygiene	12	80	18	80	30	80
	Check cooked foods	12	80	21	95	33	87.5
	Others (cleaning, tasting)	2	13.33	2	9.09	4	10.81

Suggestions	Regular supply of food grains	15	100	22	100	37	100
	Sambar Rice inclusion	10	67	14	64	24	64
Health checkup of students		15	100	22	100	37	100
PM-Poshan attendance	Children taking PM-POSHAN against enrolment		83		85		84

Table -15. Knowledge, perception of parents about PM-POSHAN

No. Parents interviewed	Ramanathapuram	Madurai	Pooled
N	45	61	106
Age years	(%)	(%)	(%)
≤40	86.7	85.2	85.8
>40	13.3	14.8	14.2
Education of parents			
Illiterate	-	6.6	3.8
Primary	13.3	6.6	9.4
Middle	4.4	8.2	6.6
High School	37.8	44.3	41.5
HSSC	26.7	19.7	22.6
Graduation & above	17.8	14.8	16.0
PM-POSHAN beneficial			
Yes	100.0	100.0	100.0
Benefit for			
Increase enrollment	60.0	85.2	74.5
Increase Attendance	53.3	86.9	72.6
Reduce drop out	64.4	77.0	71.7
Improve health & Nutritional status	86.7	98.4	93.4
Provide additional food	57.8	83.6	72.6
Increase scholastic performance	66.7	83.6	76.4
Child Participate in hot cook meal			
Yes	97.8	98.4	98.1
Child like the test	97.8	96.7	97.2
Food served is sufficient	97.8	98.4	98.1
No. of meals by children at home			
Two	-	11.5	6.6
Three	100.0	88.5	93.4
Changes observed in children			
Nutrition Status improved	60.0	82.0	72.6

Health Status improved	55.6	77.0	67.9
Regularity to school	46.7	62.3	55.7
School performance improved	46.7	59.0	53.8
No change	35.6	23.0	28.3
SMC committee in the village	100.0	99.8	99.9
Member of committee			
Yes	33.3	34.4	34.0
Suggestions for improvement of PM-POSHAN			
Change menu	2.2	24.6	1.1
Improve quality	13.3	21.3	17.9
Improve quantity	6.7	9.8	8.5

Table 16: Knowledge and Perceptions of supervisory level functionaries

Variables	Category	Assist. Director, DEO, BEO	Dep. BDO	All together
		(N=8)	(N=7)	(N=15)
Education	Graduate	37.5	14.3	26.7
	Post Graduate	62.5	85.7	73.3
Activities during supervision	Verification of records	100.0	100.0	100.0
	Identify problems & solve it	50.0	42.9	46.7
	Check hygiene	87.5	85.7	86.7
	Check cooked foods	112.5	100.0	106.7
	Others (stock, attendance)	0.0	0.0	0.0
Perception of the functionaries on the success of PM-POSHAN	Improve nutritional & health status of children	87.5	71.4	80.0
	Improve enrollment and attendance of children	62.5	100.0	80.0
	Decrease drop out	50.0	71.4	60.0
	Increased scholastic performance	50.0	57.1	53.3
Suggestions to improve PM-POSHAN	Breakfast provision	12.5	14.3	13.3
	Include Sambar	50.0	42.9	46.7
	Provide Idly & Vada	0.0	14.3	6.7
Aware of PM-POSHAN Norms	Rice	100.0	100.0	100.0
	Dal	87.5	100.0	93.5
	Oil	0.0	0.0	0.0
	Calories	50.0	57.1	53.3
	Proteins	37.5	14.3	26.7

Table 17: Knowledge and Perceptions of SMC Members on PM-POSHAN

Variable	Category	Madurai (N=14)		Ramanathapuram (N=17)		Pooled (n=31)	
		n	%	n	%	n	%
Gender	Male	0	0	6	35	6	19.4
	Female	14	100	11	65	25	80.6
Religion	Hindu	13	93	14	82	27	87.8
	Muslim	1	7	1	6	2	6.4
	Christian	0	0	1	6	1	3.2
	Others	0	0	1	6	1	3.2

Caste	OBC	9	65	10	60	19	61.2
	SC	4	28	5	30	9	29.2
	Others	1	7	2	10	3	9.6
Education Status	Primary	1	7	0	0	1	3.2
	Middle	1	7	4	24	5	16.1
	SSC	6	43	5	29	11	35.5
	Senior Secondary	3	21	2	12	5	16.1
	Graduate & above	3	21	6	35	9	29.0
Correct awareness about the food entitlements of PM-POSHAN	Cereals	14	100	9	53	23	74.2
	Pulses	14	100	7	41	21	67.7
	Vegetables	7	50	5	29	12	38.7
	Oil	7	50	3	18	10	32.3
As SMC member....	Attending the SMC meeting regularly	13	92.8	16	94	29	93.5
	Monitor the fund flow	0	0	0	0	0	0.0
	In resolving the school problems	0	0	0	0	0	0.0
	Check the process of PM-POSHAN	14	100	17	100	31	100.0
	Taste the PM-POSHAN food before serving	14	100	17	100	31	100.0
Mobilizing the community in donating cash/kind to PM-POSHAN	12	86	8	0	20	64.5	

