



Fifth joint review Mission report : bihar : Report



**Ministry of Human
Resource Development**

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Government of India

Ministry of Human Resource Development

Department of School Education & Literacy



मध्याह्न भोजन योजना
Mid Day Meal Scheme

Report of 5th Joint Review Mission on
Mid Day Meal Scheme

Bihar

(21th August – 30st August, 2013)

Acknowledgement

The Joint Review Mission Team for the Fifth Review Mission – Bihar 2013-14 would like to thank the Government of Bihar for the support rendered in facilitating the Team to undertake the Review successfully.

The members of the Mission acknowledge and value the support and hospitality extended by the Secretary, Education; to the teachers working in the remote villages; the State office of the Mid Day Meal Scheme and the kitchen staff working in the MDM 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 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 Bihar in strengthening the implementation of the Mid Day Meal Scheme in schools and ensure that every school going child avails its right to nutritious food in the State.

The JRM Team

August 2013

Chapter – 1 Executive Summary

1.1 Background

1.1.1 Background of MDM –A Brief Note

In a bid to boost the UEE (Universalization of Elementary Education) by increasing enrollment and attendance, coupled with reduction of absenteeism and simultaneously improve the nutritional status of children in primary classes; National Programme of Nutritional Support to Primary Education (NP NSPE) , popularly known as the Mid Day Meal Scheme was launched on 15th August 1995.

Subsequent to the landmark intervention by the Supreme Court of India, a directive was issued making it mandatory for the state governments to provide cooked meals instead of dry rations.

The Mid- Day Meal (MDM) Scheme is a flagship program of the Government of India. It has the distinction of being the largest school feeding program in the world reaching out to about 10.68 Crore children in 12.12 lakh primary and upper primary schools (Government, Government Aided and Local bodies), Education Guarantee Scheme (EGS) / Alternative Innovative Education (AIE) centres and Madarsa and Maqtabas supported under Sarva Shiksha Abhiyan (SSA) as well as the National Child Labour Project (NCLP) schools. In drought-affected areas MDM is served during summer vacation also.

1.1.2 Background of JRM - A Brief Note

A program of the scale and magnitude of Mid Day Meal Scheme requires close monitoring and evaluation at all levels. In 2010, the Ministry of Human Resource Development, Govt. of India, decided to review implementation of the program in all its aspects through the Review Missions, which are also to provide suggestions for improvement.

1.1.3 Brief on Previous JRM - Findings, Recommendation

The First Review Mission visited districts Gaya and Nalanda in Bihar during 14th to 20th February, 2010. The major findings were:

- Inspection registers were not found in most of the schools.
- Lack of awareness among district and block personnel on the norms and guidelines of MDM and their roles.
- Community involvement was found to be missing in all schools.
- The attitude of teachers and government officials needs to be more sensitive towards community needs.
- Cleanliness and sanitation was an issue in majority of schools.
- All schools had good building except GMS Manpura, Gaya (school run in double shift) and NPS Pali, Gaya.
- Double unit toilet was available in all schools but its maintenance was poor.
- Water facility was available in all schools except GPS Kanya, Attri Gaya and NPS Pali, Gaya.
- Hand washing facility was not available in 50% of schools.

Suggestions of the JRM

- The cooks and helpers of the schools need to be oriented on the best methods of cooking in less time and less wastage of food grains.
- Plans for community awareness to be designed to ensure better community participation
- Involvement of the teachers can be minimised if these local cooks are empowered enough to lend hands in purchasing vegetables and other condiments required for daily MDM preparation. So, that teacher can actually concentrate on teaching learning activities.
- Inspection Rosters are to be prepared for every school to ensure that all Primary and Upper Primary Schools and EGS/AIE centers are inspected at least once every three months.
- Capacity development plan for BRP & DRP.
- Duties and responsibilities of all DRP and BRP needs to be more specific.
- Setting up of a grievance redressal system.

- Monitoring system needs to be strengthened by providing extra facility.
- Monitoring of food grain distribution chain to ensure quality standards.
- The new system put in place by the state needs to be followed up and strengthened.

1.2 Key observations of JRM

Joint Review Mission team visited two districts of Bihar namely Vaishali and Jehanabad. 14 schools in Jehanabad and 15 schools and 3 centralised kitchens in Vaishali were visited. Height, weight and other clinical information was recorded for 561 children in the above mentioned number of schools. The major observations are as given below:

- In district Jehanabad, 28.98% and 18.96% of the total children were underweight and stunted, respectively.
- The incidence of underweight and stunting was higher in district Vaishali as compared to Jehanabad.
- The percentage of underweight children was 35.56% among boys and 42.65% in girls and stunting was 20.74% in boys and 26.47% in girls.
- In district Vaishali, the mean weight of 10, 11 and 14 year old girls was less than 75% of the WHO reference standards and is a matter of concern.
- The deficiency symptoms of protein, vitamin A, B complex and iron deficiency anemia were observed in the surveyed children.
- Pale conjunctiva and skin was observed in 10.33% and 1.5% of the children respectively, from district Vaishali. The prevalence of iron deficiency symptoms was comparatively higher in Jehanabad district, where 23.71% of the children had pale conjunctiva while 6.87% had pale skin.
- Though clinical signs were present in a small percentage, it is assumed that the sub-clinical iron deficiency may be prevalent in this region. Lack of variety in vegetables is the main reason for nutritional deficiencies. Clinical symptoms also showed a high prevalence of worm infestation that lowers down the absorption of food and its micronutrients.
- Poor quality of monitoring.
- Hygiene and sanitation facilities.

- IFA tablets, Vitamin-A dosage, de-worming tablets not distributed during 2012-13. Very Poor convergence with School Health Programme.
- Inadequate number of cook-cum-helpers engaged in some of the schools.

1.3 Major Recommendations

- Community mobilisation,
- The meals should be made more nutrients dense and nutritionally balanced by using channa/rajmah more frequently and improving the consistency. Inclusion of higher amounts of non tuber vegetables, especially the green leafy ones, is recommended.
- The JRM team recommended that to improve their nutritional status, the undernourished children should be identified by periodical health checkups, dewormed and be given special care during MDM.
- Drinking water should be tested for any type of biological contamination and remedial purification be done accordingly.
- Engagement of cook-cum-helpers as per norm,
- Strengthening the monitoring mechanism,
- Cleanliness of the toilets,
- Training of cook-cum-helpers,
- Laboratory testing of cooked meal
- Convergence with School Health Programme,

Chapter – 2 Joint Review Mission

2.1 The JRM Context

Nutrition and health are the pre-requisites for human resource development. Our planners have been aware of these vital inputs and enshrined it in article 47 of the constitution. "The State shall regard raising the level of nutrition and standard of living of its people and improvement in public health among its primary duties."

Malnutrition in children is the consequence of a range of factors that are often related to poor food quality, insufficient food intake, and severe and repeated infectious diseases, or frequently some combinations of the three. These conditions, in turn, are closely linked to the overall standard of living and whether a population can meet its basic needs, such as access to food, housing and health care. Nutrition is directly linked to human resource development, productivity and ultimately to the nation's growth. Malnutrition on the other hand is a complex phenomenon. It is both the cause and effect of poverty and ill health: and follows a cyclical, inter-generational pattern. It is inextricably linked with illiteracy, especially female illiteracy, lack of safe drinking water, sanitation, ignorance, lack of awareness and ill health. It creates its own cycle within the large cycle of poverty. Malnutrition adversely affects UEE. Even if a malnourished child does attend school, he/she finds it difficult to concentrate on and participate in the learning activities in school. Unable to cope, the child would very often drop out of school.

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

A programme of the scale and magnitude of Mid Day Meal requires close monitoring and evaluation at all levels. In 2010, the Ministry of Human Resource Development, Govt. of India, decided to review implementation of the programme in all its aspects through the Review Missions, comprising of experts from various areas and representatives of MHRD and State Governments. The Review Mission visits

schools in 2 districts in the State and presents their report to State and Central government.

2.1.1 Terms of Reference of the JRM

The Terms of Reference for the Review Mission were as under:

- (i) Review the system of fund flow from State Government to Schools/cooking agency and the time taken in this process.
- (ii) Review the management and monitoring of the scheme from State to School level.
- (iii) Review the implementation of the scheme with reference to availability of food grains, quality of MDM, regularity in serving MDM as per approved norms and mode of cooking.
- (iv) Role of Teachers
- (v) Convergence with School Health Program (SHP) for supplementation of micronutrients and health check-ups and supply of spectacles to children suffering from refractive errors.
- (vi) Creation of capital assets through kitchen-cum-store/kitchen devices
- (vii) Appointment of Cook-cum-Helpers for preparation and serving of meal to the children
- (viii) Availability of dedicated staff for MDM at various levels
- (ix) Review the maintenance of records at the level of school/cooking agency.
- (x) Review the availability of infrastructure, its adequacy and source of funding.
- (xi) Review of payment of cost of food grains to FCI by the districts
- (xii) Review the involvement of NGOs/Trust/Centralized kitchens by States/UTs Government in implementation of the Scheme.
- (xiii) Management Information System (MIS) from school to block, district and State Level to collect the information and disseminate it to other stakeholders
- (xiv) Assess the involvement of Community' in implementation of MDM scheme
- (xv) Review of status of MIS integration with IVRS for monitoring of the Scheme

- (xvi) Review of the status of tasting of the meal by at least one teacher.
- (xvii) Review of status of Safe storage and proper supply of ingredients to schools.
- (xviii) Review of the status of Awareness about Mid- Day Meal Scheme.
- (xix) Review of status of convening of Monitoring Committee under the Chairmanship of Member of Parliament
- (xx) Review of the convening of regular review meetings at District level.
- (xxi) Review of the status of testing of food samples by reputed institute.
- (xxii) Review of the status of Emergency Medical Plan

Terms of Reference for Nutritional Status

1. To assess the anthropometric measurements of a sample of children availing MDM
 - i. Height
 - ii. Weight
 - iii. Mid arm Circumference
2. To Calculate the Body Mass Index (BMI) on the basis of measurement of height and weight.
3. To identify the children who are undernourished and over nourished.
4. To review the quality and quantity of the served MDM.
5. To review the satisfaction of the children parents and community on the served meal under MDM in respect of quality and quantity.
6. To suggest some nutritionally balanced region specific recipes.
7. To assess the ways for better convergence with School Health Program

2.2 Composition of JRM

1. **Dr Neelam Grewal**, Director, Directorate of Research on Women in Agriculture, Bhubaneswar, Odisha (Mission Leader)

2. **Shri Sanjay Singh, OSD, Bihar**
3. **Shri Rajiv Kumar**, Under Secretary, Ministry of Human Resource Development Government of India,
4. **Dr (Mrs) Jaswinder Kaur Brar**, Associate Professor, Dept. of Food and Nutrition, College of Home Science, Punjab Agricultural University
5. **Mr Rupesh Kumar**, Advisor to the Commissioners of Supreme Court,
6. **Prof Ajay Kumar Jha**, Nodal Officer, AN Jha Institute of Social Studies, Patna, Monitoring Institution for Bihar
7. **Dr Anindita Shukla**, Consultant, NSG-MDM, Ed.CIL.
8. **Shri Bhupendra Kumar**, Consultant, NSG-MDM, Ed.CIL.

Co-Team Members

- 1- **Dr Kushagra Joshi**, Scientist, DRWA
- 2- **Ms Preetinder Kaur**, Research Assistant, PAU
- 3- **Ms Karmjeet Kaur**, Research Assistant, PAU
- 4- **Ms Ravneet Kaur**, Research Assistant

2.3 Methodology

2.3.1 Planning & preparation for the JRM

A detailed schedule of activities for the JRM was planned and prepared for the field visits and meetings with the officials at different levels. The team was sub divided in two teams for larger coverage of schools and children. The team visited 14 schools in district Jehanabad and 15 Schools and 3 centralised kitchen in district Vaishali.

2.3.2 Visit schedule

Date	Activities
21/08/2013	Departure for Patna
22	Field visit : District Jehanabad

	Meeting with State officials
	Briefing meeting with District officials (District Jehanabad)
23	Field visit : District Jehanabad Briefing by Principle Secretary
24	Field visit : District Jehanabad
25	Draft report writing
26	Field visit : District Vaishali
27	Field visit : District Vaishali
	Meeting with District Magistrate
28	Report writing
29	Report writing
30	Presentation to Principle Secretary, debriefing by the RM team
31/08/2013	Departure from Patna

2.3.3 Methodology

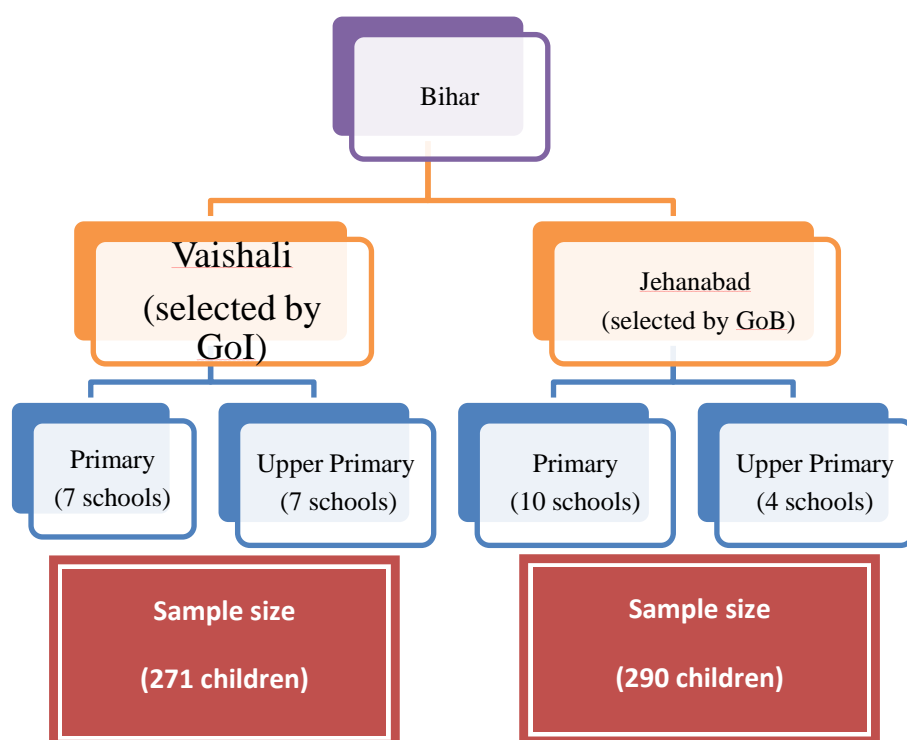
i. Selection of the districts

Two districts of Bihar namely Vaishali and Jehanabad, were selected for the visit of JRM. District Vaishali was selected by the Govt. of India on the basis of performance of the Scheme during the last year and the second district i.e. Jehanabad was selected by the State Govt.

ii. Sampling Design

The Review Mission followed a multistage sampling design to capture the intricacies involved in the implementation of the programme. From each of the two districts 4-5 blocks were selected and from each block 2-4 schools were selected randomly. From Vaishali district, blocks and schools were selected purposively so as to cover the schools where MDM is served through centralized kitchen as well as the ones where MI as the once were MDM is served by the school based kitchens.

A total sample of 561 children, 279 Girls and 282 Boys were selected for the study. Instead of selecting a large sample, the review mission emphasized for a greater in depth study to see the details in their entirety.



Multi Stage Sampling Design

iii. Information collected from schools (Primary Data)

Primary data was collected from the schools through a detailed schedule. The data on display of information regarding MDM, the number of children enrolled and the number of children attending the school and the number of children availing MDM was gathered. Information on the infrastructure facilities, community participation, tasting of meal by teachers, engagement of cook-cum-helpers, utilisation of foodgrains and funds etc. was also collected. For nutritional assessment data was collected on height, weight, food pattern and clinical symptoms of micronutrient deficiency.

a. The documents available with the implementing agencies were carefully studied and analyzed. Detailed discussions were held with the State, District, block and School level functionaries.

b. **Interview with stakeholders, observations, focused group discussions and record based inquiry** methodology was followed to capture the information on the performance of the scheme during the visits.

c. **Anthropometric measurements**

Nutrition anthropometry is one of the most important tool used for assessing the health and nutrition status of a population. The physical dimensions of the body are influenced by nutrition/ during the growing period of school age. Height and weight are the most commonly used anthropometric measurements. The related indices generally used to assess nutritional status of the children are height for age, weight for age and body mass index for age which are age and gender dependent. The height and weight of selected children was measured using standard methods (Jelliffe, 1966).

Height was measured using an anthropometric rod. It was recorded to the nearest ± 0.1 centimeters. The height was taken with the child standing erect on a flat surface without shoes, with his/her arms hanging naturally at the sides. The child held his head in a comfortably erect position, with the lower border of the eye in the same horizontal plane as the external auditory meatus. A scale was held over the child's head without much pressure in the sagittal plane (central part of head). The height was then converted to meters for calculating the body mass index (BMI).

The weight of children was taken on spring based electronic balance having an accuracy of ± 100 g. In order to obtain accurate results, an area in the classroom was selected which was away from the wall. The weighing scale was placed on a flat and even surface. Since it was not feasible, to take weight with minimal clothing, it was taken while the child was wearing the school uniform but without shoes. Each child was requested to stand straight i.e. without any support and not move while the reading was being noted.

The Body Mass Index (BMI) or Quetlet's Index is a statistical measure of the weight of a person scaled according to height (WHO, 2003). BMI is a reliable indicator of body fatness for most children. The Body Mass Index (BMI) of the selected children was calculated using the following equation given by Garrow (1981):

$$\text{BMI} = \text{Weight} / \text{Height}^2$$

where the weight is in kilogram and the height is in meters.

The height, weight and BMI were analyzed for Z - scores using WHO Global Database on Child Growth and Malnutrition (WHO, 2006).

Based on their Weight for Age (WAZ) and Height for Age (HAZ), the selected children were classified into normal (-2SD to +1SD), undernourished (< -2SD) and overweight (+1SD to +3SD) categories. Similarly, based on their BMI Z-scores, the children were classified into the following categories :

Table : Nutritional Status Classification of Children According to Body Mass Index (WHO, 2006)

Categories of BMI	Z Scores
Normal	-2SD to +1SD
Moderately undernourished	-2SD to -3SD
Severely undernourished	< -3SD
Overweight	+1SD to < +3SD
Obese	≥ +3SD

From the full Body Data, commonly used under nutrition indicators viz underweight, stunting and thinness have been employed to evaluate nutritional status of the children. Thus, in the current analysis WAZ, HAZ & BAZ indices have been used.

Underweight: A child, who is 15-20% below the normal weight for his age and height, is classified as underweight. Underweight reveals low body mass relative to chronological age which is influenced by both, height and weight of the child.

Stunting: According to World Health Organization stunting refers to insufficient gain of height relative to age (WHO, 1995). It is an indicator of chronic under nutrition and is the result of extended periods of inadequate food intake or increased morbidity or a combination of both.

Thinness: It is an indicator of acute under nutrition, the result of most recent food deprivation or illness (Bose et al, 2008). It is defined as body weight significantly below the weight expected of a child of same length or height.