Table 18: Knowledge and Perceptions of Cook-Cum Helpers (CCH) on PM-POSHAN

Variable	Category	(N=33)	%
Qualification of the CCH	Illiterate	5	15
	Primary	9	27
	Middle	18	55
	Metric	1	3
Total Service as CCH	< 10 Years	10	30
	10-20 Years	19	58
	≥ 20 Years	4	12
Cleanliness of the CCH	Good	24	73
	Satisfactory	9	27
Cleanliness of the kitchen	Good	18	55
	satisfactory	15	45
Cleanliness of Utensils	Good	25	76
	Satisfactory	8	24

Table 19: Observation of cooking process on the day of visit to the schools and availability infrastructure in the kitchen

Variable	Category		Madurai (n=14)		Ramanathapuram (n=19)		Pooled (n=33)	
			n	%	n	%	n	%
Rice	Quality	Good	13	93	19	100	32	97
		Satisfactory	1	7	0	0	1	3
	Sieving (Cleaning)		14	100	18	95	32	97
	Washing before cooking		14	100	19	100	33	100
	Cooking with lid		14	100	19	100	33	100
Dhal	Quality	Good	12	86	12	63	24	73
		Satisfactory	2	14	7	37	9	27
	Sieving (Cleaning)		14	100	18	95	32	97
	Washing before cooking		14	100	19	100	33	100
	Cooking with lid		14	100	19	100	33	100
Vegetables	Quality	Good	10	71	15	79	25	76
		Satisfactory	4	29	4	21	8	24
	Washing before cooking		14	100	19	100	33	100
	Washing after cutting		0	0	6	32	6	18
	Cooking with lid		14	100	19	100	33	100
	Cutting in to big pieces		0	0	0	0	0	0
No of schools in which GLV was cooked on the day of visit			1	7	4	21	5	15
Hand washing of cooks before cooking the food			14	100	19	100	33	100
Kitchen facility at the school	Open		0	0	2	11	2	6
	Closed		14	100	17	89	31	94
Washing of vessels before cooking			14	100	18	95	32	97
Sufficiency of vessels for cooking			14	100	18	95	32	97
Using Standard vessel for measuring the ration			7	50	14	74	21	64
Type of cooking fuel used	LPG		13	93	17	89	30	91
	Fire wood		1	7	2	11	3	9
Iodised salt used for cooking			14	100	19	100	33	100
Closed container used for storage of Iodised salt			14	100	19	100	33	100
Storage room facility	Having store room		14	100	19	100	33	100
	Having dunnage facility		10	71	15	79	25	76
	Ventilation of store room	Good	10	71	15	79	25	76
		Satisfactory	4	29	4	21	8	24
		Bad	0	0	0	0	0	0
Presence of insects in the store room			0	0	0	0	0	0
Insecticidal measures followed			9	64	12	63	21	64

Annexure

Annex1: List of Districts, blocks covered for the JRM Evaluation

Date	District	Block	Town/Village
21-11-2022	Madurai	Chellampati	Chellampatti

			Valandur
			Pulithevanpatti
			Kuppanampatty
		Madurai East	Mayandipatti
		Melur	Alagarkoil
			A.valayapatti
			Narsingampatti
			Vellapadi
22-11-2022	Madurai	Madurai North	Subramanyapuram
		Madurai East	Sathamanglam
		Madurai South	Singanamthopu
			Simmakkal Madurai-1
		Madurai Corporation	Soth Reli No. 1
		Kallikudi	Kallikudi
		Thirumangalam	Kappalur
			Uchapatti
23-11-2022	Ramnathpuram	Mudugulathoor	Kakoor
			Ramalingapuram
			Mudugulathoor
			Selvanathapuram
			KeelaKannicherri
			Selvanayakapuram
		Paramakudi	Melayakudi
			Telichethanallur
			Tinaikullara
			Paramakudi
			Somanthapuram
			Kalaiyyur
24-11-2022	Ramnathpuram	Kadaladi	Thottiyapatti
			Chikkal
			Kadaladi
		Thirupulani	Shanmugapattanam
			Thirupulani
			Melapudirekeedi
			Alavakarai
25-11-2022	Madurai	Thirupuragundram	Koothiyar Gundu
			Koodal Malai
			Thyagaraja Nagar Colony

Chapter -7

Way Ahead

The 13th Joint Review Mission visited the State of Tamil Nadu during 21st to 29th November 2022 for review of implementation of Pradhan Mantri Poshan Shakti Nirman with defined Terms of Reference. For this purpose the mission visited 49 schools (27 in district Madurai and 22 in district Ramanathapuram).

During the visits, the team collected information as per the Terms of Reference, held discussions with the select stakeholders i.e. students, teachers, Cook-Cum-Helpers, community members, parents of the students and officials at Block, District and State level.