IV. Evaluation of MDM

- **Serving Size of Mid Day Meals:** The serving size of MDM on the day of the visit was observed to determine the quantity of energy and nutrients present. The usual portion size being served to children on the day of visit was weighed on a spring balance having an accuracy of +10 grams. In order to minimize variation, two serving portions of each dish were weighed separately. The weight of plate or tiffin box etc. was subtracted from the total weight.
- **Sensory Evaluation of MDM:** The colour, texture, taste, flavor and mouth feel determine the acceptability of a meal. The mid day meal being served on the day of visit was evaluated for the sensory attributes such as consistency of dal/Khichdi. The JRM members also conducted a qualitative sensory evaluation as and when possible.

Chapter – 3 Mid Day Meal in Bihar

3.1 Historical Perspectives of MDM implementation in the State (in brief)

The Mid-Day Meal (MDM) programme is being implemented in the State since January 2005, after the notification by the State Government on 18th December 2004 to implement the MDM in all primary schools in Bihar. Earlier in 2003-04, the State had experimented with the provision of cooked meal in about 2531 schools, spread over 30 blocks in 10 districts. It was later scaled up to all of 15,000 schools in these districts, covering about 30 lakh children. Further, the programme has been implemented in all the 38 districts of Bihar since the year 2007-08.

3.2 State Profile

Bihar is located in the eastern part of the country (between 83° 30' to 88° 00' longitude). Bihar is the 12th largest State and 3rd most populated State in India. It is an entirely land-locked state, although the outlet to the sea through the port of Kolkata is not far away. Bihar lies mid-way between the humid West Bengal in the east and the sub humid Uttar Pradesh in the west, which provides it with a transitional position in respect of climate, economy and culture. It is bounded by Nepal in the north and by Jharkhand in the south. The Bihar plain is divided into two unequal halves by the river Ganga which flows through the middle from west to east.

Bihar became the epicenter of power, culture and learning under the rule of some of the greatest emperors of India, namely Samudragupta, Chandragupta Maurya, Vikramaditya and Asoka. It was also home to the two great centers of learning at that time, Vikramshila and Nalanda University. For 1000 years, ancient Bihar known as Magadha played a pivotal role in the field of power, education and culture. The first Indian empire called the Mauryan Empire originated in Magadha in 325 B.C. and its capital city was Pataliputra (now Patna).

Post independence the economy of Bihar was never as good as it is today. Recent statistics on state income has revealed that there has been a comprehensive improvement in the economy of Bihar. The state has witnessed a high growth rate at 11.95 percent during the Eleventh Plan period (2007-12). The investment pattern also shows a massive upsurge - the average annual plan size was Rs. 4,200 crore during the Tenth Plan period (2002-07) which has become more than Rs. 16,200 crore during the Eleventh Plan period. The estimated GSDP of Bihar at current prices in 2011-12 is Rs. 2.53 lakh crore which raises the per capita income to Rs. 25,653. Agriculture and Animal Husbandry sector in Bihar was a mere 2.99 percent in 2002-07; that has significantly climbed to 5.93 percent during 2007-12. This fact needs special mention as 90 percent of the state's population depends upon agriculture for their livelihood.

The per capita income of Bihar was Rs. 11,615 (i.e. 32.4 percent of all India average) in 2007-08. However, during 2011-12 this ratio has improved to 42.07 percent. Thus, a consistent growth rate has to be maintained to close the gap between the per capita income of Bihar and that of India. The problem of low per capita income in Bihar is alleviated by considerable disparity across districts in terms of their per capita income.

District Map of Bihar



As per details from Census 2011, Bihar has population of 10.41 Crores, an increase from figure of 8.30 Crore in 2001 census. Total population of Bihar as per 2011 census is 10,40,99,452 of which male and female are 5,42,78,157 and 4,98,21,295 respectively. In 2001, total population was 8,29,98,509 in which males were 4,32,43,795 while females were 3,97,54,714. The total population growth has decreased during this decade to 25.42% from 28.43% during the previous decade. ***Although the population growth has gone down but the share of population of Bihar in the total population of India has increased to 8.60% in 2011, from 8.07% in 2001.***

Table – 1 Vital Statistics related to Bihar

Sl. No.	Description	2011
1	Population	10,40,99,452
2	Male	5,42,78,157
3	Female	4,98,21,295

4	Population Growth	25.42%
5	% of total Population	8.60%
6	Sex Ratio	918
7	Child Sex Ratio	935
8	Density/km ²	1,106
9	Area (in km ²)	94,163
10	Literacy	61.80%
11	Male Literacy	71.20%
12	Female Literacy	46.40%
13	Total Literate	5,25,04,553
14	Male Literate	3,16,08,023
15	Female Literate	2,08,96,530

3.3 District Profile - Jehanabad

Jehanabad was carved out of old Gaya district on 1st August, 1986. Today it has one sub-division and seven blocks namely Jehanabad, Makhdumpur, Kako, Ghoshi, Modanganj, Hulasganj and Ratni. The city of Jehanabad, which is the head quarter of the district, is situated at the confluence of the rivers Dardha & Yamuna. According to the provisional estimate, this district is situated in between 25-0' to 25-15' degree North latitude and 84-31' to 85-15' East Longitude. Its is surrounded by district of Patna in north, Gaya in south, Nalanda in east and the newly created district of Arwal in the west. Major part of the land in the district is plain. The rivers Sone, Phalgu, Dardha & Yamuna criss-cross the district. The river Sone that touches the western part of the district is the only perennial river and rest of the rivers are seasonal.

Jehanabad district is a predominantly agricultural district. The soil is highly fertile. This district is densely populated. Paddy, wheat, maize and pulses are the main agricultural crops raised by farmers in the district. Cane is also grown in some parts of the district. The total land available in the district is 3,87,157 acres. Forest

coverage is very small having less than 0.5% of the total available area under forest. The net sown area available for cultivation is 2,67,833 acres, which is 69.18% of the total available land.

As per census, 2011 data the literacy rate of Jehanabad was 66.80% compared to 55.22% of 2001. If things are looked out at gender wise, male and female literacy were 77.66% and 55.01%, respectively. For 2001 census, the same figures stood at 69.52 and 39.82 in Jehanabad District.

District Map of Jehanabad

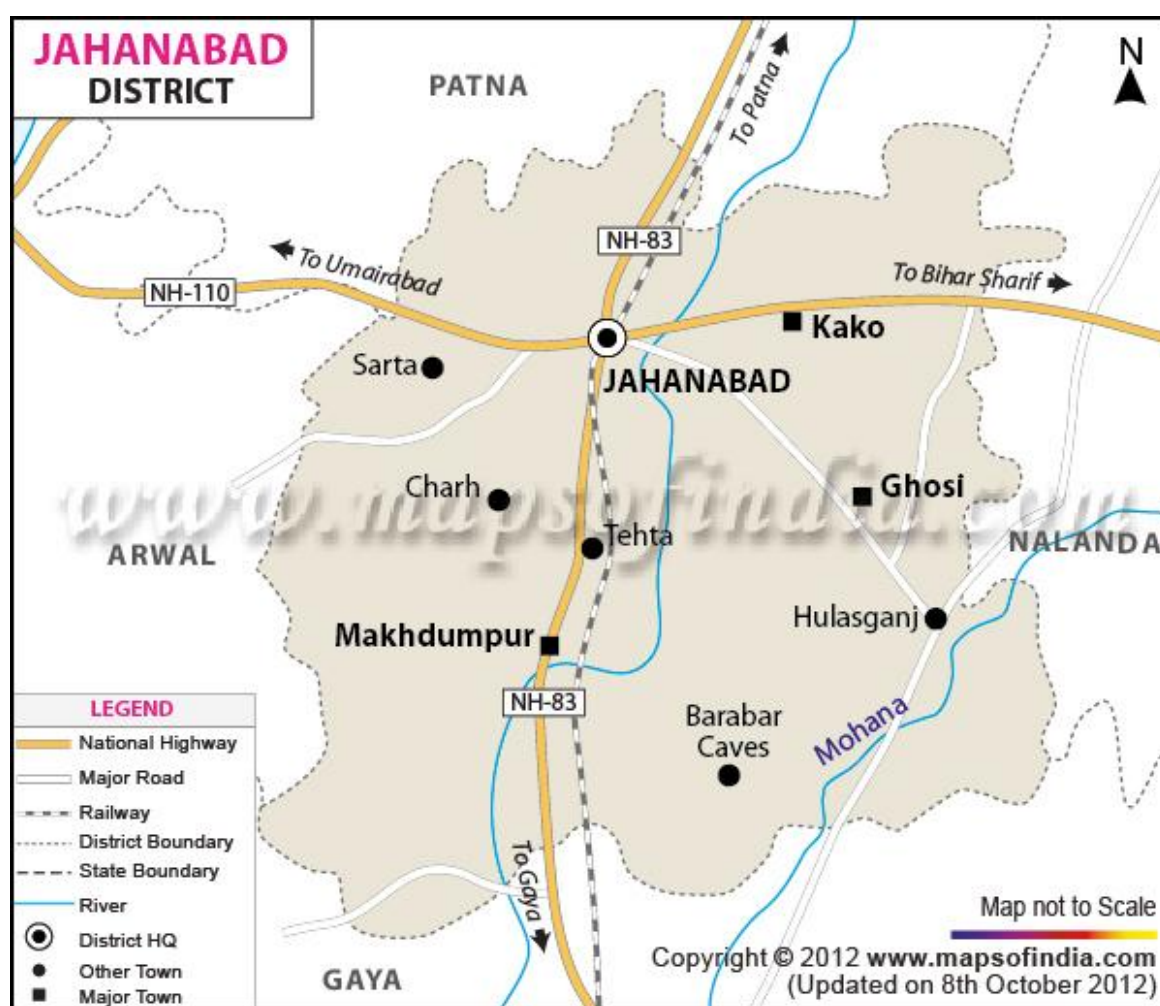


Table – 2 Vital Statistics related to district Jehanabad

Sl. No.	Description	2011
1	Population	11,25,313
2	Male	5,85,582
3	Female	5,39,731
4	Population Growth	21.68%
5	Area Sq. Km	931
6	Density/km ²	1,209
7	Proportion to Bihar Population	1.08%
8	Sex Ratio (Per 1000)	922
9	Average Literacy	66.8%
10	Male Literacy	77.66%
11	Female Literacy	55.01%
12	Literates	6,18,881
13	Male Literates	3,74,412
14	Female Literates	2,44,469

3.4 District Profile – Vaishali

Vaishali district came into existence in 1972. Earlier it was a part of Muzaffarpur district. The Vaishali district is a part of Tirhut division and the district headquarters are at Hajipur town. Agriculture is the main activity and banana, paddy, wheat, maize and lentils are the major crops.

Vaishali derives its name from King Vishal of the Mahabharata age. Even before the advent of Buddhism and Jainism, Vaishali was the capital of the vibrant republican Licchavi state since before the birth of Mahavira (c. 599 BC), which suggests that it was perhaps the first republic in the world, similar to those later found in ancient Greece. In that period, Vaishali was an ancient metropolis and the capital city of the republic of the Vaishali state, which covered most of the Himalayan Gangetic region of present-day Bihar state, India. Very little is known about the early

history of Vaishali. The Vishnu Purana records 34 kings of Vaishali, the first being Nabhaga, who is believed to have abdicated his throne over a matter of human rights and believed to have declared: "I am now a free tiller of the soil, king over my acre." The last among the 34 was Sumati, who is considered a contemporary of Dasaratha, father of the Hindu god, Lord Rama.

Numerous references to Vaishali are found in texts pertaining to both Jainism and Buddhism, which have preserved much information on Vaishali and the other MahaJanapadas. Based on the information found in these texts, Vaishali was established as a republic by the 6th century BC, prior to the birth of Gautama Buddha in 563, making it the world's first republic.

In the republic of Vaishali, Lord Mahavira was born. Gautama Buddha delivered his last sermon at Vaishali and announced his Parinirvana there. Vaishali is also renowned as the land of Ambapali (also spelled as Amrapali), the great Indian courtesan, who appears in many folktales, as well as in Buddhist literature. Ambapali became a disciple of Buddha.

As per census, 2011 data the literacy rate of Vaishali was 66.60% compared to 50.49% of 2001. Gender wise segregation of data reveals that male and female literacy rates have increased to 77.66% and 55.01% respectively from 69.52% and 39.82% in the census, 2001 in Vaishali District.

District map of Vaishali



Table – 3 Vital Statistics related to district Vaishali

Sl. No.	Description	2011
1	Population	34,95,021
2	Male	18,44,535
3	Female	16,50,486
4	Population Growth	28.57%
5	Area Sq. Km	2,036
6	Density/km2	1,717
7	Proportion to Bihar Population	3.36%
8	Sex Ratio (Per 1000)	895
9	Average Literacy	66.6
10	Male Literacy	75.41
11	Female Literacy	56.73
12	Literates	19,26,740
13	Male Literates	11,52,576
14	Female Literates	7,74,164

3.5 Review of performance: Physical and financial (2009-10 to 2012-13)

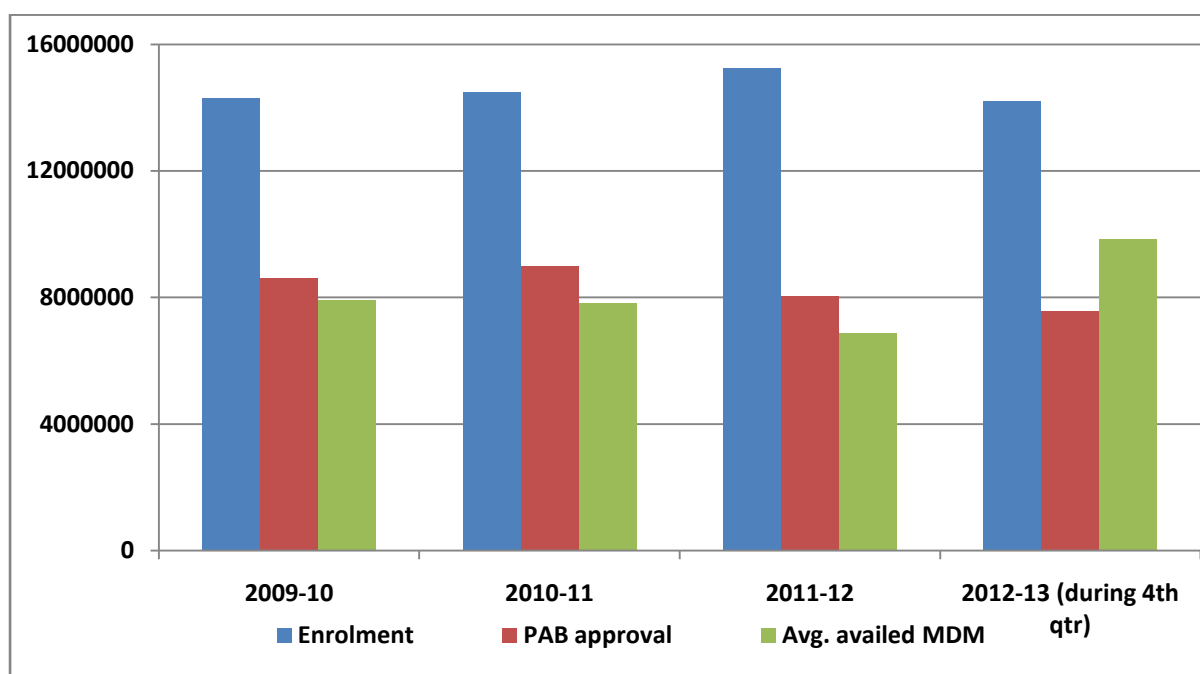
3.5.1 Coverage of children: Primary

A perusal of the figures given in the table below shows a constant increasing trend of enrolment between 2009-10 to 2011-12. However, there is a sharp decline in enrolment from 2011-12 to 2012-13. The important issue to mention is the increase in the number of children which has gone up to 69% during the 4th quarter of 2012-13 from 45% during the 2011-12.

Primary					
Year	Enrolment	PAB approval	Avg. availed MDM	% availed vs. Enrol.	% availed vs PAB approval

2009-10	14299885	8620801	7912269	55	92
2010-11	14476688	9000000	7832405	54	87
2011-12	15253464	8035318	6872599	45	86
2012-13 (during 4 th qtr)	14195644	7556755	9844873	69	131

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



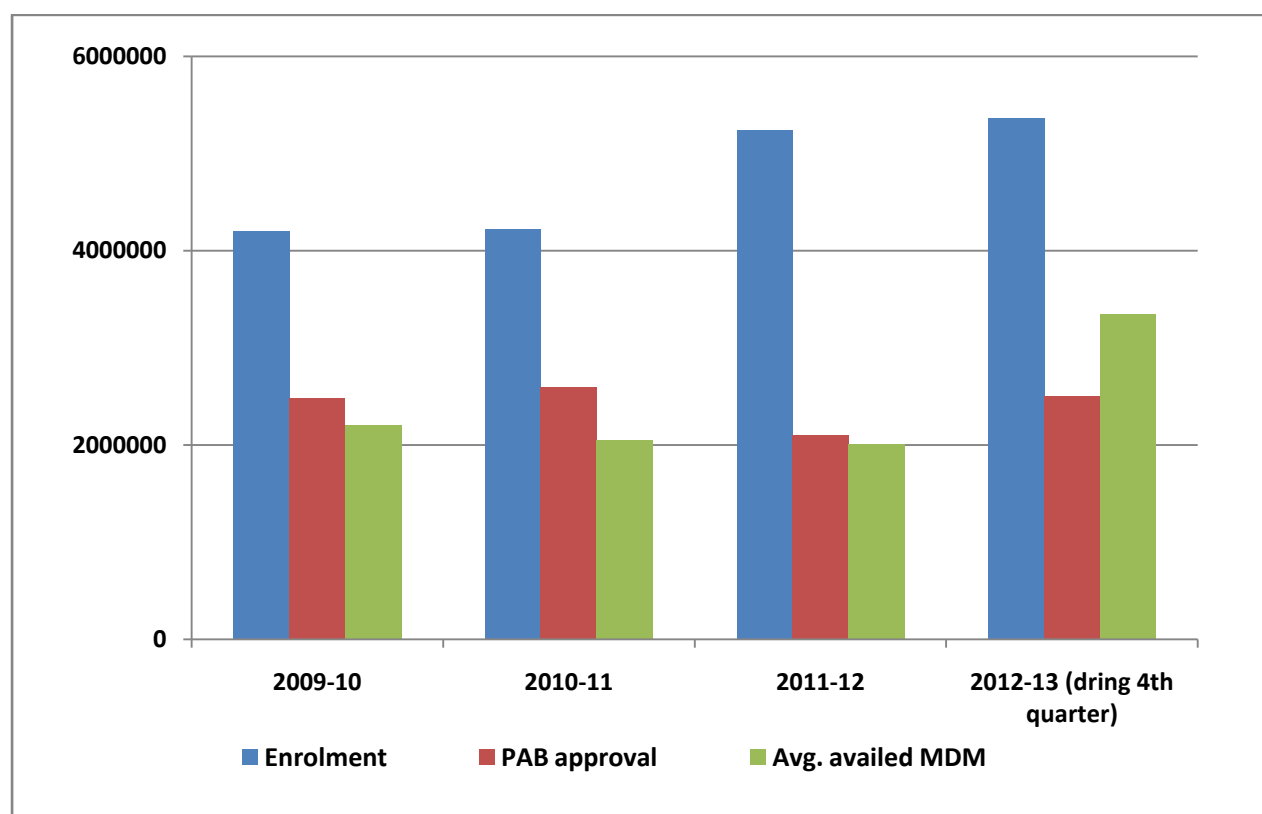
3.5.2 Coverage of children: Upper Primary

As in the primary, the coverage has gone up in upper primary from 38% during 2011-12 to 62% during the 4th quarter in 2012-13.

Upper Primary					
Year	Enrolment	PAB approval	Avg. availed MDM	% availed vs. Enrol.	% availed vs PAB approval
2009-10	4202700	2488208	2204178	52	89
2010-11	4221661	2600000	2045212	48	79
2011-12	5244628	2106667	2009843	38	95

2012-13 (dring 4th quarter)	5365579	2500000	3347395	62	134
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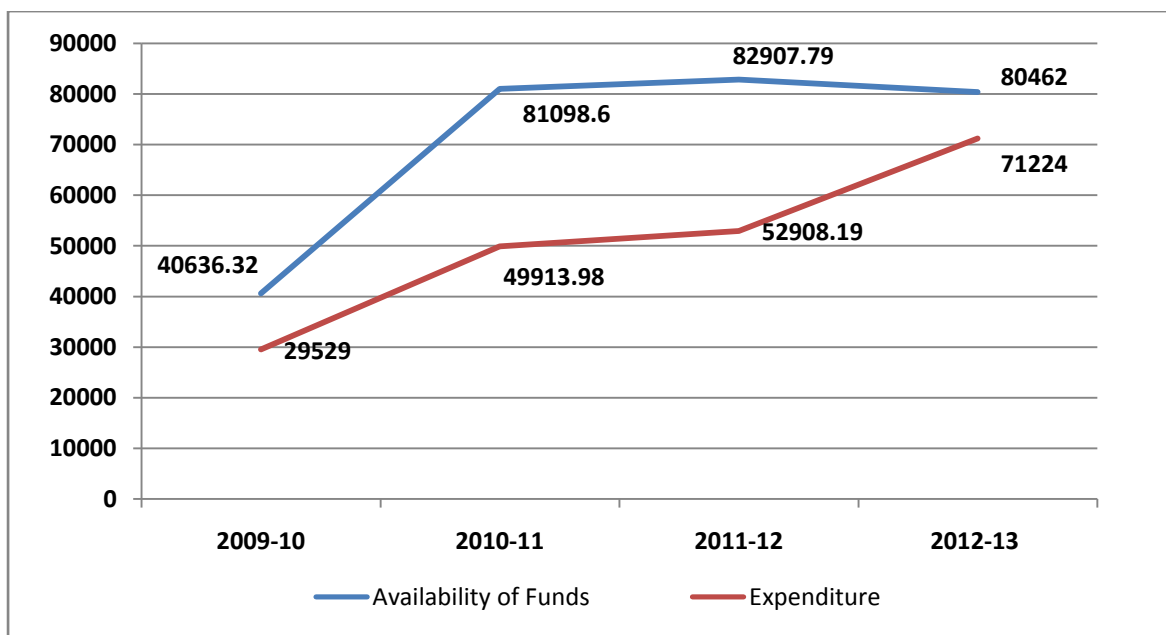
Graph: Trends of enrolment and Avg.number of children availing MDM: Up. Primary



3.5.3 Utilisation of Cooking Cost

(Rs in lakh)

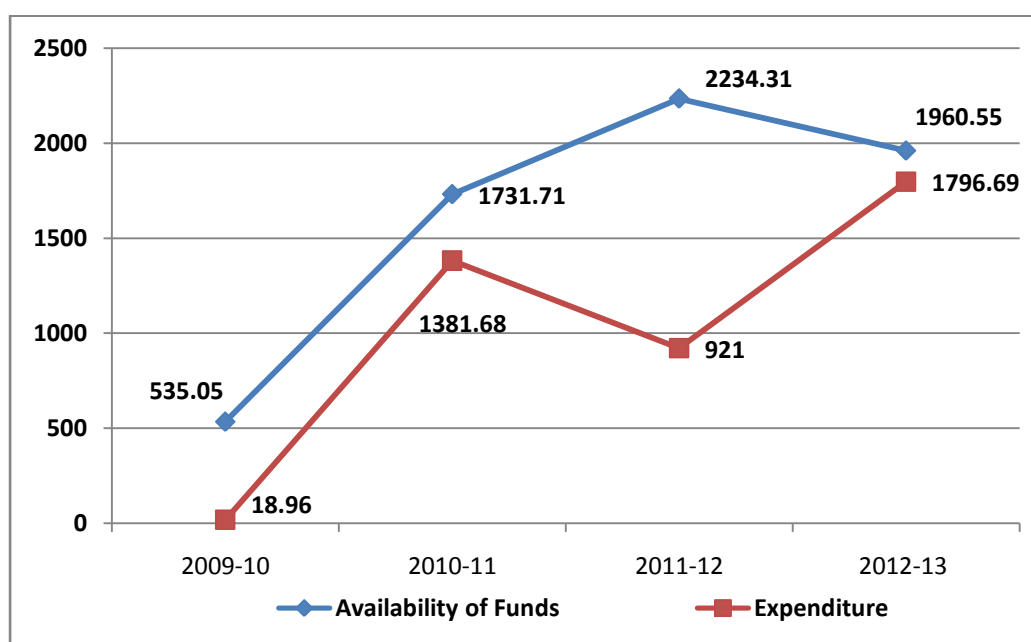
Cooking Cost	2009-10	2010-11	2011-12	2012-13
Availability of Funds	40636.32	81098.60	82907.79	80462
Expenditure	29529.00	49913.98	52908.19	71224



3.5.4 Utilisation of Transportation Assistance

(Rs. in lakh)

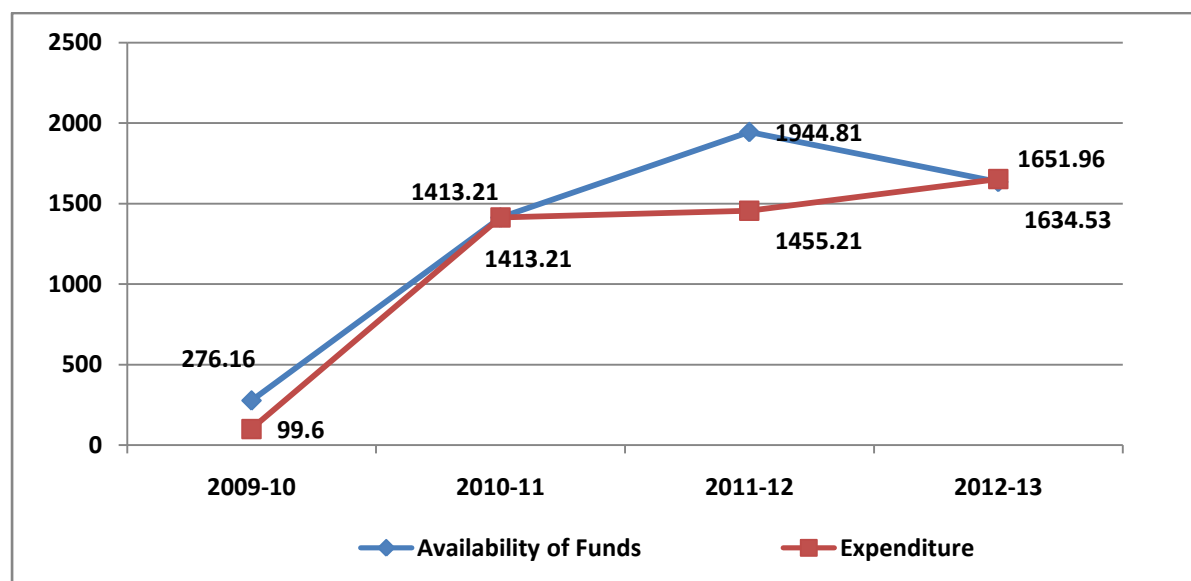
Transportation Asst.	2009-10	2010-11	2011-12	2012-13
Availability of Funds	535.05	1731.71	2234.31	1960.55
Expenditure	18.96	1381.68	921.00	1796.69



3.5.5 Utilisation of Management Monitoring and Evaluation (MME)

(Rs. in lakh)

MME	2009-10	2010-11	2011-12	2012-13
Availability of Funds	276.16	1413.21	1944.81	1634.53
Expenditure	99.60	1413.21	1455.21	1651.96



Chapter – 4 Observations

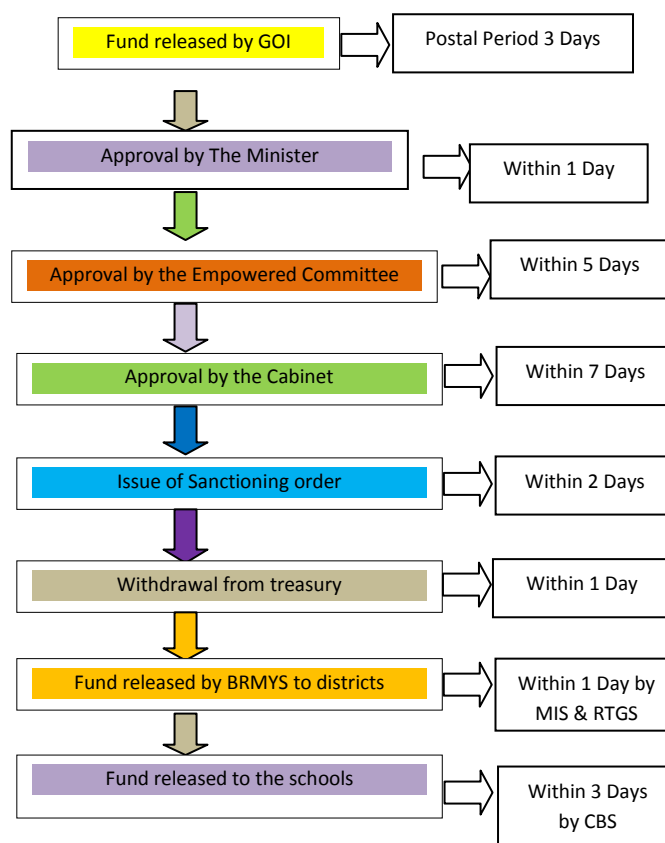
4.1 Observations on MDM implementation

1. Review the system of fund flow from State Government to Schools/cooking agency and the time taken in this process.

The JRM team observed that the fund flow mechanism is working very smoothly, as funds for cooking cost and payment of honorarium to the cook-cum-helpers were available at all schools. There was no shortage of funds at school level.

After the release of funds from the Government of India, the Central share and matching State share are released within 20 days to the schools with the help of RTGS and core banking system. The time lag of the fund flow from the Directorate to the district and from district to the school is as under :-

Fund flow system



The Mission also observed that the payment to cook-cum-helpers has been done in a lot for 2 month to 6 month during 2012-13.

2. Review the management and monitoring of the scheme from state to school level

Bihar is among very few States of the country where dedicated staff is available for implementation, management and monitoring of the Mid day Meal scheme. MDM scheme is being monitored by Director (MDM), and other staff at the State level. There is an exclusively designated officer for MDM scheme at District and Block levels. The Joint Review Mission was briefed that schools are being inspected by the State, District and block Level Officers. However, it was observed that none of the visited schools had ever been visited by the State level officials. Although all the schools were being visited by Block Officials but it was evident that the vital parameters related to MDMS were neglected. The BRPs and DRPs looked at only the regularity of serving of the MDM but not at the records. Other important components like convergence with School Health Programme, health and hygiene, cleanliness in kitchen etc. were ignored.

It has also been observed that the some teachers, especially in Vaishali District, where the meal is being served by NGOs, are not aware about the MDM norms/entitlements at all. It is strongly felt that all officers dealing with MDM need orientation and awareness about the MDM scheme and its effective implementation urgently.

The district and block level Steering cum Monitoring committee and VSS have been notified and instructions have been issued to hold regular meetings to monitor and evaluate the scheme. The JRM observed that there was no schedule of the meetings, that were being held as per convenience as a mere formality. Some of the proceedings did not even bear the signatures and appeared to have been recorded recently.

Headmasters have been instructed to maintain registers regarding tasting of meal by the teachers and cook-cum-helpers in the schools. The procurement

committee at the district level has been authorized to purchase kitchen devices through open tender. The data received from IVRS System (Dopahar) regarding average per day beneficiaries and the number of schools serving Mid Day Meal in the state has been posted on the web site dopahar.org. for the public view every day.

3. Review the implementation of the scheme with reference to availability of food grains, quality of MDM, regularity in serving MDM as per approved norms and mode of cooking

Under MDMS, the food grains are supplied by Government of India, free of cost, through the Food Corporation of India. The Sr. Deputy Collector, who is In-charge Officer at the district level is nominated as Nodal Officer at District level to execute all the issues pertaining to procurement, lifting, quality of food grains, payment of cost of food grains and submission of monthly reports.



The rice was covered with a dirty cloth

Child with tiffin at school Lodipur where the Children refused to take MDM

Verification of quality to ensure atleast FAQ food grain is done at three level (a) as per central government norms, joint inspection of food-grain quality and quantity by representative of the District Magistrate and FCI Representative and at block level, by Block Resource Person and Asst. Godown Manager and at the school level, on delivery to Head Teacher. A detailed guideline for providing food grains of FAQ has already been in circulation vide letter no. 5977 dated 21-11-2011 and is reiterated in every quarter of financial year.

The JRM observed that sufficient quantity of food grains was available with all the visited schools having school based kitchen. Buffer stock of food grains was maintained in almost all the visited schools. The quality of rice was observed to be average.

Some of the children were not availing MDM after the unfortunate incident that occurred in Dharamsakti Gandman on 16th July, 2013. However, in majority of the schools all the children were availing mid day meal. The quality of meal served was observed to be of good in majority of the schools. Firewood is used as fuel in all the visited schools.

4. Convergence with School Health Programme (SHP)

The MDMS guidelines envisage that necessary interventions like regular health checkups, provision for de-worming tablets and supplementation of micronutrients like Vitamin 'A' dosage and IFA tablets are to be provided in convergence with the National Rural Health Mission (NRHM) of the Ministry of Health & Family Welfare. The School Health Programme is the only public sector programme specifically focused on school age children. Successful school health programme ensures better educational outcomes, improved social equity and improved capabilities to handle the adult world.

The School Health Program is envisaged as an important tool for the provision of preventive, promotive and curative health services to the population. The states can, in the spirit of the flexibility of RCH and NRHM, modify the options as per their needs and the available options for service delivery.

Components of School Health Program

Health service provision:

➤ Screening, health care and referral

- ❖ Screening of general health, assessment of Anaemia/Nutritional status, visual acuity, hearing problems, dental check up, common skin conditions, heart defects, physical disabilities, learning disorders, behavior problems.

- ❖ Basic medicine kit to be provided to take care of common ailments prevalent among young school going children.
- ❖ Referral Cards for priority services at District / Sub-District hospitals.
- **Immunization**
 - ❖ As per national schedule
 - ❖ Fixed day activity
 - ❖ Coupled with education about the issue
- **Micronutrient (Vitamin A & Iron Folic Acid) management**
 - ❖ Weekly supervised distribution of Iron-Folate tablets coupled with education about the issue
 - ❖ Vitamin-A as per national schedule.
- **De-worming**
 - ❖ As per national guidelines
 - ❖ Biannually supervised schedule
 - ❖ Prior IEC with intimation to families to bring siblings to school on the fixed day
 - ❖ Siblings of students also to be covered
- **Health Promoting Schools**
 - ❖ Counselling services, promotion of mental well-being.
 - ❖ Regular practice of yoga, physical education, health education
 - ❖ Peer leaders as health educators
 - ❖ Adolescent health education
 - ❖ Linkages with the out of school children
 - ❖ Health clubs, Health cabinets, Health jamborees
 - ❖ First Aid room/corners or clinics.
- **Capacity building of teachers and involved health personnel**
- **Monitoring & Evaluation**

A School Health Programme called *Nayee Pedde Swastha Guarantee Yojna* has been introduced in Bihar in convergence with Health Department to cover all children in Government, Local body and Govt. Aided Schools / Hostels from Classes I to X from the year 2011-12. The following are the components of the health services covered under this Programme:

- Screening, health care and referral
- Immunization
- Micronutrient management like Vitamin A and Iron Folic Acid
- De-worming
- Health promoting schools

The Mission has observed that the convergence with School Health Programme for supplementation of micronutrients, health check-ups and for supply of spectacles is extremely poor.

	2011-12	2012-13	2013-14	2014-15	2015-16
51	110	14	10	15	-
52	114	13	114	17.5	115
53	104	16	104	105	105
54	109	13	109	14	-
55	107	18	107	108	17
56	104	15	104	16	-
57	103	17	103	187	-
58	110	18	110	18	111
59	105	16	105	16.5	-
60	107	17	107	18.8	-
61	111	15	111	16	-
62	115	20	115	20.3	-
63	107	15	107	15.4	-
64	115	16	115	16.5	116
65	107	14	107	14.5	108
66	112	18	112	18.5	-
67	106	16	106	16.2	107
68	110	17	110	17.5	111
69	106	14	106	15.3	-
70	110	20	110	20.2	-
71	105	18	105	17.6	106
72	115	15	115	15.3	116
73	118	13	118	14	119
74	103	16	103	16.7	-
75	110	17	110	17.5	-

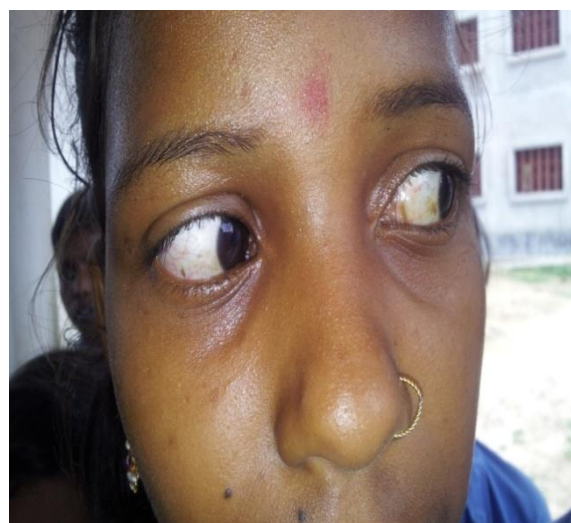


Some of the major observations in this regard are:-

- a. Most of the visited schools did not have Individual School Health Cards of students and the health check-up registers were available only in a few schools. Wherever present, the individual health cards were not being maintained properly with the sole exception of one school in Panpur, Vaishali district where the health check up had been done in April 2013. Only names of the students are written without any mention of their height, weight, health

status or any other deficiency or health problem. In the absence of such records, follow up and monitoring becomes difficult.

- b. The last visit of the health officials in majority of the schools visited was in 2011, especially in district Jehanabad.
- c. None of the children have been provided with Vitamin- A dosage, de-worming tablets and IFA tablets during 2012-13. IFA tablets in one school were provided in April 2013 but had not been distributed.