The JRM team has covered 1248 children, 584 children Ramanathapuram and 664 in Madurai district for assessment of nutrition status and perceptions and practices of the select students, parents, teachers, community members and functionaries. Overall prevalence of stunting was about 9.5%, which was higher in Ramanathapuram district (10.5%) as compared to Madurai district (8.6%). The overall prevalence of thinness was 24.5% and was higher in Ramanathapuram district (26.2%) as compared to Madurai district (23.0%).

Also the prevalence of thinness was higher among boys (28.8%) as compared to girls (20.1%). About 7% of girls and 9% of boys were overweight/obese and the prevalence was higher in Ramanathapuram district (9.6%) as compare to Madurai district (7.4%). Clinical signs of nutritional deficiency was observed among 2%; Goitre (0.6%), Bitot's spot (0.3%), Fluorosis (0.6%).

JRM appreciates that the meal under PM POSHAN is providing required amount of calories and proteins.

The team has summarized recommendations which are realistic and applied with a higher objective to accrue maximum benefits out of the resources and efforts mobilized for the scheme. The team reiterates that besides nutritional adequacy of PM POSHAN, nutrition education appropriately utilizing School Nutrition Gardens should serve as an effective tool for the child, teacher and parents.

1. Good Practices observed

- 1) The state is providing egg/banana daily to all students from its own resources.
- 2) State is providing Meal to students of classes 9th and 10th also from its own resources.
- 3) Provision of breakfast in 1,545 schools covering 1.14 lakh children from States own resources.
- 4) Health check-up of school children is being carried out under Rashtriya Bal Swasthya Karyakram (RBSK). In most of the school student health and ophthalmic examination were done under RBSK.
- 5) State is providing time scales pay to cook-cum-helpers.
- 6) Cook-cum-Helpers in most of the visited schools were using aprons and head gears and Hygiene kits.
- 7) School Nutrition (Kitchen) Garden have been setup in most of the visited schools.
- 8) Eating plates were provided for serving meal to children in all schools from State own resources.
- 9) Use of LPG as fuel is observed in all the visited schools.
- 10) Drinking water facility is available in all schools within the school premise and RO system was installed in majority of the school.
- 11) Separate toilets for boys and girls are available in all schools.
- 12) Tasting of meal register is maintained in all schools.
- 13) Double fortified salt and fortified oil are being used in all the visited schools.

2. Areas of Concern

- 1) Some children are not taking meals in few of the visited schools, State Govt may look-in to the reasons in this regard. State may put in place a system to closely monitor these schools and encourage children to take meals.
- 2) State Government needs to ensure that the meals are provided as per the prescribed quantities under the guidelines of PM POSHAN Scheme.
- 3) Monitoring requires attention at all levels right from State to school level. It was noticed at school level that the visiting officials i.e. PA Noon meal, BDOs, Deputy BDOs etc. in most of the cases need to record specific observations on important components of PM POSHAN Scheme.
- 4) Only 40% schools are reporting on Automated Monitoring System.
- 5) Cook cum helpers are not engaged as per prescribed norms of Govt. of India.

- 6) Children in some schools do not like "Keerai Sadam" in menu. The menu may be revised as per the liking of the students.
- 7) The entitlement of children under the Scheme is not displayed at a prominent place in many schools visited and almost all the teachers, organisers, SMC members /chairpersons were not aware of food norms and entitlements of children.
- 8) PM POSHAN logo, Menu and emergency telephone numbers were not displayed at a prominent place in some of the visited schools.

3. Recommendations

- 1) Breakfast provided in some schools is a good initiative may be extended to all.
- 2) State may include Sambar rice for one more day per week as desired by the children of the visited schools in place of "Keerai Sadham".
- 3) Inclusion of curd in the menu may also be explored as desired by all children in schools.
- 4) The entitlement of children, logo, menu and important numbers viz., fire brigade, Police Station, Primary Health Centres etc., may be painted at a prominent place in schools.
- 5) State may engage all the approved cook cum helpers as per the requirement.
- 6) Millets may be included in the menu once in a week.
- 7) Training and sensitization of officials at different levels.
- 8) State may explore the feasibility of provision of Seasonal fruits to school children.
- 9) State may put in place a system to closely monitor the schools where children are not taking meal on regular basis and ensure that all the eligible children are covered under this scheme.
- 10) State should adopt stringent mechanism to ensure that children receive the prescribed quantities of food-grains, pulses, vegetables and other ingredients.
- 11) Repair of existing kitchen-cum-stores to be completed, wherever required.
- 12) The children suffering from Anaemia identified by RBSK may be taken special care and the parents may be made aware.
- 13) The observations on the quality and taste of Meal may be recorded in the taste register by the Parents and community members also.

- 14) Storage bins for safe storage of food grains and other ingredients to all schools.
- 15) School Nutrition (Kitchen) gardens developed by some schools should be replicated in other schools to the extent possible.
- 16) Testing of meals at frequent intervals through accredited labs needs to be done to comply with provisions of Rules in collaboration with FSSAI.
- 17) Social Audit may be carried out in all the districts as per the guidelines.