Health check up by the doctors of the Review Mission team, Bitots spot

5. Creation of Capital assesses through kitchen-cum-store/kitchen devices

MIS based database management shows 45,142 schools already have kitchen cum stores, 8,563 kitchen-cum-stores are in progress. In year 2008-09, kitchen sheds were sanctioned at a unit cost of Rs 60,000. Due to increase in cost of materials and labour these units could not be constructed. However, it is important to mention that during the First JRM in 2010 the team was not informed about this issue. Further, kitchens were constructed in many schools during that period. The State Government returned these funds to Gol in 2011-12. In 2012-13 Govt. of Bihar requested to again release the same funds, these were again released to Bihar in March 2013. The State Government has now decided to bear the additional cost due to increase in SOR amounting to approximately Rs.90,000 per unit. Accordingly, in July 2013 the department has sanctioned kitchen shed to 7,276 schools having

land. Funds for 6703 schools have been released. The JRM team was informed that construction of all the remaining kitchen sheds will be completed by March, 2014.



A new kitchen shed and an old one

As of July 2013, 96% of schools in Bihar have utensils for cooking/serving whereas 66% of schools have plates for eating. The gap identified in plates is proposed to be provided in 2013-14 from state fund and old cooking utensils would be replaced in 2013-14 from fund made available by central government. Rs 2122.03 lakhs of Fund for purchasing 2122027 plates in upper primary schools has been released in month of august 2013.

Components	Physically Allocation since 2006-07 as on 31st March 2013		PhysicalProgress as on 31st March 2013		
	Total no of schools/Centers	Total allocation	Constructed/ Procured	In Progress	Not Started
Kitchen Sheds	70238	65977	45142	8563	12272
Kitchen Devices	70238	105391	69632	35760	0

6. Appointment of Cook-cum-Helpers for preparation and serving of meal to the children

The State Government has engaged 1,68,340 Cook-cum-helpers (43968 SC, 5952 ST, 90148 OBC, and 28272 others) in the State. Most of these cook-cum-helpers are women and thus the State Government is following the MDM guidelines for empowering the women by providing them opportunities for employment and income generation. The JRM observed that in some schools lesser number of cook-cum-helpers have been engaged than the norms. The State officials clarified that the PAB-MDM has approved 2,31,811 cook-cum-helpers to be engaged in the schools, and State has issued instructions to engaged the remaining cook-cum-helpers.

The cook-cum-helpers informed that they have received training during 2012-13 on the aspects of quality of meal, cooking procedures, safety and hygiene etc.

The JRM team felt that the cook cum helpers should be trained in more rigorous manner on the issues of health hygiene and food safety aspects and the methods of cooking. It was observed in the visited schools in the preparation of soya nuggets it was burnt in several schools of Nyatola and blocks of SehdevBujurg that these burnt soya nuggets were discarded by the children in the school. The cooks were unaware about the proper methods of preparation of *pulav* which is one of the menu of the MDM.



The cook-cum-helpers also informed that they have received honorarium up to the month of July, 2013. The records also reveals that payment in both the

districts has been made till July 2013 @ Rs.1000/- per month per cook-cum-helper at both schools as well as centralized kitchens of Ekta Shakti Foundation. It is also observed that CCHs in all the schools have been appointed in Vaishali district at school points for serving MDM supplied by Ekta Shakti Foundation.

The team felt that there is a need of training of the Cook- cum- helpers for the correct preparation methods.

It was found that cooks have been provided with one apron for cooking Mid Day Meals in schools. The very purpose of providing apron will get defeated if the number is not increased. One apron will not allow cooks to clean it every day leading to soiling and contamination. The quality of material used for apron in Vaishali district was not pure cotton and was thermoplastic fibre. Aprons must be made of pure cotton. This is very categorically specified in the norms for apron as the use of thermoplastic fibres can be hazardous.

Cooks wearing polyester and cotton aprons



Cooks wearing polyester and cotton aprons; washing utensils with aprons on can lead to soiling

It was observed that the teacher incharge of MDM scheme in school based kitchens notes down the number of children present on that particular day and accordingly CCHs prepare food for the present children. In case of the schools where MDM is being served through centralized kitchen, the teacher informs the supplier about the number children present on the day and the supplier usually supply the meals for same number of children the next day.

7. Availability of dedicated staff for MDM at various levels.

The availability of officers and their roles and responsibilities at different levels are given below:

Slate level

1. **Principal Secretary** : Overall review and guidance
2. **Director**: State Level decision making authority, overall management, monitoring and coordination.
3. **Deputy Director**: In-Charge of establishment, Recruitment, transfer/posting, food grain, cooks, kitchenshed, kitchen device etc.
4. **Officer on special duty**: Authorised representative of director in Confidential & Administrative matters, MIS, IVRS, accounts, fund flow and NGO etc.
5. **Assistant Director**: All MDM operational matters.
6. **Junior Monitoring Officer (on deputation from Dept. of Education, Govt. of Bihar)**
7. MDM total documentation, MDM NGO related work. Handling of GOI complaints and compliances relating to MDM programme.
8. **Account Officer** : Account management for entire State, PAC compliance, AC/DC reporting and compliance, AG audit compliance.
9. **State Accountant**: Maintenance of accounting Records, Reporting, Planning & Budgetary Control, Financial Analysis, Compliance with AG DC Bills, miscellaneous statutory compliance etc.
10. **Data Officer-cum-SystemAdministrator**: Data compliance, Analysis, Reporting, MIS & IVRS online web Management System maintenance.
11. **Assistant Programme Co-Ordinator**: Coordination & Monitoring of state wide MDM program.
12. **Computer Operator** :Data entry, etc.

District level

1. **District MDM In-charge** : Monitor MDM Programme in districts and decision making authority in district.
2. **District Resource Person** : Coordinating MDM activities in blocks through BRPs, compliances and reporting.
3. **Accountant-cum-Data Entry Operators**: Maintenance of accounting Records, Reporting, Planning & Budgetary Control, MIS generation and Reporting.

Block level

1. **Block Resource Person (BRP)**: Managing, supervision and coordinating MDM activities in Blocks and Schools, Monitoring & Compliance, MIS & Reporting.
2. **Contractor** : Lifting and distribution of food grain from block level SFC godown to Schools.

8. Review the maintenance of records at the level of school/cooking agency.

The JRM team observed that only one register is being maintained at school level for all the MDM purposes. This single register has the provision for containing information on number of children availed MDM, the quantity of foodgrains utilized, amount of cooking cost utilized, quantity of other ingredients utilized on daily basis. However, it was noticed that the information was not regularly maintained in almost 50% of the visited schools. The irony is that there are regular inspections by the BRPs and other officials, yet the matter has gone unnoticed.

आज दिनांक 20/08/13 को विद्यालय शिक्षा समिति की बैठक
 विद्यालय में किया गया जिसमें निम्न सदस्यगण
 हजे उपस्थित हुए थे विद्यालय शिक्षा समिति के अध्यक्ष
 के साथ समिति के सभी सदस्यों के साथ बैठक में
 विद्यालय में हुए विद्यार्थियों में बहस हुई जिसमें
 सभी के हितों में बैठक बुलाई गया है जिसकी
 अध्यक्षता सोनी देवी महोदय ने किया।

समाप्ति समय - 12:30 बजे

1) सचिव - विद्यालय शिक्षा समिति
 2) अध्यक्ष - विद्यालय शिक्षा समिति

3) विद्यालय शिक्षा समिति
 4) विद्यालय शिक्षा समिति

5) विद्यालय शिक्षा समिति
 6) विद्यालय शिक्षा समिति

7) विद्यालय शिक्षा समिति
 8) विद्यालय शिक्षा समिति

9) विद्यालय शिक्षा समिति
 10) विद्यालय शिक्षा समिति

11) विद्यालय शिक्षा समिति
 12) विद्यालय शिक्षा समिति

13) विद्यालय शिक्षा समिति
 14) विद्यालय शिक्षा समिति

15) विद्यालय शिक्षा समिति
 16) विद्यालय शिक्षा समिति

The maintenance of records for the meetings of *Vidyalyaya Shiksha Samitis* is also an area of concern as the proceedings of none of the meetings were properly recorded in almost all the schools, barring Govt. High School, Makhdumpur, of Jehanabad district. The JRM team also stressed upon the importance of proper maintenance of the records of the proceedings of the meetings held.

9. Availability of infrastructure

The State Government has arranged to provide eating plates for most of the children. **It is a praiseworthy effort on the part of State Govt.**

The **sanitation and hygiene facilities** at the school level are a matter of very serious concern and pose a big challenge for the State Government. **The condition and maintenance of toilets was pathetic in almost all the schools.** Toilets were poorly maintained by the school authorities in both the visited districts. The main reasons for this were non-availability of water and lack of supervision. In Vaishali district even the newly constructed toilets were not in use due to lack of water supply. Some of these toilets had not been cleaned for days together. It was also noticed that most of the girls don't use the toilets in the schools where these are poorly maintained.

The Case of Madhya Vidyalaya, Unta

This is a co-educational school in the heart of Jehanabad town that presents a picture of utter negligence. The general cleanliness of the school was extremely poor and there were heaps of garbage at many places. The girl students of Lodipur, Unta that "though we complain to the HM but nobody bothers about it, they clean it only once in a month". The toilets in this school were not even cleaned since the reopening of the school.



The location of toilets in many schools is also a matter of grave concern. **In many places, the toilets are located next to the drinking water facility. In several places even the cooking utensils are cleaned there only. Such close proximity to the toilet increases the risk of contamination.**

It was also noticed that there are no proper places for the students to have a meal in many schools. The students have the meals in veranda or in open space in the school and throw the leftover haphazardly. There are no pits/dustbins installed in the schools.

10. Review of payment of cost of food grains to FCI by the districts.

The Mission was informed that after verification of bills submitted by FCI on monthly or quarterly basis with the lifting report of SFC, payment is made upon the approval by the District Magistrate. It was also informed that the status of payments to FCI is reviewed during monthly meetings at the District as well as at the State level along with FCI representatives. As per the information provided by the State Govt. payment has been made towards 84% of the total bills raised by the FCI as on 29th August, 2013 and an amount of Rs. 26.18 crore is still pending with the State Govt.

11. Review the involvement of NGO's/Trust/Centralized kitchens

The NGOs are engaged to supply Mid day Meal through centralized kitchen in the schools in 14 districts of the state. The Review Mission observed that Ekta Shakti Foundation supplies hot cooked meal in 8 blocks of Vaishali district through its 8 centralised kitchens, one each in these 8 blocks. The Review Mission observed that the traveling time for cooked meal to the schools is 15-50 minutes, which seems to be reasonable. The centralized kitchen located in the Hajipur block served meals to about 20,000 children in about 200 schools. The NGO officials informed that they had hired 17 vehicles for transporting the cooked meal to schools. The ingredients used in the centralized kitchen at the time of visit were of good quality.

During its visits to centralized kitchen of Ekta Shakti Foundation in Hajipur and Lalganj in district Vaishali it was observed that the premise was large enough to prepare the meal for the allocated number of children. The cleanliness was also observed to be good in both the kitchens. However there is still scope for improvement in maintenance and record keeping at the school level. Steel utensils are used for distribution of MDM to schools.

The Standard Operating Procedures on storage and handling require to be followed and if necessary, the functionaries of centralised kitchens should undergo this training and these should be strictly adhered to. The NGO officials mentioned that pest control was done twice a month but this will not prevent rodents & other creatures from coming into the easily accessible storage areas. All the food grains, spices and edible items need to be kept covered and labelled.

The quality of meal served appeared to be good and the children also expressed their satisfaction with the quality and quantity of the meal served.

The team observed that in some schools the amount of food provided by the centralized kitchen seemed to be insufficient in relation to the attendance. The record keeping was very poor at the centralized kitchen and the managers at the kitchen could not show any record related to Mid Day Meal. Although the JRM team was told that regular inspections of the centralized kitchen were made but no record of these inspections was available at any of the visited kitchens.

The menu and entitlements were also not displayed at a prominent place in the visited kitchens. The teachers in many schools were of the view that it will be difficult to undertake social audit.

12. Management of Information System (MIS)

The Govt. of India has launched a web based MDM-MIS for getting the information on real time basis. Bihar has already launched their web based MIS integrated with IVRS system for getting daily information on the status of meal served and the beneficiaries on a particular day. The JRM team was informed that the earlier system of manual management and monitoring was an elaborate process where schools submitted monthly reports to the Block Resource Person (BRP), a government functionary responsible for assisting the implementation of the MDMS at the block level. The reports of all schools in a given block were compiled by the BRP and then submitted to the district authority. In addition to the report, requisition forms were also submitted to procure funds and food grains for the future. The district level office would then issue allotments accordingly and hand over the cheques/food grain allotment back to the BRP for distribution to schools.

This manual system of management and monitoring suffered from a variety of challenges like:

- (i) No or late submission of reports by schools,
- (ii) Unavailability of key indicators on coverage, meals served, infrastructure provided such as kitchen devices,
- (iii) Unavailability of data on how many requisitions were submitted and how many were processed,
- (iv) Frequent and excessive delay in delivery of funds and food grains to schools,
- (v) No means to authenticate the data owing to corrupt practices at the data gathering level,
- (vi) Figures on student attendance, number of beneficiaries served, shortage of funds/food grains were inflated since information was not immediately available to monitoring authorities at higher levels,

- (vii) Immediate redressal of shortages was not possible due to the delays involved in manually processing reports through different administrative levels; final assessments also occurred only on a quarterly basis,
- (viii) Unavailability of consolidated data that could be analyzed for macro-level trends at the state, district or block levels, leading to difficulties in targeted decision making,
- (ix) Monitoring on a monthly basis did not allow monitoring authorities to disaggregate daily school performance,
- (x) Pre-emptive action was limited as monthly reports allowed only post facto analysis and could not adequately predict upcoming supply chain bottlenecks,
- (xi) There was no overall system for tracking how many inspections took place, which notes had adverse remarks that required action and what was the status of follow up action taken. The overall system was fragmented and lacked cohesion. Hence, there was an abject need to streamline the management and monitoring of the scheme.

The MDM Management and Monitoring System consist of two initiatives – a Management Information System (MIS) and an Interactive Voice Response System (IVRS) named Dopahar. Both systems are complementary to each other and have been designed to strengthen the management monitoring and evaluation of the MDMS. Under the IVRS system Dopahar (IVRS), detailed reports providing actionable information, daily SMS alerts and daily supplementary questions to identify the reasons for non-functioning of the scheme were introduced. **The successful implementation of these management and monitoring systems across the state of Bihar is due to the efficient coordination between the Directorate, field officers and the vendors.**

However, the JRM team observed that Bihar has not entered any data in the annual and monthly data in the MDM-MIS launched by the Govt. of India during 2013-14.

13. Assess the involvement of Community' in implementation of MDM Scheme

For effective and better implementation of a social scheme Community participation is an essential tool. In Jehanabaddistrict the MDM is being served by VSS through school based Kitchen. It was observed that there was no community participation in monitoring of the meals prepared and served at the school point. The children do not have any idea about what is going to be served on a particular day under MDM.

Entitlements of the children under MDMS were not displayed at a prominent place in all of the schools in both the districts, though the weekly menu was displayed in some of the visited schools. For a programme like MDMS advocacy holds utmost importance and the information and norms of the scheme should be displayed prominently as per the MDM guidelines. It has also been observed that the key functionaries of MDM i.e. schools teachers and Head teachers in most of the schools were not aware of the entitlements of the children under MDM.

In Vaishali district, where MDM is being served by centralised kitchens operated by an NGO (Ekta Shakti Foundation) in the Bhagwanpur and Biddupur blocks as well as by the Self Help Groups through school based kitchen, the scenario regarding community participation in supervision and management of MDMS was poor like Jehanabad. Most of the children and parents are not aware of the menu and entitlements.

Community participation is one area where serious attention is required to be given by state agencies. While interacting with people, the JRM team found that though the people from 'catchment area community' knew about MDM scheme in general, in terms of the 'right ' of their children under MDM, they hardly knew that they themselves need to participate in this programme in a more effective manner.

Monitoring by parents was absolutely nil in most of the schools visited. One of the major contribution of the community, on the contrary, was in forbidding their children from taking MDM in the light of Gandmaan incident. Though

their concern for children is understandable, one could have expected from government agencies to go in for a **massive mobilisation drive to convince people in a positive way to allow their children for taking MDM as a few children told that MDM was the only square meal that they ate.**

There were some schools in both the districts visited where MDM was reported to have been stopped in the light of the fear emerging out of the Gandmaan incident. In this context, community intervention in terms of positive results was grossly missing.

In some of the schools it was found that a good number of students preferred to stay away from MDM while some of their fellow students did take it. Here again community intervention, apart from other interventions both at government and school levels, was urgently required.

In some schools where part or a majority of children stayed away from taking MDM, VSS could have been visibly proactive. Obviously, the supervision by VSS was missing in many ways in this context. A general impression gathered, was that inactive VSS was convenient in one way or the other to some of the people who were to execute this scheme.

A significant gap between the number of children enrolled and the number of children who had their MDM on the day of the visit was observed in majority of the visited schools. The role of community in ensuring attendance of children in school is of utmost importance.

One thing was clear that barring a few visited schools though MDM was being served in every school, sadly the community participation was in a dismal state in both the districts, Jehanabad and Vaishali.

One should not forget that active participation of community can address many of the issues related to MDM in schools in more meaningful ways. Therefore, government agencies must put an all out effort in increasing its participation in every school. It will also help in building an atmosphere of support for government programmes in the rural areas and in urban areas.

The JRM team is of the view that as the community participation increases, the lesser is the burden on government agencies towards the successful implementation of this flagship programme. It will be in the fitness of things more so now in the light of Food Security Act. This will be an addition to this present benefit being provided.

14. Review of status of MIS integration with IVRS for monitoring of the scheme

To complement with the monthly reporting of the MIS, an IVRS system namely Dopahar was launched (accessible at dopahar.org). Dopahar uses IVRS technology to make automated calls daily to school headmasters to obtain information on the performance of the MDM, anticipate supply chain bottlenecks, cross-check the data provided by the MIS and assist verification during field inspections. All data collected is publicly accessible.

The scope of MIS gets enhanced by introducing new modules relating to kitchen facilities, cooks, news monitoring, etc. New tools in the system such as immediate SMS alerts to headmasters on the allocation of funds/food grains at the district level and flat file based transfer of conversion cost and cooks honorarium. A pilot testing of the tablet scheme (mobile based inspection and MIS system) for qualitative information from inspections and easy entry of data has been incorporated. Similarly, in Dopahar (IVRS) detailed reports providing actionable information, daily SMS alerts and daily supplementary questions to identify the reasons for non-functioning of the scheme were introduced. The successful implementation of these management and monitoring systems across the state of Bihar is due to the efficient coordination between the Directorate, field officers and vendors. In turn, the systems themselves have been useful in pinpointing the difficulties in coordination between functionaries at the district, block and school levels and eliminating such issues through regular meetings held by the Directorate at the state level. **The JRM team appreciated this praise worthy initiative.**

Importance of MIS integrated with IVRS in implementation of MDMS

Timely Fund transfer and payments to stakeholders:

After implementation of MIS, the report of grains received by schools is obtained from MIS and based on that payment is made to block transporters within 1 month, which earlier was verified manually and used to take 3 to 4 months. Monthly payment of honorarium to cooks by the schools was difficult to monitor and it used to be delayed by 3 to 4 months. Now, it can be monitored on a monthly basis. With the introduction of flat file for fund transfer, the cooks are being paid in time. Similarly, timely monthly salary payment to BRPs is ensured on the basis of data entered by them in the MIS, which was earlier based on physical receipt of attendance leading to delays.

Increased sense of accountability:

The system of daily calls to headmasters speeds up the monitoring. The impact of these calls in terms of improved supply chain management, increased public accountability and enhanced inspection have instilled in the headmasters a sense of accountability for the performance of schools under their charge with respect to the MDMS.

A ranking system based on 10 parameters has been introduced for districts. The Average Per day beneficiary against enrolment, MDM working days, Conversion cost availability in the Schools, Food Grain availability in the Schools, MIS Entry status and Dopahar (IVRS) response parameters are derived from MIS and IVRS. Rest of the remaining parameters are School Inspection, Steering-Cum-Monitoring Committee Meetings, and Cook-cum-Helper's Payment. These parameters are being included in MIS and at a testing status.

Transparency and reduction in corruption:

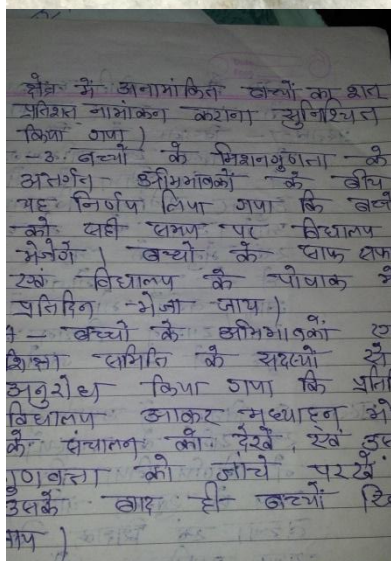
Both MIS and IVRS have put the data relating to the scheme in public domain. Any citizen can view the daily beneficiary details of any school or the monthly performance of any school. This has brought about transparency in the scheme. After implementation of MIS the manual processing in fund and food grain requirement generation and disbursement of funds/grains has been replaced by automated process. This has significantly reduced the corruption element in the scheme.

Enhanced grievance redressal

Through Dopahar IVRS, headmasters now have improved capacity to enquire about fund and food grain availability as well as seek clarifications regarding the usage of Dopahar itself such as queries on missed call services and procedures involving change in mobile numbers.

15. Review of the status of tasting of the meal by at least one teacher.

The MDM guidelines envisage mandatory tasting of meal by teachers and community members before it is served to children. The Govt. of Bihar has issued instruction for tasting of meal by the head teacher of the school, then by member of VSS and cook-cum-helper before it is served to the children. The JRM team observed that the practice is being followed in all the visited schools after the unfortunate incident of Gandman. In all the visited schools a register has been maintained for getting the signature/thumb impression of the teachers and VSS members to certify that they have tasted the meal.



16. Review of status of safe storage and proper supply of ingredients to schools

The Review Mission members observed that the State Government has provided bins for safe storage of food grains and other condiments in all visited schools. The State officials informed that after the unfortunate incident of Dharamsakti Gandman, State Government has decided to provide storage bins for food grains to all the schools in the State.

17. Review of the status of Awareness about Mid- Day Meal Scheme.

The JRM members interacted with parents and community members at a few places and hold group discussions with them. It was observed that although

most of them were not aware about the entitlements of the children under MDM, but all of them were aware that MDM is the right of the child.

The State officials briefed the JRM team that after the Gandaman incident many of the parents have instructed their children to not eat mid day meal provided in the schools and in some cases they have also told the teachers to not serve MDM to their children. This situation was observed in few schools by the JRM team during the visit. It is felt by the team that there is an urgent need for undertaking a strong community drive for restoring the faith of community in MDMS because the parents and the community are afraid / overcome by fear of poor/contaminated food being served to their children.

The Team also observed that information regarding MDM i.e. the entitlements of children, Menu, logo, and emergency contact number etc. are not displayed at a prominent place in any of the visited school. The mission strongly recommend that these information should be displayed at prominent place in every school on urgent basis.



JRM team was also informed that for creating awareness about the MDM scheme entitlements through newspaper advertisements have been published from time to time. Through MIS website www.mdmsbihar.org and IVRS website www.dopahar.org Govt. of Bihar has shared the details of the scheme with public and has given an opportunity to the public to see details of scheme and performance of any school on monthly / daily basis.

It was also informed that individual letters were sent to PRI representatives giving details of the scheme and facility to view schools wise details in MIS and IVRS websites.

18. Review of status of convening of Monitoring Committee under the Chairmanship of Member of Parliament

The JRM team was informed that Monitoring committees were already been in place in all the districts under the chairpersonship of Member of Parliament. It was also informed that regular meetings are taking place and MDM is one of the item discussed in these meetings. However, no record with regard to these meetings could be made available to the JRM team despite repeated requests.

19. Review of the status of testing of food samples by reputed institute.

There is no NABL laboratory for testing of food samples in the State of Bihar, the nearest one being in Kolkata. It was informed that the State Government is exploring the possibility for laboratory testing of meals.



20. Review of the status of Emergency Medical Plan

The review Mission team could not see any planning in terms of emergency Medical Plan in the visited schools of the selected districts. **However, several helpline telephone numbers were prominently displayed in some of the visited schools, especially those in Jehanabad district.**

The JRM team was of the view that a dedicated helpline number for MDMS is required by the State.

21. Annual Work Plan & Budget

The JRM team analysed the information submit by the district to State through its AWP&B and the information submitted by the State Govt. to Govt. of India through its AWP&B, 2013-14. To the surprise of the team there was a huge

difference in the information submitted by the district and the information shown by the State against the district. For example the difference in coverage of children and working days is given in the table below :

Item	Source Table in respective AWP&B, 2013-14	District plan	State plan
No. of children opted for MDM (Primary)	Table AT-4	96,788	1,52,419
No. of children opted for MDM (Up. Primary)	Table AT-4 A	33,137	60,492
Average no. of children availed MDM (Primary)	Table AT-5	96,788	1,21,346
Average no. of children availed MDM (Up. Primary)	Table AT-5 A	32,860	42,141
Coverage of working days (Primary)	Table AT-5	168	134
Coverage of working days (up. Primary)	Table AT-5 A	168	131

The State Govt. has mentioned in the Annual Work Plan and Budget, 2013-14 that the plan is prepared on the basis of data / Information submitted through the district level plan submitted by the district. It is also mentioned that the information submitted by the district is then analysed at the State level for preparation of State plan. The State has also informed that a work shop was organized in the month of December, 2012 to train the persons responsible for preparation of AWP&B at the district level. This is a serious issue, as Govt. of India organizes training programmes for preparation of AWP&B for all the States/UTs every year.

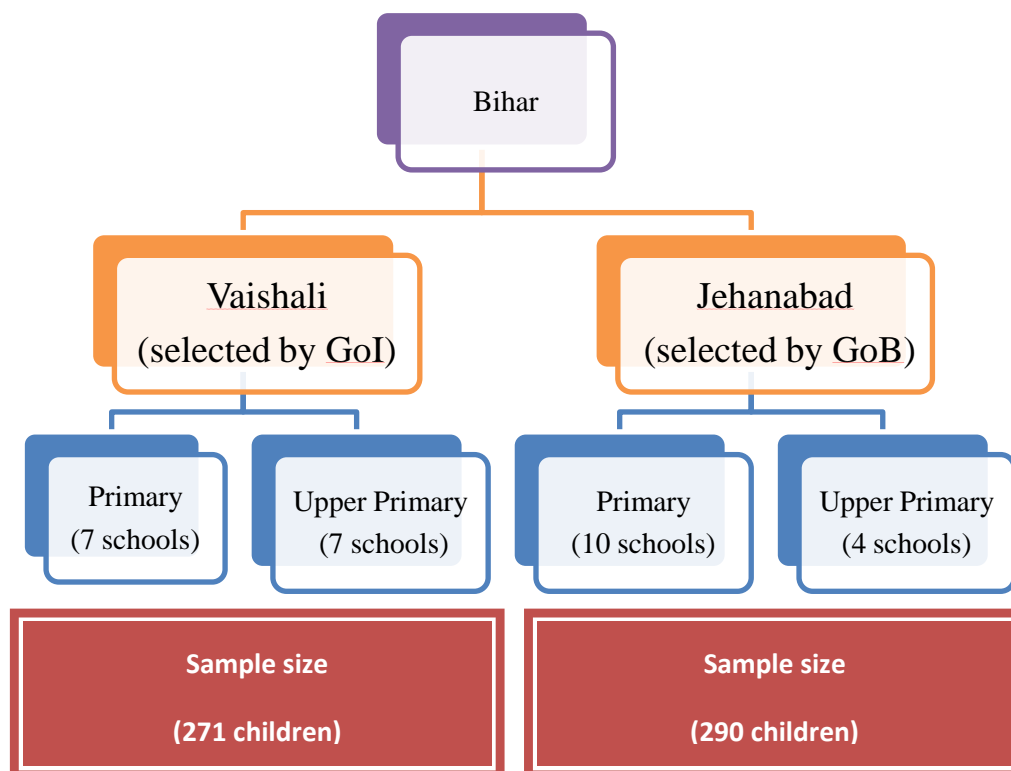
Chapter – 5 Nutritional Assessment

A survey was conducted in government run primary and upper primary schools of the two districts of Jehanabad and Vaishali, with the objective to collect information related to the following aspects of Mid Day Meal Scheme in the State:

- Food pattern
- Anthropometric profile
- Clinical symptoms of nutritional deficiencies
- Quality and quantity of the Mid Day Meal

Methodology

Selection of sample: A sample of 561 children from 17 primary (I- V class) and 11 upper primary schools (VI-VIII class) from the two selected districts of Bihar viz. Jehanabad and Vaishali, were randomly selected. A multi stage, random sampling design was used for the selection of schools and the children in the selected districts.



Sampling design for assessment of nutritional status of children from two districts of Bihar

Food pattern: The food pattern of the children was determined by using “24 Hour Recall Method” in the case of upper primary (UP) children.

Anthropometric profile: The height and weight of selected children was measured using standard methods (Jelliffe, 1966). The Body Mass Index (BMI) of the selected children was calculated using the following equation given by Garrow (1981):

$$\text{BMI} = \text{Weight} / \text{Height}^2$$

where the weight is in kilograms and the height is in meters.



The height, weight and BMI were analyzed for Z - scores using WHO Global Database on Child Growth and Malnutrition (WHO, 2006).

Based on their Weight for Age (WAZ) and Height for Age (HAZ), the selected children were classified into normal (-2SD to +1SD), undernourished (< -2SD) and overweight (+1SD to +3SD) categories. Similarly, based on their BMI Z-scores, the children were classified into the following categories :

Normal	: -2SD to +1SD
Moderately undernourished	: -2SD to -3SD
Severely undernourished	: < -3SD
Overweight	: +1SD to < +3SD
Obese	: ≥ +3SD

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

Twenty six water samples of the visited schools were tested by using water testing kits developed by Department of Microbiology, Punjab Agricultural University, Ludhiana. Standard methodology recommended by the department was used to collect water samples from each school. The test samples were duly marked and observed upto 48 hours for colour change in comparison to the control sample. The presumptive identification of the water samples taken was done.

The methodology used for the purpose has already been mentioned in the relevant chapter.

SALIENT FINDINGS

I Food pattern

The findings regarding the meal and food pattern revealed that the majority of selected children had four meals (Table 1). Almost all the children reported to take a meal after the school, in both the districts which indicated that MDM did not replace their home meal; instead it was an additional meal for them.

Table 1: Daily meal pattern of the selected children

Meal	Food Item
Morning	<i>Dal/ Bhaat / Roti/ Chokha/vegetables</i>
MDM	As per schedule
After school	<i>Dal/ Bhaat / Roti/vegetables</i>
Dinner	<i>Dal/vegetable, Roti/ Bhaat</i>

Majority of the selected children reported that they had breakfast daily though a lesser variety of food items was observed in their diets.

Table : Consumption Pattern of Food

Food Groups	Consumption and Quantity
Cereals	High and adequate
Pulses	High and inadequate
Vegetables	Negligible and inadequate
Green leafy vegetables*	Negligible and inadequate
Fruits	Negligible and inadequate
Milk and milk products	Negligible and inadequate

*Not used in the displayed MDM menu

Cereals and pulses were the main food items consumed. Consumption of vegetables was low while intake of fruits was negligible in both the districts. The vegetables that were consumed by the children during previous day of the survey were potato, pointed gourd (*Parwal*), raw banana, lady finger, brinjal, and raw papaya, maximum being that of potato and raw papaya being the least. The consumption of other vegetables was negligible. The data show that except potatoes, other vegetables were consumed by a very small number of children which may be a cause of sub-clinical micronutrient deficiencies among them. Milk consumption among the children seemed to be very less in both the districts.

II Anthropometric profile

i. Weight for Age (WAZ) and Height for Age (HAZ)

Weight for age reflects the body mass relative to the chronological age, whereas height for age reflects achieved linear growth and its deficit indicates long term cumulative inadequacies of health and nutrition.

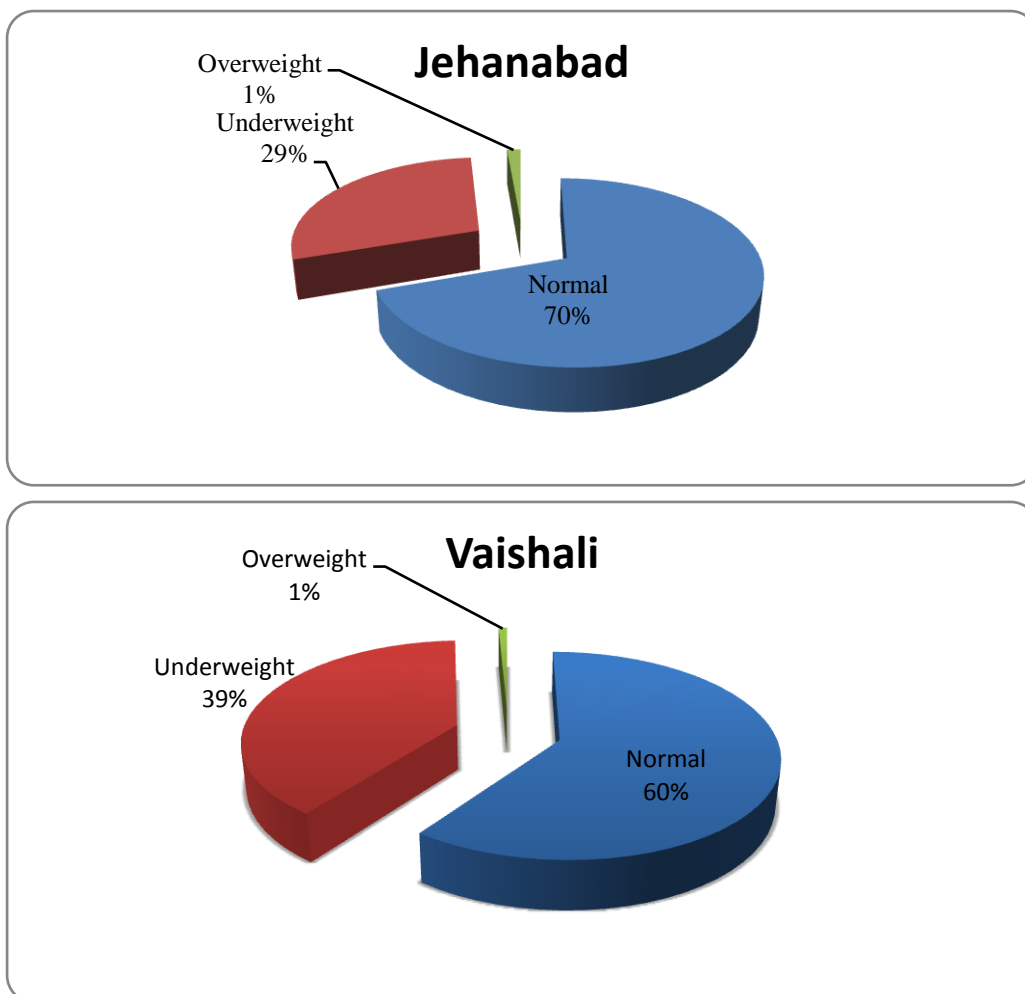


Fig 1 Classification of children based on Weight for Age Z scores

In district Jehanabad, 28.98 and 18.96 % of the total children were underweight(fig.1) and stunted(fig. 2), respectively.

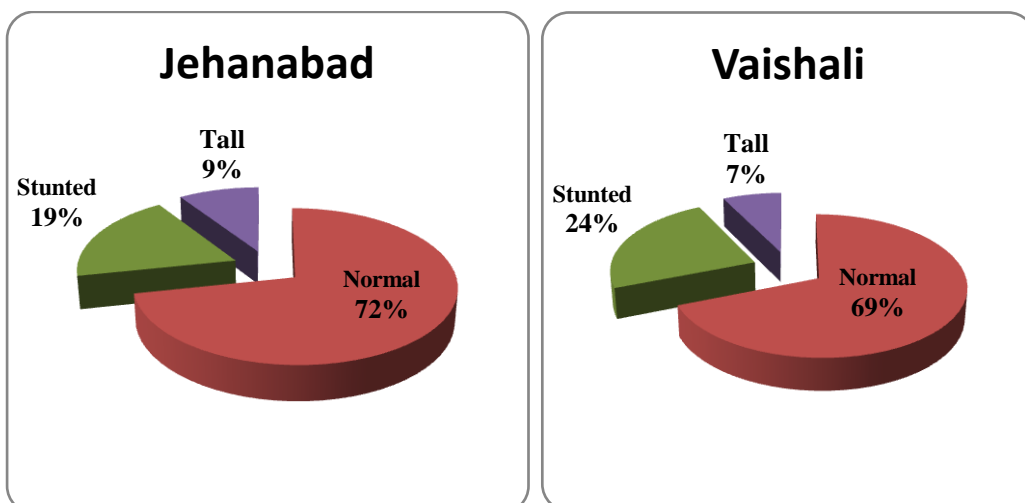


Fig 2 Classification of children based on Height for Age Z scores

A gender difference was observed in underweight children in Jehanabad, as it was 25.90% in boys and 32.16% in girls. HAZ scores, as depicted in table 3, indicated that stunting was more prevalent among girls (boys:16.32% vs girls:21.68%). The incidence of underweight and stunting was higher in district Vaishali as compared to Jehanabad. The percentage of underweight children was 35.56% among boys and 42.65% in girls and stunting was 20.74% in boys and 26.47% in girls. As in Jehanabad, stunting was more prevalent in girls in this district too. The percentage of tall children was 9.32% and 7.38% in Jehanabad and Vaishali, respectively (table 3).