(Davander Kumar)

(Dr. Anindita Shukla)

(Dr. Samarasimha Reddy)

(G. Vijaya Bhaskar)

(Dr. D Rathna)

(Dr. Indrapal I. Meshram)

Images from the field: Gallery





ANNEXURE-I

SCHOOL WISE DETAILS OF ENROLMENT AND AVERAGE CHILDREN AVAILED HOT COOKED MEAL DURING LAST TEN DAYS

DISTRICTS MADURAI

Sl. No.	School Name	Enrol	Aadhaar	day of visit	day 2	day 3	day 4	day 5	day 6	day 7	Day 8	day 9	day 10	Average	% of Enrol
1	ST.Claret's.P.S.P ulithevanpatti, Chellampatti	120	120	106	81	95	101	107	107	111	104	106	108	106	88
2	Panchayat union primary school Chellampatti	55	55	48	46	44	48	46	50	51	50	49	46	49	89
3	Govt. High School Chellampatti	120	120	83	66	87	85	85	79	75	80	84	78	87	72
4	Panchayat union middle school Valandur chellampatti	86	86	76	73	78	80	84	84	83	80	80	79	81	94
5	Government Kallar Middle School, Kuppanampatti	55	55	52	34	48	50	54	50	55	50	48	55	51	92
6	Panchayat union middle school, uchapatti, thirumangalam	244	244	208	193	171	216	221	223	217	209	216	219	215	88
7	Govt. kallar primary school kappalur, thirumangalam	142	142	116	118	95	103	123	119	122	119	123	121	120	85
8	Thiagarajar mills primary school kappalur, thirumangalam	230	230	218	210	191	204	203	205	205	212	222	214	212	92
9	Thiagarajar mills higher secondary school kappalur, thirumangalam	178	178	162	156	145	163	163	164	157	163	157	160	162	91
10	Panchayat union primary school kallikudi	40	40	38	31	35	35	35	35	35	35	35	35	36	89
11	Panchayat Union Primary School, Perungudi	148	130	132	130	94	136	140	138	128	131	136	94	128	87
12	Government High School, Perungudi, Thirupparankundaram	204	164	166	159	150	164	164	181	183	183	112	112	162	79
13	Madurai Corporation Middle School, Sathamangalam	182	154	140	179	163	156	152	141	162	153	152	152	157	86

14	Corporation Primary School, Aadhimoolam No.2	169	145	116	130	132	142	141	138	151	143	148	147	142	84
15	R.C.High School, East Madurai	600	499	497	526	584	580	589	542	544	544	544	534	549	91
16	R.C. Primary School, East Madurai	566	476	384	334	359	505	551	461	460	563	464	464	466	82
17	Panchayat Union Middle School, A.Valayapatti	225	207	207	203	218	196	213	204	203	208	197	198	207	92
18	Arulmigu Sundararaja Primary School	76	67	55	70	62	70	70	69	66	71	70	75	68	90
19	Arulmigu Sundararaja High School, Melur	88	88	71	72	78	78	78	75	75	61	62	78	75	86
20	Corporation Primary School, Subramaniyapuram, Madurai North	54	54	38	48	50	49	50	53	49	54	46	43	49	91
21	E.V.R.N.Corporation Primary School, South Veli Street, Madurai South	301	256	263	199	247	252	260	264	252	262	261	263	257	85
22	E.V.R.N.Corporation Girls High School	648	648	539	563	559	585	561	562	693	591	425	325	558	86
23	Panchayat Union Primary School, Mayandipatti, Madurai East	74	74	63	64	65	62	61	60	63	64	65	64	65	88
24	Government High School, Mayandipatti, Madurai East	284	284	215	215	165	250	259	241	241	216	220	216	234	82
25	Panchayat Union Primary School, Therku Theru, Melur Block	181	181	148	105	157	167	163	159	147	153	157	148	156	86
26	Panchayat Union Middle School, Vellaripatti	109	107	94	83	102	101	104	96	86	102	99	96	98	90
27	Panchayat Union Primary School, Narasingampatti	74	74	68	64	71	70	70	70	70	67	74	74	71	95

District Rammanathapuram

1	Municipal Primary School, Mani nagar, Paramakudi-Block	25	25	24	23	23	24	24	25	22	23	22	23	23	93
2	R.C.Yadhava Primary School, Paramakudi	296	296	100	100	100	100	100	100	100	100	100	100	100	34
3	Alangara madha Higher Secondary School, Paramakudi	720	665	250	250	250	250	250	250	250	250	250	250	250	35
4	Municipal Primary School, Emaneswaram, Paramakudi	88	88	84	85	85	87	88	85	80	83	83	81	84	96
5	Jeeva Nagar Paramakudi Municipal Primary School,	383	371	374	372	374	379	374	370	361	376	377	372	373	97
6	Municipal Primary School, Emaneswaram, Paramakudi	268	268	251	261	261	261	261	261	261	261	261	261	260	97
7	Municipal Higher Secondary School, Emaneswaram, Paramakudi	285	285	245	243	245	245	242	245	245	242	246	245	244	86
8	Principal Municipal Primary School, Sivananthapuram	240	240	207	208	206	163	208	208	209	208	208	208	203	85
9	Municipal Primary School, Melachatram	111	102	105	102	84	99	108	106	102	101	108	108	102	92
10	Panchayat Union Primary School, Valanthuravai	74	70	67	75	68	58	66	70	72	74	72	74	70	94
11	Government High School, Valanthuravai	86	86	81	81	81	81	81	81	81	81	81	81	81	94
12	Panchayat Union Primary School, Mandapam	193	193	178	183	174	183	171	179	175	167	177	169	176	91
13	Panchayat Union Primary School, Kaizhkalichlrry	50	50	48	49	50	49	49	48	49	49	49	49	49	98
14	Panchayat Union Primary School, Selvanayagapuram	185	185	174	174	175	166	167	175	172	171	167	172	171	93
15	Govt., Higher Secondary School, Selvanayagapuram	167	167	80	80	80	80	80	80	80	80	80	80	80	48
16	Pallivasal Primary School, Selvanayagapuram	305	305	200	200	200	200	200	200	200	200	200	200	200	66