Table Classification of children based on WAZ, HAZ and BMI-Z scores

	Boys		Girls		Total	
	N ₁ (147)	Percentage (%)	N ₂ (143)	Percentage (%)	N (290)	Percentage (%)
Jehanabad						
WAZ						
Normal	106	72.10	96	67.15	202	69.65
Underweight	38	25.90	46	32.16	84	28.98
Overweight	3	2.00	1	0.69	4	1.37
HAZ						
Normal	102	69.38	106	74.12	208	71.72
Stunted	24	16.32	31	21.68	55	18.96
Tall	21	14.30	6	4.20	27	9.32
BMI						
Normal	106	72.10	118	82.52	224	77.24
Moderately undernourished	38	25.90	24	16.78	62	21.38
Overweight	3	2.00	1	0.70	4	1.38
Vaishali						
WAZ						
Normal	85	62.96	78	57.35	163	60.14
Underweight	48	35.56	58	42.65	106	39.12
Overweight	2	1.48	0	0	2	0.74
HAZ						
Normal	94	69.63	93	68.38	187	69.00
Stunted	28	20.74	36	26.47	64	23.62
Tall	13	9.63	7	5.15	20	7.38
BMI						
Normal	88	65.18	93	68.38	181	66.79
Moderately undernourished	46	34.07	42	30.88	88	32.47
Overweight	1	0.75	1	0.74	2	0.74

Table 4 shows that the age wise mean weight of boys and girls was 67.79 to 87.47% and 75.60 to 91.96 % of the reference standards. In district Vaishali, the mean weight of 10, 11 and 14 year old girls was less than 75% of the WHO reference standards and is a matter of concern.

Table : Average weight of children from two districts of Bihar

Age, (years)	JEHANABAD			VAISHALI			Reference Standards, WHO (2006)
	n	Weight (Mean± SD)	% Reference Standards	N	Weight (Mean± SD)	% Reference Standards	
Boys							
5	-	-	-	5	16.8±2.59	90.81	18.5
6	17	17.8±2.19	85.58	10	16.9±2.02	81.25	20.8
7	16	19.4±2.76	83.62	16	20.16±3.92	86.90	23.2
8	18	21.0±3.52	81.40	14	22.32±2.71	86.51	25.8
9	7	22.6±2.66	78.75	21	22.14±3.42	77.14	28.7
10	23	27±5.84	84.11	14	24.86±4.61	77.45	32.1
11	26	30.6±6.22	84.76	8	27.88±7.95	77.23	36.1
12	15	35.6±7.15	87.47	20	31.23±5.76	76.73	40.7
13	13	40±7.49	87.34	16	37.59±7.41	82.07	45.8
14	2	40.8±1.06	79.69	11	36.73±7.52	71.74	51.2
15	2	38.3±2.47	67.79	-	-	0.00	56.5
Girls							
5	-	-	-	2	13.5±0.71	75	18.0
6	16	17±2.87	83.74	8	15.25±2.73	75.12	20.30
7	19	19.6±2.77	85.59	11	17.95±3.23	78.38	22.90
8	12	21±2.37	81.40	24	20.83±4.02	80.74	25.80
9	17	22±3.27	75.60	8	23.13±5.61	79.48	29.10
10	18	26.4±6.23	79.76	14	23.32±5.02	70.45	33.10
11	23	29.5±5.64	78.88	20	27.43±4.42	73.34	37.40
12	18	33.8±5.24	80.86	16	32.19±5.96	77.01	41.8

13	16	42.3±6.1	91.96	28	36.48±6.96	79.30	46.00
14	4	38.3±5.12	77.37	4	34.38±6.85	69.45	49.50
15		-	-	-	-	-	52.14

The mean weights of all the children were more than 70% of the reference standards (Fig 4)

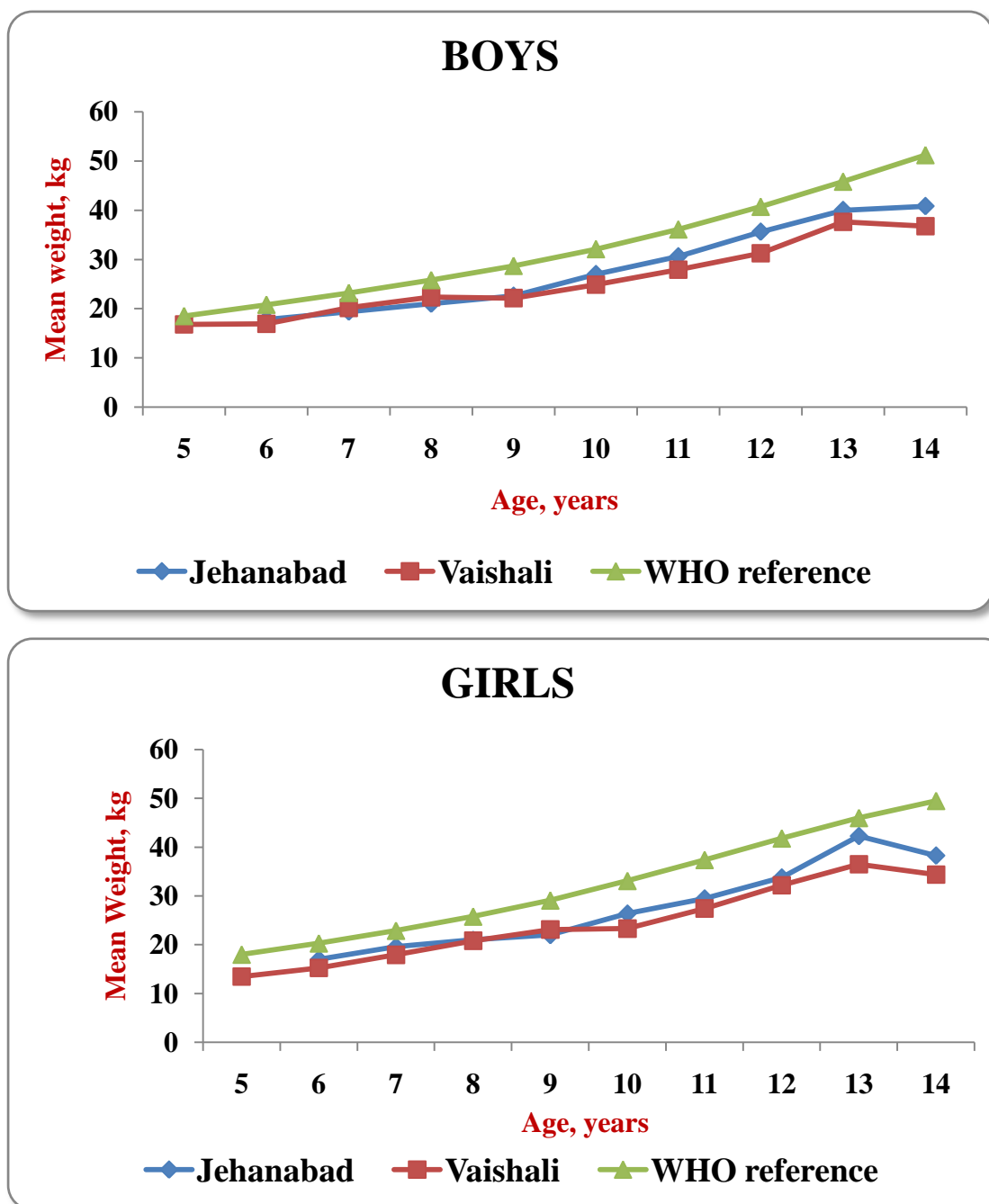


Fig 4 Mean weight of boys and girls (5-15 y) in Jehanabad and Vaishali districts of Bihar

The mean height of boys in different age groups in district Jehanabad ranged between 91.32 to 100.3 % of the reference standards while, the percentage for girls was between 94.07 to 97.61 (Table 5).

Table 5: Average height of children from Jehanabad and Vaishali districts of Bihar

Age, (years)	JEHANABAD			VAISHALI			Reference Standards, WHO (2006)
	n	Height (Mean± SD)	% Reference Standards	n	Height (Mean± SD)	% Reference Standards	
Boys							
5	-	-		5	110.62±9.38	101.3	109.20
6	17	113.32±6.98	97.9	10	110.62±5.21	95.6	115.7
7	16	122.31±13.6	100.3	16	118.26±9.65	96.9	122.0
8	18	122.44±10.58	95.6	14	124.18±6.79	96.9	128.10
9	7	127.2±6.21	95.1	21	125.80±8.41	94.1	133.70
10	23	132.89±10.56	95.7	14	130.97±7.24	94.4	138.80
11	26	139.69±9.69	97.2	8	138.13±10.77	96.1	143.70
12	15	149.59±9.95	100.2	20	142.28±8.14	95.3	149.30
13	13	152.97±9.58	97.8	16	152.83±9.66	97.7	156.40
14	2	159.0±1.41	96.7	11	153.16±10.86	93.1	164.50
15	2	155.25±4.31	91.32				170.00
Girls							
5				2	104.6±2.97	97.76	107.00
6	16	109.39±8.38	95.12	8	106.51±7.87	92.62	115.00
7	19	118.76±6.19	97.50	11	114.41±10.59	93.93	121.8
8	12	124.74±3.62	97.61	24	121.59±9.58	95.14	127.8
9	17	125.21±9.28	94.07	8	127.24±13.31	95.60	133.10
10	18	131.47±8.51	95.13	14	126.28±11.10	91.37	138.20
11	23	136.4±7.65	94.53	20	137.76±8.36	95.47	144.3
12	18	143.45±7.47	94.69	16	141.06±6.81	93.11	151.5
13	16	148.91±5.98	94.67	28	148.26±7.43	94.25	157.3
14	4	153.03±4.53	95.41	4	146.13±9.04	91.10	160.4
15							162.0

The mean heights of all the children were more than 90% of the reference standards (Fig 5).

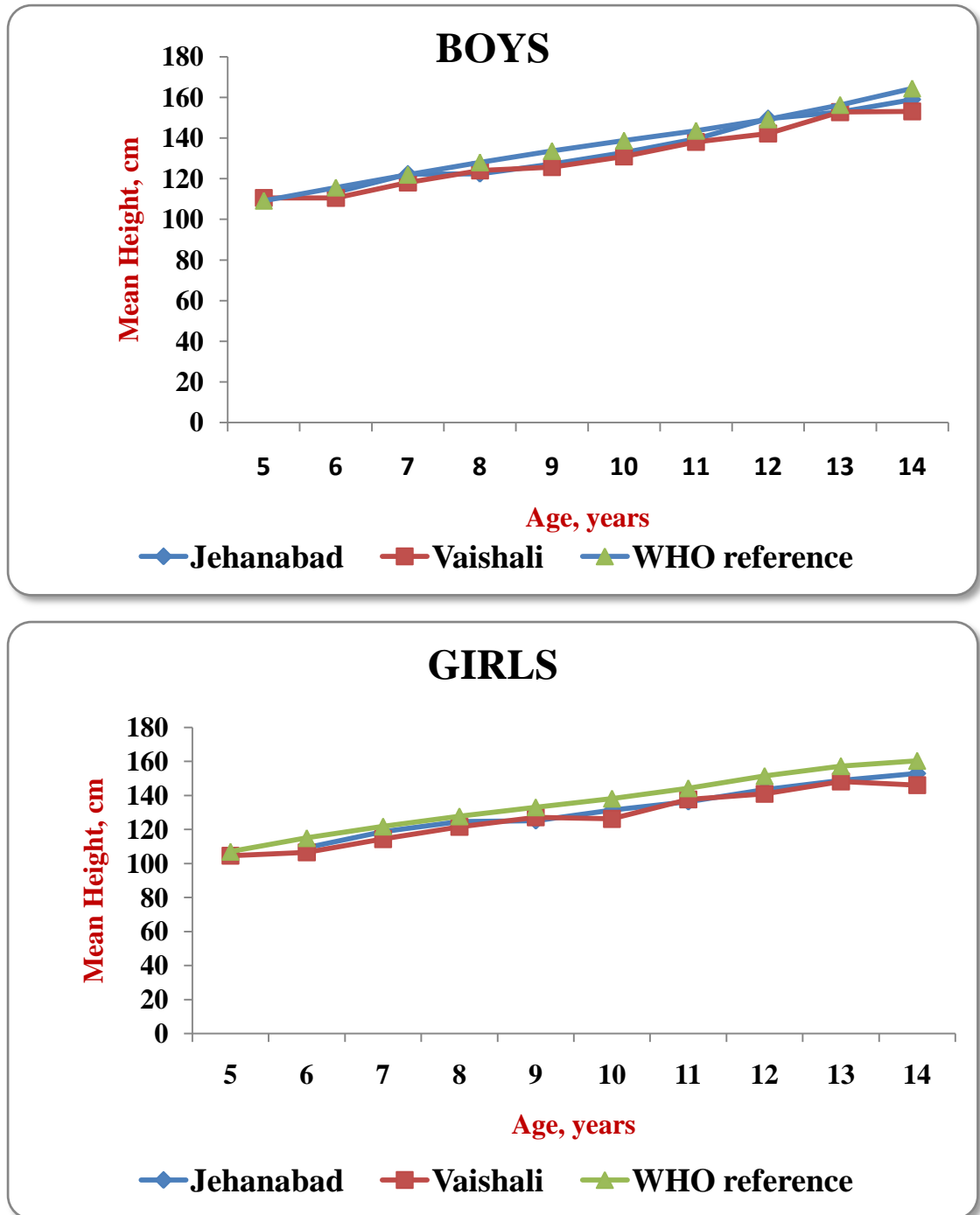


Fig 5 Mean height of boys and girls (5-15 y) in Jehanabad and Vaishali districts of Bihar.

The findings revealed that the mean heights of the children (5-14 years) were much closer to the reference standards, while the weights were lower in both the districts, more specifically in Vaishali district.

BMI for Age

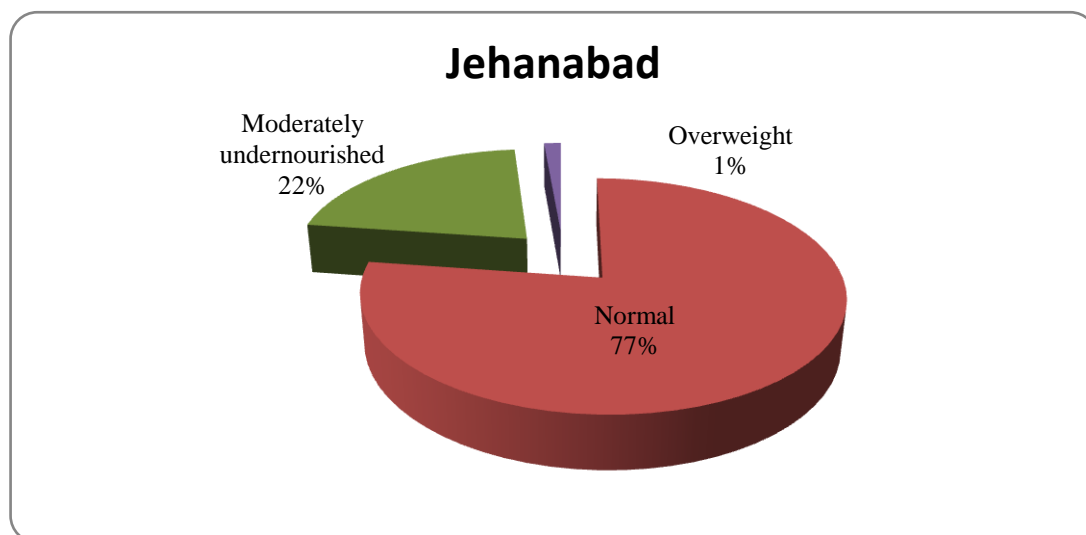
BMI for age reflects the body weight relative to height. WHO classified low BMI for age as an indicator of undernutrition which varies from moderate to severe. High BMI for age expresses overweight and obesity. The data in table 6 shows that there were more moderately undernourished children in district Vaishali (32.47%) as compared to Jehanabad (21.38 %). The BMI for age ranged between 78.91 to 91.73 % of reference standards in boys. The corresponding values for girls were 80.05 to 98.65 %. When compared with the WHO standards, the heights and weights of about 70% of the selected children from both the districts were found to be satisfactory.

Table 6: Average Body Mass Index (BMI) of children from Jehanabad and Vaishali districts of Bihar

Age (years)	N	JEHANABAD		VAISHALI			Reference Standards, WHO (2006)
		BMI (Mean± SD)	% Reference Standards	n	BMI (Mean± SD)	% Reference Standards	
Boys							
5	-	-	-	5	13.70±0.80	89.54	15.3
6	17	13.82±0.73	89.74	10	13.77±0.82	89.42	15.4
7	16	13.28±2.32	85.13	16	14.31±1.10	91.73	15.6
8	18	13.95±1.01	87.74	14	14.44±0.88	90.82	15.9
9	7	13.98±1.01	86.30	21	13.96±1.43	86.17	16.2
10	23	15.13±1.84	91.14	14	14.38±1.40	86.63	16.6
11	26	15.55±1.56	90.41	8	14.35±1.80	83.43	17.2
12	15	15.77±1.98	88.60	20	15.44±2.72	86.74	17.8
13	13	16.73±2.04	89.95	16	16.01±2.22	86.08	18.6
14	2	16.13±0.70	83.58	11	15.47±1.56	80.16	19.3
15	2	15.86±0.14	78.91	-	-	0.00	20.1

Girls							
5	-	-	-	2	12.37±1.37	81.38	15.20
6	16	14.12±1.16	92.29	8	13.42±1.70	87.71	15.30
7	19	13.86±0.98	89.42	11	13.67±1.24	88.19	15.50
8	12	13.42±1.16	84.94	24	14.02±1.56	88.73	15.80
9	17	13.91±0.61	86.40	8	14.11±1.42	87.64	16.10
10	18	15.07±1.73	89.17	14	14.44±1.10	85.44	16.90
11	23	15.70±1.92	89.71	20	14.40±1.41	82.29	17.50
12	18	16.33±1.52	89.23	16	16.06±1.98	87.76	18.30
13	16	19.04±2.26	98.65	28	16.57±2.82	85.85	19.30
14	4	16.31±1.82	81.96	4	15.93±1.49	80.05	19.90
15	-	-	0.00	-	-	0.00	20.4

Over nutrition was observed in only 1.38% and 0.74% of the children in Jehanabad and Vaishali, respectively (Fig 6). The mean BMI for age was lower than the reference standards in boys as well as girls of the two districts.



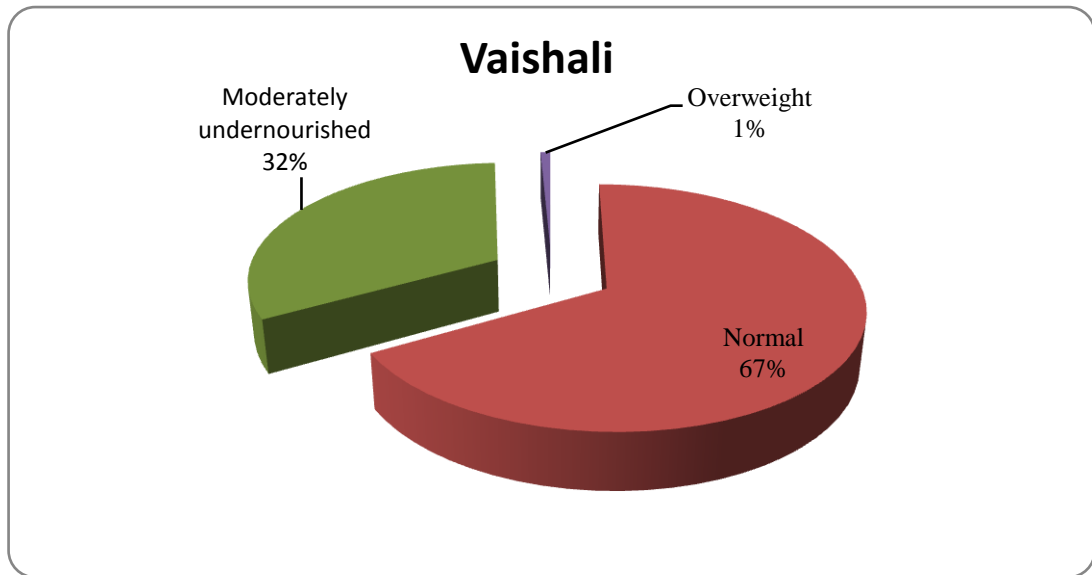
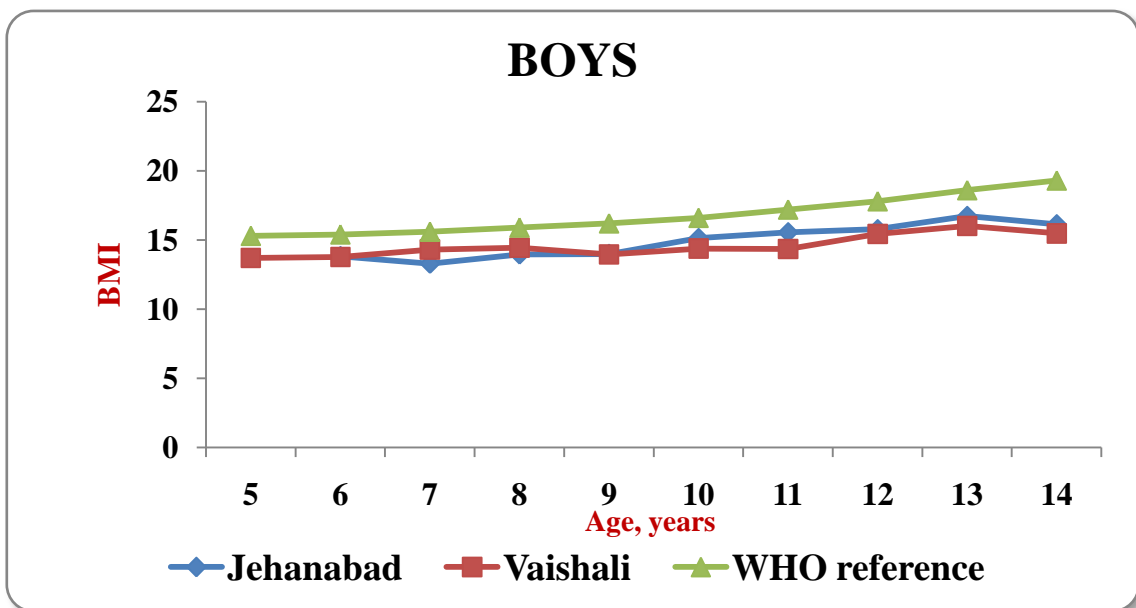


Fig 6 Classification of children based on BMI for age Z scores

Figure 7 shows that the mean BMI for age for boys ranged between 13.28 to 16.73 and 13.70 to 16.01, for Jehanabad and Vaishali, respectively. For girls, the BMI ranged between 13.42 to 16.33 and 12.37 to 16.57, for Jehanabad and Vaishali, respectively. When compared to WHO standards, the BMI for the children in both the districts were found to be satisfactory.



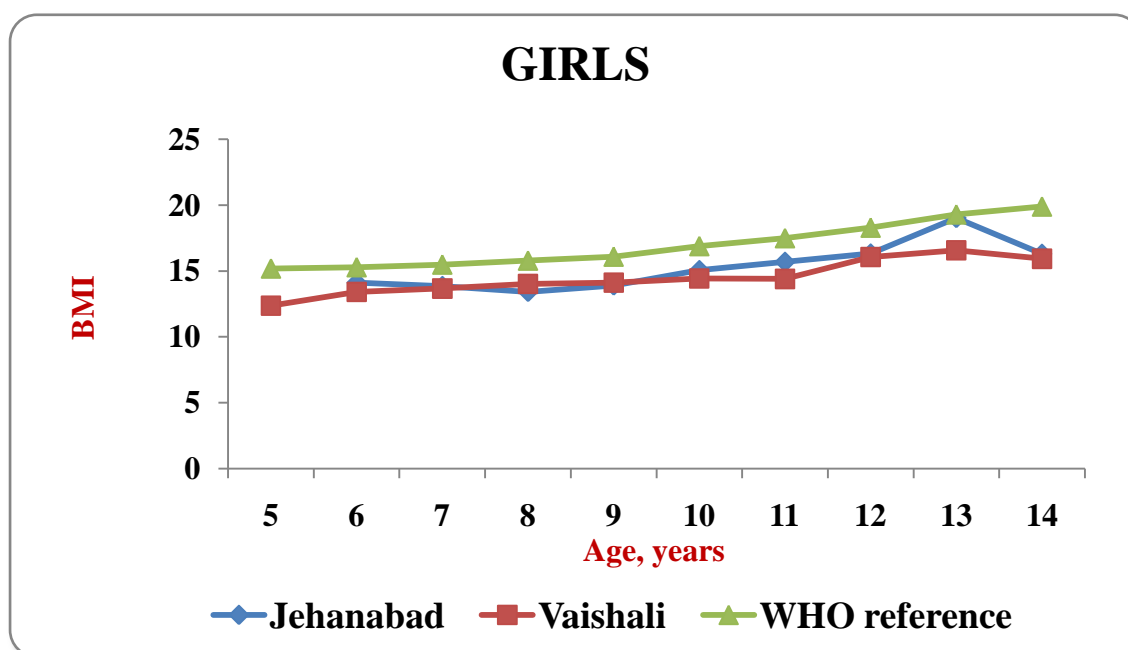


Fig 7. Mean BMI of boys and girls (5-15 years) in Jehanabad and Vaishali districts of Bihar

III Clinical symptoms of nutritional deficiencies

The deficiency symptoms of protein, vitamin A, B complex and iron deficiency anemia were observed in the surveyed children. Pale conjunctiva and skin was observed in 10.33 and 1.5 % of the children respectively, from district Vaishali. The prevalence of iron deficiency symptoms was comparatively higher in Jehanabad district, where 23.71 % of the children had pale conjunctiva while 6.87% had pale skin (Fig 8). Though clinical signs were present in a small percentage, it is assumed that the sub-clinical iron deficiency may be prevalent in this region. Lack of variety in vegetables is the main reason for nutritional deficiencies. Clinical symptoms also showed a high prevalence of worm infestation that lowers down the absorption of food and its micronutrients.

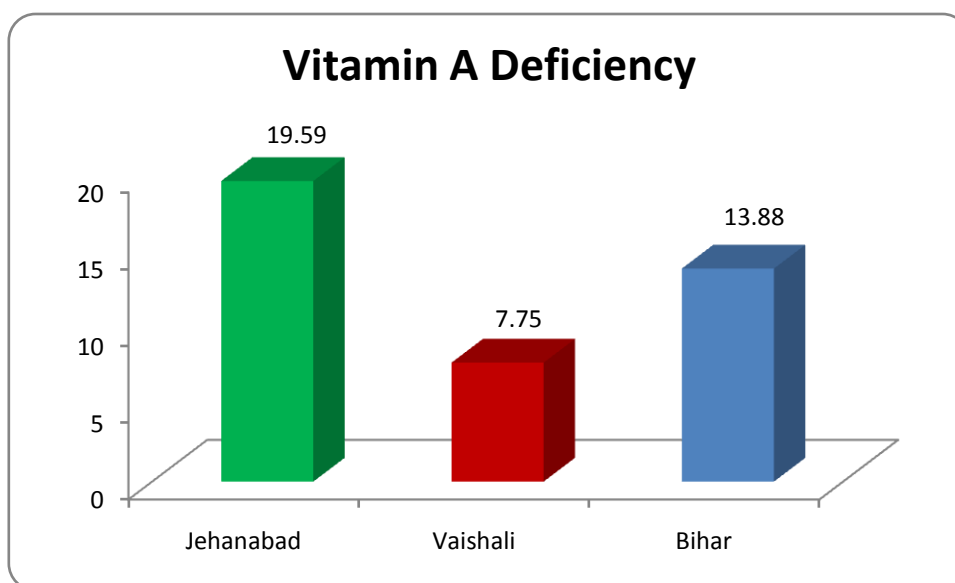
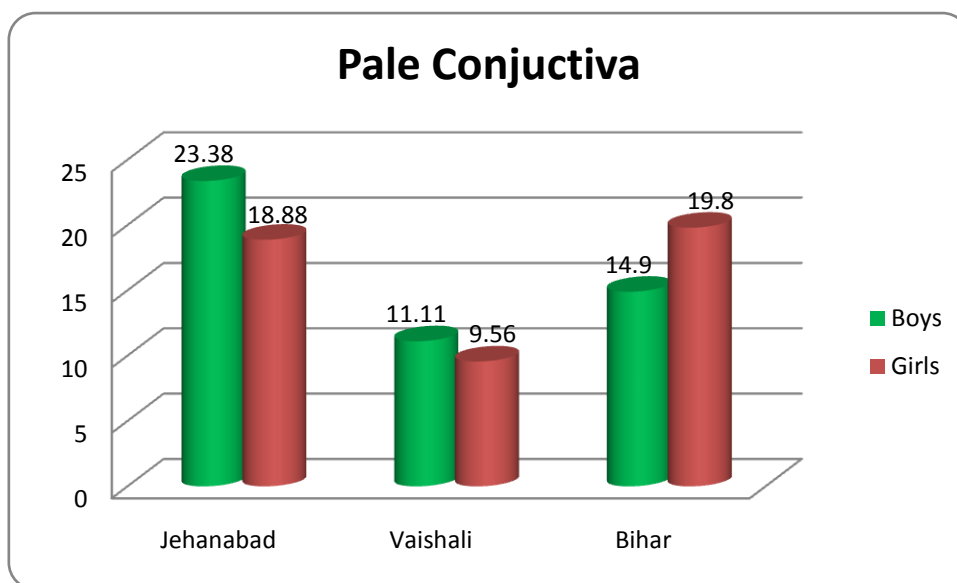


Fig 8. Clinical Signs of various deficiencies among selected children

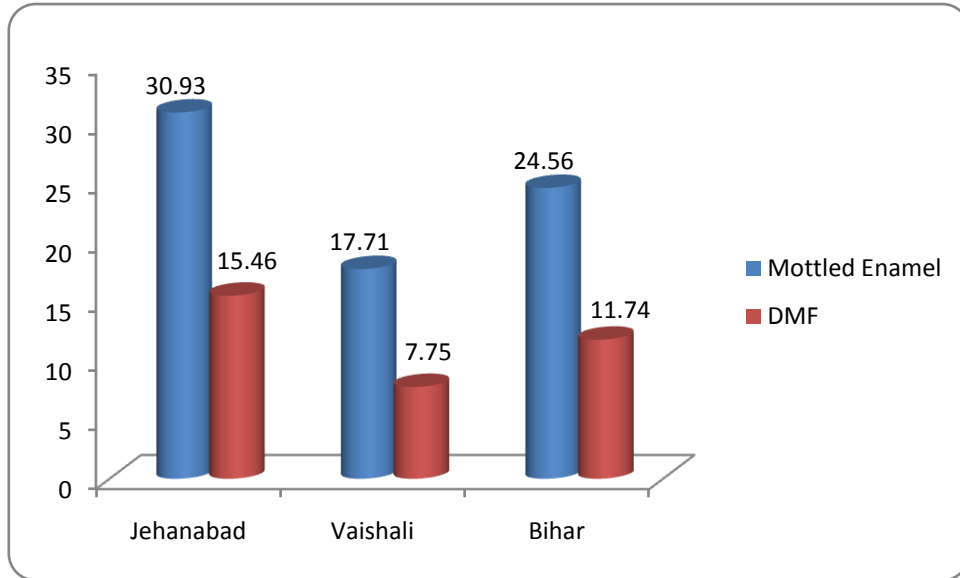


Fig 9. Percentage of Mottled Enamel and Decayed, Missing or Filled teeth (DMF) among selected children.



Spongy gums, a sign of vitamin C deficiency, was observed in 5.2 and 1.85 % of the children from the two districts. Vitamin A deficiency symptoms were observed in 13.88% children. 19.59% being from Jehanabad and 7.75% from Vaishali district (Fig.8). Decayed, missing, filled teeth (DMF), which is a clinical sign of excess of fluorine, was

observed in 15.46 and 7.75 % of the children from Jehanabad and Vaishali districts, respectively (Fig 9). The overall oral hygiene was poor among majority of the subjects. The incidence of DMF may also be attributed to poor oral hygiene and excess fluorine cannot be the only causative factor.

IV Quantity and Quality of Mid Day Meal

The prescribed nutrition to be provided by the Mid Day Meal is as follows:

1. 450 kcal and 12g of protein which is derived from 100 g of food grains (rice/wheat), 20g of pulses, 50g of vegetables and 5g of oil for children studying in primary classes and
2. 700 kcal and 20g of protein, which is derived from 150g of food grains (rice/wheat), 30g of pulses, 75g of vegetables and 7.5g of oil in upper primary classes.

The quantity and quality of the meal were evaluated by the JRM team at the time of serving of meals in eleven schools of the two districts. The measured quantities of the meals served were found to be adequate or more than adequate in all the eleven surveyed schools. However, the use of vegetables was grossly inadequate in all the schools as compared to prescribed amount.

Fig. 9 Quantity and quality of Mid Day Meal served to children in selected schools (N=11)

The MDM guidelines clearly mention that a supervising teacher should taste the prepared meal prior to serving, which was practiced in almost all the schools. The sensory quality of the meals was either good or very good in all the surveyed schools. All the children reported that they finished their serving and got more if asked for.

Table 7 shows the results of the presumptive identification of the test water samples collected from the visited schools of districts Jehanabad and Vaishali.



Water samples collected from various selected villages of Jehanabad and Vaishali

Table 7. Results of presumptive identification of water samples

Jehanabad		
Name of school	Potable	Contaminated
Upgraded Middle School Sikariya	√	
Govt. Primary School, Sukulchak		√
Govt Middle School Hajipur		√
Govt Upgraded Middle School Sukhdev Vigah	√	
Rajkia Utkramit Madhya Vidyalaya, Dersaiya		√
Rajkia Prathamik Vidhyalaya Jolhavigha Maniyawah		√
Rajkia Kriti Prathamik Vidyalaya Hati	√	
Rajkia Kriti Prathamik Vidyalaya Kaji Sarai	√	
Rajkia Utkramit Madhya Vidyalaya, Lodipur	√	
Madhya Vidyalaya Unta		√
TOTAL	5(50%)	5(50%)
Vaishali		
Govt. Middle School Jethui*	√	√

Govt. Middle School Dighi Kala		√
Rajakia Prathamik Vidyalaya Senduari Vasudev	√	
Govt. Upgraded Middle School Pranpur, Berai		√
Government Middle School Dhanushi		√
Govt Primary School Ramnagar Tola		√
Rajakia Adarsh Madhya Vidyalaya, Sarai		√
Utkramit Madhya Vidyalaya Raghunathpur Emadpur		√
Rajakia Adarsh Madhya Vidyalaya Bhagwanpur		√
Madhya Vidyalaya Panapur		√
Ums Murrawatpur Kachahari		√
Prathamik Vidyalaya Kamalpur Sankrit		√
Utkramit Madhyavidyalya Nayaganj Sonartoli		√
Utkarmic Madhyavidyalya Muravatpur		√
Rajkiye Madhya Vidyalaya Sultanpur		√
TOTAL	2(12.5%)	14(87.5%)

*Two samples

The results of the water samples tested showed that the 50% of water samples were contaminated in Jehanabad district, whereas 87.5% of the samples taken were contaminated in Vaishali district. This indicates there is a need for further biological investigation of the drinking water in these areas

SUGGESTED RECIPES FOR MDM BIHAR

1. BESAN –PALAK CURRY

INGREDIENTS

- Chick pea flour = 1 cup
- Curd/ Butter milk = 2 cups
- Onion = 100 gm
- Jeera (cumin seeds) = ½ tsp
- Coriander seeds = 1 tsp
- Red chilli powder = 1 tsp
- Spinach= 1 bunch
- Turmeric powder = 1 tsp
- Curry leaves= 8-10
- Ginger=20 gm
- Oil as needed
- Salt to taste

METHOD

-Wash spinach thoroughly and chop it.

-In a mixing bowl, mix besan flour with beaten curd/ butter milk. Add red chilli powder and turmeric powder and mix well so that no clumps shall be there.

-Heat oil in a high walled, heavy bottom pan or karahi; add curry leaves, crushed coriander seeds and fry a little.

-Then add chopped onions and fry till golden brown in colour.

-Now add finely chopped palak/ spinach, sauté it a little. Add curd mixture and water (double the amount of curd mixture) to it.

-Bring the liquid to boil while stirring continuously.

-Let simmer for about 30 minutes stirring frequently. Season with salt. If the mixture is too thick, you can add more water as needed.

Variation

Potatoes and cabbage can also be used instead of spinach.

2. VEGETABLE PULAO WITH DAL

INGREDIENTS

- Rice =100 g
- Carrots = 50 g
- Shelled peas or green chana= 50 g
- Cauliflower = 50 g
- Onion = 75 g
- Tomato (optional) = 50 gm or to taste
- Green chillies = one no.
- Zeera (Cumin seeds) = 1 tsp
- Salt= To taste
- Ghee as needed

METHOD

- Chop all vegetables into thin slices or cubes.
- Wash rice and soak for half an hour.
- Heat oil in a pan. Fry the cumin seeds (zeera) and sliced onion till golden brown and add tomato.
- Add chopped vegetables and sauté a little.
- Then take water and add it to rice. Bring it to boil.
- Mix well and cover it with lid; cook on medium heat and serve with dal or curd.

3. MATAR METHI

INGREDIENTS

- Peas (dry or fresh) =250 g
- Dry fenugreek leaves =10 g
- Onion=150 g

- Tomato = 100 g
- Salt = 100 g
- Red chillies = According to taste
- Turmeric powder = ¼ tsp (1.25g)
- Oil = 10 g
- Milk =100ml

METHOD

-Soak fresh peas for six hours.

-Boil the peas in just enough water till soft (if peas are dry).

-Make a paste of onions and fry in oil till golden brown.

-Add salt, red chillies, turmeric powder and dried fenugreek leaves and cook for few minutes.

-Add boiled and mashed tomatoes and cook for another two minutes.

-Add milk and boil the mixture. Serve hot.

VARIATION

Dried mint leaves and curry leaves can be used instead of dried fenugreek leaves and in winter season 100g fresh mint and curry leaves can be used.

4. RAJMAH (KIDNEY BEANS) CURRY

INGREDIENTS

- Rajmah (Kidney beans)=250 g
- Onion=100g
- Tomato=75g
- Ginger=10g
- Garlic=5g
- Garam masala=1/2 tsp
- Zeera/ cumin seeds =1tsp
- Turmeric powder=1 tsp

METHOD

- Pick, wash and soak kidney beans in water completely immersed for a minimum of 6-8 hours before they can be boiled.
- Drain the water it was soaked in and cook with three cups of fresh water.
- Wash and peel the potatoes and cut into pieces.
- In a pressure cooker boil water (three times to rajmah/ kidney beans). Add beans and potatoes to it.
- Pressure cook for 15-20 minutes. After first whistle turn the heat to low.
- Simmer for 15-20 minutes. Remove from heat.
- Heat the oil in a pan and fry onions till golden brown. Add tomato, turmeric powder, ginger and green chillies and stir for few minutes.
- Add the boiled bean, potatoes, salt and garam masala. Stir lightly and cook for 10-15 minutes in the covered pan.