17	Pallivasal Higher Secondary School, Selvanayagapuram	684	684	200	200	200	200	200	200	200	200	200	200	200	29
18	Panchayat Union Primary School, Ramalingapuram	39	38	36	35	36	38	37	39	37	37	37	36	37	94
19	Panchayat Union Primary School, Khakur	71	71	62	64	65	62	65	67	62	70	71	69	66	93
20	Government Middle School, Kadaladi	128	128	120	120	120	120	120	120	120	120	120	120	120	94
21	Panchayat Union Primary School, Sikkal	90	90	77	81	90	90	90	90	90	90	90	90	88	98
22	Panchayat Union Primary School, Thotiapatti, Kadaladi	327	312	293	297	299	300	297	287	292	300	300	274	294	90

ANNEXURE –II

**School wise details of infrastructures facilities
districts Madurai and Ramanathapuram**

Sl.No.	Block Name	School Name	Menu	Logo	Entitlement		Kitchen cum store	Mode of Fuel	Availability KD	Eating plates
Madurai District										
1	Chellampatti	ST.Claret's.P.S.Pulith evanpatti, Chellampatti	No	No	No	No	Yes	Gas	Yes	Bring from Home
2	Chellampatti	Panchayat Union Primary School Chellampatti	Yes	No	No	No	Yes	Gas	Yes	Yes

3	Chellampatti	Govt. High School Chellampatti	Yes	No	No	No	Yes	Gas	Yes	Yes
4	Chellampatti	Panchayat Union Middle school Valandur Chellampatti	Yes	No	No	No	Yes	Gas	Yes	Yes
5	Chellampatti	Government Kallar Middle School, Kuppanampatti	Yes	Yes	No	Yes	Yes	Gas	Yes	Yes
6	Thirumangalam	Panchayat Union Middle School, Uchapatti, Thirumangalam	Yes	Yes	No	Yes	Yes	Gas	Yes	Yes
7	Thirumangalam	Govt., Kallar Primary School Kappalur, Thirumangalam	Yes	Yes	Yes	No	Yes	Gas	Yes	Yes
8	Thirumangalam	Thiagarajar mills primary school kappalur, thirumangalam	Yes	Yes	Yes	No	Yes	Gas	Yes	Yes
9	Thirumangalam	Thiagarajar mills higher secondary school kappalur, thirumangalam	Yes	No	No	No	Yes	Gas	Yes	Yes
10	Kallikudi	Panchayat union primary school kallikudi	Yes	Yes	Yes	Yes	Yes	Gas	Yes	Yes
11	Thirupparankundram	Panchayat Union Primary School, Perungudi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	Thirupparankundram	Government High School, Perungudi, Thirupparankundarm	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
13	Madurai Corporation	Madurai Corporation Middle School, Sathamangalam	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	Madurai Corporation	Corporation Primary School, Aadhimoolam No.2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	Madurai East	R.C. High School, East Madurai	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	Madurai East	R.C. Primary School, East Madurai	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	Melur	Panchayat Union Middle School, A.Valayapatti	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	Melur	Arulmigu Sundararaja Primary School	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	Melur	Arulmigu Sundararaja High School, Melur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

20	Madurai North	Corporation Primary School, Subramaniyapuram, Madurai North	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	Madurai North	E.V.R.N.Corporation Primary School, South Veli Street, Madurai South	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	Madurai North	E.V.R.N.Corporation Girls High School	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	Madurai East	Panchayat Union Primary School, Mayandipatti, Madurai East	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	Madurai East	Government High School, Mayandipatti, Madurai East	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	Melur	Panchayat Union Primary School, Therku Theru, Melur Block	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	Melur	Panchayat Union Middle School, Vellaripatti	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	Melur	Panchayat Union Primary School, Narasingampatti	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

RAMANATHAPURAM

1	Paramakudi	Municipal Primary School, Mani nagar, Paramakudi-Block	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Paramakudi	R.C.Yadhava Primary School, Paramakudi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Paramakudi	Alangara madha Higher Secondary School, Paramakudi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Paramakudi	Municipal Primary School, Emaneswaram, Paramakudi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Paramakudi	Jeeva Nagar Paramakudi Municipal Primary School,	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	Paramakudi	Municipal Primary School, Emaneswaram, Paramakudi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7	Paramakudi	Municipal Higher Secondary School, Emaneswaram, Paramakudi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	Paramakudi	Principal Municipal Primary School, Sivananthapuram	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	Paramakudi	Municipal Primary School, Melachatram	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	Mandapam	Panchayat Union Primary School, Valantharavai	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	Mandapam	Government High School, Valantharavai	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	Mandapam	Panchayat Union Primary School, Mandapam	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	Mudhukulathoor	Panchayat Union Primary School, Kaizhkalichlrry	Yes	Yes	Yes	Yes	Yes	Gas	Yes	Yes
14	Mudhukulathoor	Panchayat Union Primary School, Selvanayagapuram	Yes	No	No	Yes	Yes	Gas	Yes	Yes
15	Mudhukulathoor	Govt., Higher Secondary School, Selvanayagapuram	Yes	No	No	No	Yes	Gas	Yes	Yes
16	Mudhukulathoor	Pallivasal Primary School, Selvanayagapuram	Yes	No	No	Yes	Yes	Gas	Yes	Yes
17	Mudhukulathoor	Pallivasal Higher Secondary School, Selvanayagapuram	No	No	No	No	Yes	Gas	Yes	Bring from Home
18	Mudhukulathoor	Panchayat Union Primary School, Ramalingapuram	No	No	No	Yes	Yes	Gas	Yes	Yes
19	Mudhukulathoor	Panchayar Union Primary School, Khakur	Yes	Yes	Yes	Yes	Yes	Gas	Yes	Yes
20	Kadaladi	Government Middle School, Kadaladi	Yes	No	No	No	Yes	Gas	Yes	Yes
21	Kadaladi	Panchayat Union Primary School, Sikkal	Yes	No	No	Yes	Yes	Gas	Yes	Yes
22	Kadaladi	Panchayat Union Primary School, Thotiapatti, Kadaladi	Yes	Yes	Yes	Yes	Yes	Gas	Yes	Yes

Sl.No.	Block Name	School Name	Toilet Facility		Water Source		CCH engaged	Training of CCH	Mode of payment of CCH	No.of months delay of payment to CCH
			Boy	Girl	Tap	Hand Pump				
MADURAI DISTRICT										
1	Chellampatti	ST.Claret's.P.S.Pulithe vanpatti, Chellampatti	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
2	Chellampatti	Panchayat Union Primary School Chellampatti	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
3	Chellampatti	Govt. High School Chellampatti	Yes	Yes	Yes	-	1	No	E-Transfer	Timely
4	Chellampatti	Panchayat Union Middle school Valandur Chellampatti	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
5	Chellampatti	Government Kallar Middle School, Kuppanampatti	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
6	Thirumangalam	Panchayat Union Middle School, Uchapatti, Thirumangalam	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
7	Thirumangalam	Govt., Kallar Primary School Kappalur, Thirumangalam	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
8	Thirumangalam	Thiagarajar mills primary school kappalur, thirumangalam	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
9	Thirumangalam	Thiagarajar mills higher secondary school kappalur, thirumangalam	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
10	Kallikudi	Panchayat union primary school kallikudi	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
11	Thirupparankundram	Panchayat Union Primary School, Perungudi	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
12	Thirupparankundram	Government High School, Perungudi, Thirupparankundram	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
13	Madurai Corporation	Madurai Corporation Middle School, Sathamangalam	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
14	Madurai Corporation	Corporation Primary School, Aadhimoolam No.2	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely

15	Madurai East	R.C. High School, East Madurai	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
16	Madurai East	R.C. Primary School, East Madurai	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
17	Melur	Panchayat Union Middle School, A.Valayapatti	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
18	Melur	Arulmigu Sundararaja Primary School	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
19	Melur	Arulmigu Sundararaja High School, Melur	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
20	Madurai North	Corporation Primary School, Subramaniyapuram, Madurai North	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
21	Madurai North	E.V.R.N.Corporation Primary School, South Veli Street, Madurai South	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
22	Madurai North	E.V.R.N.Corporation Girls High School	Yes	Yes	Yes	-	4	Yes	E-Transfer	Timely
23	Madurai East	Panchayat Union Primary School, Mayandipatti, Madurai East	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
24	Madurai East	Government High School, Mayandipatti, Madurai East	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
25	Melur	Panchayat Union Primary School, Therku Theru, Melur Block	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
26	Melur	Panchayat Union Middle School, Vellaripatti	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
27	Melur	Panchayat Union Primary School, Narasingampatti	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely

RAMANATHAPURAM

1	Paramakudi	Municipal Primary School, Mani nagar, Paramakudi-Block	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
2	Paramakudi	R.C.Yadhava Primary School, Paramakudi	Yes	Yes	Yes	-	4	Yes	E-Transfer	Timely
3	Paramakudi	Alangara madha Higher Secondary School, Paramakudi	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely

4	Paramakudi	Municipal Primary School, Emaneswaram, Paramakudi	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
5	Paramakudi	Jeeva Nagar Paramakudi Municipal Primary School,	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
6	Paramakudi	Municipal Primary School, Emaneswaram, Paramakudi	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
7	Paramakudi	Municipal Higher Secondary School, Emaneswaram, Paramakudi	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
8	Paramakudi	Principal Municipal Primary School, Sivananthapuram	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
9	Paramakudi	Municipal Primary School, Melachatram	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
10	Mandapam	Panchayat Union Primary School, Valantharavai	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
11	Mandapam	Government High School, Valantharavai	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
12	Mandapam	Panchayat Union Primary School, Mandapam	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
13	Mudhukulathoor	Panchayat Union Primary School, Kaizhkalichirry	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
14	Mudhukulathoor	Panchayat Union Primary School, Selvanayagapuram	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
15	Mudhukulathoor	Govt., Higher Secondary School, Selvanayagapuram	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely
16	Mudhukulathoor	Pallivasal Primary School, Selvanayagapuram	Yes	Yes	Yes	-	2	No	E-Transfer	Timely
17	Mudhukulathoor	Pallivasal Higher Secondary School, Selvanayagapuram	Yes	Yes	Yes	-	3	No	E-Transfer	Timely
18	Mudhukulathoor	Panchayat Union Primary School, Ramalingapuram	Yes	Yes	Yes	-	2	No	E-Transfer	Timely
19	Mudhukulathoor	Panchayat Union Primary School, Khakur	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
20	Kadaladi	Government Middle School, Kadaladi	Yes	Yes	Yes	-	2	No	E-Transfer	Timely

21	Kadaladi	Panchayat Union Primary School, Sikkal	Yes	Yes	Yes	-	2	Yes	E-Transfer	Timely
22	Kadaladi	Panchayat Union Primary School, Thotiapatti, Kadaladi	Yes	Yes	Yes	-	3	Yes	E-Transfer	Timely

Sl.No.	Block Name	School Name	Inspection	School Health Programme	Emergency plan	Tasting Meal register	Availability of SNG	Social Audit conducted	Provision of Tithi Bhojan	
									Full meal	Additional food/fruit items
MADURAI DISTRICT										
1	Chellampatti	ST.Claret's.P.S.Pulithe vanpatti, Chellampatti	Yes	Yes	Yes	No	Yes	No	-	Yes
2	Chellampatti	Panchayat Union Primary School Chellampatti	Yes	Yes	Yes	Yes	No	No	-	Yes
3	Chellampatti	Govt. High School Chellampatti	Yes	Yes	Yes	No	No	No	Yes	Yes
4	Chellampatti	Panchayat Union Middle school Valandur Chellampatti	Yes	Yes	Yes	Yes	Yes	No	No	No
5	Chellampatti	Government Kallar Middle School, Kuppanampatti	Yes	Yes	No	No	No	No	Yes	Yes
6	Thirumangalam	Panchayat Union Middle School, Uchapatti, Thirumangalam	Yes	Yes	Yes	Yes	No	No	Yes	Yes
7	Thirumangalam	Govt., Kallar Primary School Kappalur, Thirumangalam	Yes	Yes	No	Yes	No	No	No	Yes
8	Thirumangalam	Thiagarajar mills primary school kappalur, thirumangalam	Yes	Yes	Yes	Yes	No	No	Yes	Yes
9	Thirumangalam	Thiagarajar mills higher secondary school kappalur, thirumangalam	Yes	Yes	Yes	Yes	No	No	No	No
10	Kallikudi	Panchayat union primary school kallikudi	Yes	Yes	No	Yes	Yes	No	Yes	Yes
11	Thirupparankundram	Panchayat Union Primary School, Perungudi	Yes	Yes	No	Yes	Yes	No	Yes	No

12	Thirupparan kundram	Government High School, Perungudi, Thirupparankundarm	Yes	Yes	No	Yes	Yes	No	Yes	No
13	Madurai Corporation	Madurai Corporation Middle School, Sathamangalam	Yes	Yes	No	Yes	Yes	No	Yes	No
14	Madurai Corporation	Corporation Primary School, Aadhimoolam No.2	Yes	Yes	No	Yes	Yes	No	Yes	No
15	Madurai East	R.C. High School, East Madurai	Yes	Yes	No	Yes	Yes	No	Yes	No
16	Madurai East	R.C. Primary School, East Madurai	Yes	Yes	No	Yes	Yes	No	Yes	No
17	Melur	Panchayat Union Middle School, A.Valayapatti	Yes	Yes	No	Yes	Yes	No	Yes	No
18	Melur	Arulmigu Sundararaja Primary School	Yes	Yes	No	Yes	Yes	No	Yes	No
19	Melur	Arulmigu Sundararaja High School, Melur	Yes	Yes	No	Yes	Yes	No	Yes	No
20	Madurai North	Corporation Primary School, Subramaniyapuram, Madurai North	Yes	Yes	No	Yes	Yes	No	Yes	No
21	Madurai North	E.V.R.N.Corporation Primary School, South Veli Street, Madurai South	Yes	Yes	No	Yes	Yes	No	Yes	No
22	Madurai North	E.V.R.N.Corporation Girls High School	Yes	Yes	No	Yes	Yes	No	Yes	No
23	Madurai East	Panchayat Union Primary School, Mayandipatti, Madurai East	Yes	Yes	No	Yes	Yes	No	Yes	No
24	Madurai East	Government High School, Mayandipatti, Madurai East	Yes	Yes	No	Yes	Yes	No	Yes	No
25	Melur	Panchayat Union Primary School, Therku Theru, Melur Block	Yes	Yes	No	Yes	Yes	No	Yes	No
26	Melur	Panchayat Union Middle School, Vellaripatti	Yes	Yes	No	Yes	Yes	No	Yes	No
27	Melur	Panchayat Union Primary School, Narasingampatti	Yes	Yes	No	Yes	Yes	No	Yes	No

RAMANATHAPURAM

1	Paramakudi	Municipal Primary School, Mani nagar, Paramakudi-Block	Yes	Yes	No	Yes	Yes	No	Yes	No
2	Paramakudi	R.C.Yadhava Primary School, Paramakudi	Yes	Yes	No	Yes	Yes	No	Yes	No
3	Paramakudi	Alangara madha Higher Secondary School, Paramakudi	Yes	Yes	No	Yes	Yes	No	Yes	No
4	Paramakudi	Municipal Primary School, Emaneswaram, Paramakudi	Yes	Yes	No	Yes	Yes	No	Yes	No
5	Paramakudi	Jeeva Nagar Paramakudi Municipal Primary School,	Yes	Yes	No	Yes	Yes	No	Yes	No
6	Paramakudi	Municipal Primary School, Emaneswaram, Paramakudi	Yes	Yes	No	Yes	Yes	No	Yes	No
7	Paramakudi	Municipal Higher Secondary School, Emaneswaram, Paramakudi	Yes	Yes	No	Yes	Yes	No	Yes	No
8	Paramakudi	Principal Municipal Primary School, Sivananthapuram	Yes	Yes	No	Yes	Yes	No	Yes	No
9	Paramakudi	Municipal Primary School, Melachatram	Yes	Yes	No	Yes	Yes	No	Yes	No
10	Mandapam	Panchayat Union Primary School, Valantharavai	Yes	Yes	No	Yes	Yes	No	Yes	No
11	Mandapam	Government High School, Valantharavai	Yes	Yes	No	Yes	Yes	No	Yes	No
12	Mandapam	Panchayat Union Primary School, Mandapam	Yes	Yes	No	Yes	Yes	No	Yes	No
13	Mudhukulathoor	Panchayat Union Primary School, Kaizhkalichlrry	Yes	Yes	Yes	Yes	Yes	No	No	Yes
14	Mudhukulathoor	Panchayat Union Primary School, Selvanayagapuram	Yes	Yes	Yes	Yes	Yes	No	No	Yes
15	Mudhukulathoor	Govt., Higher Secondary School, Selvanayagapuram	Yes	Yes	Yes	Yes	No	No	No	No
16	Mudhukulathoor	Pallivasal Primary School, Selvanayagapuram	Yes	Yes	No	Yes	No	No	No	Yes
17	Mudhukulathoor	Pallivasal Higher Secondary School, Selvanayagapuram	Yes	Yes	No	No	No	No	No	NO

18	Mudhukulathoor	Panchayat Union Primary School, Ramalingapuram	Yes	Yes	Yes	Yes	Yes	No	No	Yes
19	Mudhukulathoor	Panchayat Union Primary School, Khakur	Yes	Yes	No	Yes	Yes	No	Yes	Yes
20	Kadaladi	Government Middle School, Kadaladi	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
21	Kadaladi	Panchayat Union Primary School, Sikkal	Yes	Yes	No	Yes	No	No	No	Yes
22	Kadaladi	Panchayat Union Primary School, Thotiapatti, Kadaladi	Yes	No	Yes	No	Yes	No	No	Yes

List of officials met /accompanied JRM Team during the visit from
21.11.2022 to 29.11.2022

I. State Level

S.No	Name (Thiru / Tmt)	Designation
1	Dr. Shambhu Kallolikal	Additional Chief Secretary, Govt. of Tamil Nadu
2	D. Rathna, I.A.S.,	Director of Social Welfare & WE
3	Dr. S. Revathy	Joint Director (NMP)
4	G. Thivya Prabha	Assistant Director (NMP)
5	A. Narayanan	Assistant Director (Retd,)
6	K. Sreenivasan	Assistant Director (M) (Retd,)
7	S. Jeya kumar	System Manager
8	M. Anthony Ammal	Data Entry Operator
9	A. Prabhakaran	Data Entry Operator
10	A. Prema	Assistant
11	K. Ravichandran	Assistant

Tmt. Chitra, AD (Training) Retd., Superintendents and other officials of Directorate of Social Welfare & Women Empowerment Department.

II. District Level

i) Madurai

Tmt. S. Uma Maheswari, Personal Assistant (NMP) to District Collector, Selvi. P. Rajammal, Assistant Accounts Officer, concerned Block Development Officers and Other Officials.

ii) Ramnathapuram

Tmt. J. Roja, Personal Assistant (NMP) to District Collector, K. Kalimuthu, Assistant Accounts Officer, concerned Block Development Officers and Other Officials.