5. CHANNA BAINGAN

INGREDIENTS

- Chickpeas = 100 g
- Brinjal (Egg plant) = 600 g
- Onion= 150 g
- Tomato= 150 g
- Ginger= 10 g
- Green chillies= 10 g
- Coriander leaves= 15 g
- Salt= According to taste
- Red chilies= According to taste

METHOD

- Soak the chickpeas overnight. Drain the water and pressure cook in fresh water for 15-20 minutes.
- Grease the brinjal and roast over fast burner flame or charcoal fire till they become soft.
- Pour hot water over them and remove the charred skin. Mash them into a fine paste.
- Heat the oil in a pan and fry onions till golden brown. Add tomato, turmeric powder, ginger and green chillies and stir for few minutes.
- Add the mashed brinjal, steamed chickpeas, salt, red chillies and garam masala. Stir lightly and cook for 10-15 minutes in the covered pan.

6. BOTTLE GOURD IN MILK GRAVY

INGREDIENTS

- Bottle gourd= 400 g
- Onion= 75 g
- Tomato= 75 g
- Coriander leaves= 10 g
- Green chillies= 10 g
- Milk= 100 ml
- Salt= According to taste
- Red chillies= According to taste
- Turmeric powder= ¼ tsp
- Garam masala= ¼ tsp
- Oil= 10 g

METHOD

- Boil milk in a heavy bottomed pan till it gets reduced to half. Keep aside.
- Peel bottle gourd and cut it into small pieces.
- Heat oil in a pressure pan. Add onions and cook till golden brown.
- Add chopped tomatoes, bottle gourd, green chillies, salt and turmeric powder and pressure cook for 3 minutes.
- Mix the thickened milk and chopped coriander leaves to the cooked vegetable and serve hot.

VARIATION

Ridge gourd can be used instead bottle gourd.

7. RED CHANA/ WHITE CHANA IN SPINACH GRAVY

INGREDIENTS

For gravy

Red chana (Bengal gram) = 250 g

Spinach=500 g

Onion= 100 g

Tomato=75 g

Ginger = 10 g

Garlic= 5 g

Salt= According to taste

Red chillies= According to taste

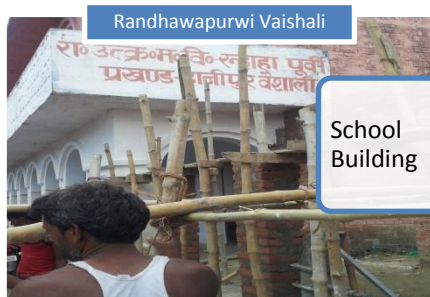
Oil= 15 g

METHOD

- Wash and pressure cook the spinach leaves for two minutes.
- Grind the spinach in the mixer when it is cool.
- Heat oil and fry the thinly sliced onions in it till golden brown.
- Add ginger and garlic paste, tomato and cook for two minutes.
- Add ground spinach, water, salt and red chillies and cook for another five minutes.
- Add overnight soaked chana in the gravy and cook well.

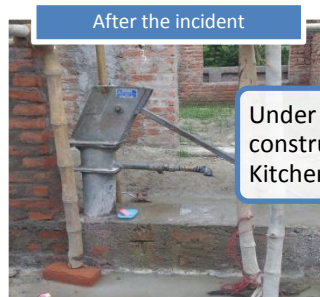


Health Problems observed by the JRM Team



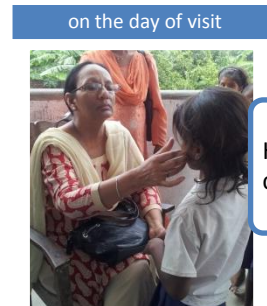
Randhawapurwi Vaishali

School Building



After the incident

Under construction Kitchen shed



on the day of visit

Health check up

1. The JRM Team observed that the school of Randhawapurwi is located at a very interior place of Vaishali district. On 16th August 2013, 50 fell sick after the consumption of Mid day Meal.
2. After the discussion with the Principle the team came to know that a tablet was found in the meal of children in undissolved state.
3. As a preventive measure all the children consuming MDM was admitted to hospital after the complain of head ache and vomiting.
4. Condition of 3 three children were bad as the parents of those children tried to make them vomit by giving them raw banana Plant juice, which in turn did some infection in the throat of the children which was cured after some time with few medication.

5. The parents of the children are still not willing that their children should consume Mid day meal till date.
6. **Huge level of Motivation is required to have faith in Mid day Meal.**

Chapter – 6 Recommendations

- 1. Community mobilization:** The State Government should start an extensive community mobilization program for restoring the faith of community in MDMS. The efforts need to undergo a qualitative shift by taking RTE norms into consideration whereby communities are also empowered to monitor the implementation of mid-day-meal scheme. The training of SMC should also reflect specific needs and concerns of mid- day-meal scheme.
- 2.** The meals should be made more nutrient dense and nutritionally balanced by using channa/rajmah more frequently and improving the consistency. Inclusion of higher amounts of non tuber vegetables, especially the green leafy ones, is recommended.
- 3.** The JRM team recommended that to improve their nutritional status, the undernourished children should be identified by periodical health checkups, dewormed and be given special care during MDM.
- 4.** Drinking water should be tested for any type of biological contamination and remedial purification be done accordingly.
- 5.** Better convergence with the School Health program is essential. There is a need for the regular health monitoring. Vitamin A, Iron and Folic Acid supplements and deworming tablets should be provided on regular basis to the schools. Further, proper instructions regarding their dosage should be given to the teachers. Health cards, with duly filled record of each child need to be maintained and updated regularly in all the schools.
- 6.** There is a need to educate the cooks regarding proper weighment of raw ingredients. Use of weighing balance is recommended for weighing raw ingredients so that children receive prescribed amounts of nutrients.
- 7.** Kitchen sheds in many places have roofs made of reed. Being a breeding place for lizards and cow webs that may fall into the meal being cooked. Immediate replacement of these is essential or alternative remedial measures for this are imperative.
- 8.** Health and Nutrition Education (HNE) is required for children, parents, teachers, cooks and caretakers. Feeding program along with HNE may prove more effective in improving the health and nutritional status of the children.

- 9. Cook-cum-Helpers:** State Govt. should engage adequate number of cook-cum-helpers in the schools as per norms.
- 10. Display of information:** The rights and entitlement of children, menu, MDM logo, and emergency contact numbers should be displayed prominently on the outside wall of the schools.
- 11. Monitoring and Supervision:**
- **Inspections by the officials-** Considering that the scheme is not properly monitored in the State, State may ensure that all the parameters related to MDMS be properly monitored through a structured format.
 - **Setting up of State Review Mission** to review the Scheme in a district on quarterly basis.
- 12.** All centralized kitchens must follow the principles of HACCP (Hazard Analysis Critical Control Point) to ensure that compromised quality food products are not prepared and food related hazards do not occur.
- 13.** The primary (bulk) containers should be preferably sterilized before packing food. This would minimize the risk of food infection outbreaks especially during rainy season.
- 14.** A duty roaster for periodic cleaning of kitchen fixtures/equipment etc. must be prepared and put up on a wall outside kitchen.
- 15.** The gunny bags used for food grains can be auctioned and the amount can be utilized for better implementation of MDMS.
- 16.** Periodic feedback may be obtained for further improvement of from the stakeholders and other concerned officials/teachers who are engaged at the gross root level.
- 17. Grievance Redressal Mechanism (GRM)**
- a) Setting up of GRM at various levels.

- b) Suggestion box / complaint register should be kept at a convenient place in the school to enable the visitors to give their suggestion and views for improving the scheme.
- c) A toll free number may be installed for lodging complaints and giving suggestions and it may be widely publicized.

Shri Sanjay Singh

Prof Ajay Kumar Jha

Dr (Mrs) Jaswinder Kaur Brar

Mr Rupesh Kumar

Shri Rajiv Kumar,

Dr Neelam Grewal, (Mission Leader)

Annexure: 1

Sample design of the nutritional survey

Name Of School	Total Strength	Sample size	Boys	Girls
Jehanabad				
Govt. Middle School ,Mai	400	18	9	9
Govt. Middle School ,Makdunpur	182	12	6	6
Upgraded Middle School Sikaria	366	34	16	18
Govt. Primary School, Sukulchak	104	28	15	13
Govt. Middle School Bhewad	323	32	16	16
Govt Middle School Hajipur	350	32	16	16
Govt Upgraded Middle School Sukhdev Vigah	118	16	8	8
Rajkia Utkramit Madhya Vidyalaya, Dersaiya	144	20	9	11
Rajkia Prathamik Vidhyalaya Jolhavigha Maniyawah	72	15	11	4
Rajkia Kriti Prathamik Vidyalaya Hati	55	15	11	7
Rajkia Kriti Prathamik Vidyalaya Kaji Sarai	315	21	11	10
Rajkia Utkramit Madhya Vidyalaya, Lodipur	128	30	16	14
Madhya Vidyalaya Unta	438	17	6	11
Total	2995	290 (9.69%)	143	147
Vaishali				

Govt. Middle School Jethui	141	32	16	16
Govt. Middle School Digli Kala	407	28	14	14
Rajakia Prathamik Vidyalaya Senduari Vasudev	83	10	5	5
Govt. Upgraded Middle School Pranpur, Berai	112	15	8	7
Rajkiye Madhya Vidyalaya Rambhadra	205	16	8	8
Government Middle School Dhanushi	284	16	8	8
Govt Primary School Ramnagar Tola	150	10	5	5
Rajakia Adarsh Madhya Vidyalaya, Sarai	371	12	6	6
Utkramit Madhya Vidyalaya Raghunathpur Emadpur	190	20	13	7
Rajakia Adarsh Madhya Vidyalaya Bhagwanpur	233	14	7	7
Utkramit Madhya Vidyalaya Randhawapur	170	16	8	8
Madhya Vidyalaya Panapur	507	26	14	12
Ums Murrawatpur Kachahari	469	15	8	7
Prathamik Vidyalaya Kamalpur Sankrit	114	18	7	11
Utkramit Madhyavidyalaya Nayaganj Sonartoli	298	8	2	6

Rajkiye Madhya Vidyalya Sultanpur	400	15	6	9
Total	4134	271 (6.65%)	136	135

Value in parenthesis is percent sample drawn

School wise details of Attendance and Avg. children availed MDM during last ten days : District Jehanabad															
SN	Name of the District	Name of the Block	Name of the school	Enrollment	Attendance										Avg.
					Day-1	2	3	4	5	6	7	8	9	10	
1	Jehanabad	Jehanabad	RajkiaMadhayVidyalaya	300	146	172	196	154	196	180	200	178	205	194	182
2	Jehanabad	Kako	Govt. middle School Mai	511	254	287	347	306	352	358	302	339	373	400	400
3	Jehanabad	Lodipur	RajkiaUtkramit Madhya Vidyalaya	128	101	111	Meal was not served								0
4	Jehanabad	Dersaiya	RajkiaUtkramit Madhya Vidyalaya	207	154	149	85	153	148	160	155	149	145	139	144
5	Jehanabad	Kako	RajkiaKritiprathamicVidyalaya Hati	106	57	50	33	55	73	65	80	69	63	68	55
6	Jehanabad	Kako	RajkiaKritiprathamicVidyalayaK ajiSarai ()P& UPY	174	86	79	60	90	106	92	103	84	79	91	78
				547	266	270	170	251	296	273	288	293	265	275	237
7	Jehanabad	Jehanabad	Madhya VidyalayaUnta (P)	720	172	190	231	225	235	232	235	240	218	228	198
			UPY	1142	316	329	319	269	290	204	285	212	180	190	240
8	Jehanabad	Kako	RajkiaPrathamikVidhyalayaJolh avighaManiyawah	122	91	75	73	72	81	53	98	93	88	86	72
9	Jehanabad	Jehanabad	Govt. middle School (p)	323	126	152	169	129	176	181	176	153	179	183	144
			UPY	227	161	104	122	129	121	133	127	113	122	124	113
10	Jehanabad	Kadauna	Upgraded Middle school Sikaria (P)	224	140	115	169	151	126	135	135	115	161	146	MDM was not served from 4/8/13 to 21/8/13
			Upy	142	79	75	33	94	86	88	88	85	96	101	
11	Jehanabad	Kadauna	GPS Sukulchak	115	106	103	105	95	109	106	109	105	103	104	104
12	Jehanabad	Kako	Govt Upgraded Middle school Sukhdevvihar	78	64	64	59	60	68	66	68	69	69	69	66
			UPY	59	47	49	45	48	56	57	55	52	57	55	52
13	Jehanabad	Jehanabad	Govt. Middle School	251	136	106	104	34	102	128	95	119	120	115	
			UPY	623	346	306	263	86	247	281	286	222	220	203	
14	Jehanabad	Kako	Govt Pry school Nadiyava	118	88	91	86	63	85	92	91	92	95	88	

School wise details of Attendance and Avg. children availed MDM during last ten days : District Vaishali															
SN	Name of the District	Name of the Block	Name of the school	Enrollment	Attendance										Avg.
					Day-1	2	3	4	5	6	7	8	9	10	
1	Vaishali	Bhangwanpur	Utkramit Madhya VidyalayaRaghunathpurEmadpur (p)	245	146	155	140	96	65	79	133	129	129	95	116
			UPY	142	97	87	77	66	52	66	65	85	79	61	73
2	Vaishali	Sarai	RajakiaAdarsh Madhya Vidyalaya (p)	234	176	131	154	114	86	91	129	129	151	146	111
			Upy	578	309	372	315	250	293	292	288	280	280	363	260
3	Vaishali	Bhangwanpur	RajakiaAdarsh Madhya VidyalayaBhagwanpur (p)	450	224	255	242	242	180	247	247	232	251	206	233
4	Vaishali	SehdeiBujurg	RajakiamadhyaVidyalaya (P)	330	389	381	344	357	333	289	322	351	358	316	344
			UPY	447	221	182	223	301	267	243	239	311	282	294	256
5	Vaishali	Biddupur	Madhya VidyalayaPanapur	475	221	182	223	301	267	243	239	311	282	294	256
			Upy	616	283	218	241	314	281	141	174	289	290	279	251
6		Biddupur	Madhya VidyalayaPanapur (P)	305	294	282	311	239	243	267	301	223	182	221	256
			UPY	350	279	290	289	174	141	281	314	241	218	283	251
7	Vaishali	Biddupur	PrathamicVidyalayaKamalpurSanskrit	193	116	116	117	116	115	110	109	110	110	116	114
8	Vaishali	SehdeiBujurg	UMS MurrawatpurKachahari (p)	355	263	289	278	282	275	####	265	263	288	263	275
			Upy	244	182	215	186	188	193	193	202	193	197	195	194
9	Vaishali	SehdeiBujurg	Utkramit Madhya Vidyalaya (p)	248	174	186	177	175	156	164	152	180	165	160	169
			UPY	288	137	148	122	120	127	111	114	145	127	134	129
10	Vaishali	Lalgang	Government Middle School Dhaushi (p)	253	198	208	206	194	197	215	Meal was not served				142
			UPY	223	193	208	210	196	207	213	Meal was not served				141
11	Vaishali	Hazipur	Govt. Upgraded Middle school Pranpur (p)	183	142	138	150	147	136	130	146	122	138	128	77
			UPY	123	80	68	73	68	73	73	74	72	81	80	35
12	Vaishali	Hazipur	RajakiaPrathamicVidyalayaSedualyvasudev	110	93	91	90	86	73	66	84	84	84	82	83
13	Vaishali	Hazipur	Govt. Middle school Digli Kala	990	315	363	440	314	263	448	477	445	482	527	407
14	Vaishali	Hazipur	Govt. Middle School Jethni (P+Upy)	819	393	375	462	412	473	255	0	0	436	0	141

School wise details of Infrastructure facilities : District: Vaishali													
Name District	Name of the school	Enrollment	Avg.	No. of CCH	Caste of the CCH	Separate toilet	Drinking water	Fuel	Fire extinguisher	Health check up	Inspection	MDM LOGO	Emergency No display
Vaishali	Utkramit Madhya VidyalayaRaghunathpurEmadpur (p)	245	116.7	3	EBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	UPY	142	73.5	4	EBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
Vaishali	RajakiaAdarsh Madhya Vidyalaya (p)	234	111	4	EBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	Upy	578	260	6	5 OBC 1 ST	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
Vaishali	RajakiaAdarsh Madhya VidyalayaBhagwanpur (p)	450	233	3	3 OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
Vaishali	RajakiamadhyaVidyalaya (P)	330	344	3	3 OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	UPY	447	256	3	3 OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
Vaishali	Madhya VidyalayaPanapur	475	256	3	3 OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	Upy	616	251	3	3 OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	Madhya VidyalayaPanapur (P)	305	256	3	3 OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	UPY	350	251	Same									
Vaishali	PrathamVidyalayaKamalpurSankrit	193	114	2	3 SC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
Vaishali	UMS MurrawatpurKachahari (p)	355	275	4	4 SC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	Upy	244	194	Same									
Vaishali	Utkramit Madhya Vidyalaya (p)	248	169	4	2SC OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	UPY	288	129										
Vaishali	Government Middle School Dhaushi (p)	253	142	4	OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	UPY	223	141										
Vaishali	Govt. Upgraded Middle school Pranpur (p)	183	77	2	OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
	UPY	123	35	Same									
Vaishali	RajakiaPrathamVidyalayaSed ualyvasudev	110	83	4	2SC OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
Vaishali	Govt. Middle school Digli Kala	990	407	4	3SC 1OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No
Vaishali	Govt. Middle School Jethni (P+Upy)	819	141	2	2 OBC	Yes	Handpump	Firwood	NO	Nil	Yes	No	No

School wise details of Infrastructure facilities : District: Jehanabad

SN	Name of the District	Name of the school	Enrollment	Avg.	No. of CCH	Caste of the CCH	Separate toilet	Drinking water	Fuel	Fire extinguisher	Health check up	Inspection	MDM LOGO	Emergency No display
1	Jehanabad	RajkiaMadhayVidyalaya	300	182	5	OBC	Yes	Handpump	Firwood	Yes	Nil	Yes	No	No
2	Jehanabad	Govt. middle School Mai	511	400	5	OBC	Yes	Handpump	Firwood	Yes	Nil	Yes	No	No
3	Jehanabad	RajkiaUtkrमित Madhya Vidyalaya	128	0	2	EB C	Yes	Handpump	Firwood	Yes	Nil	Yes	No	No
4	Jehanabad	RajkiaUtkrमित Madhya Vidyalaya	207	144	2	EB C	Yes	Handpump	Firwood	Yes	Nil	Yes	No	No
5	Jehanabad	RajkiaKritiprathamik VidyalayaHati	106	55	4	3 EBC 1 Gen	Yes	Handpump	Firwood	Yes	Nil	Yes	No	No
6	Jehanabad	RajkiaKritiVidyalaya KajiSarai (J)P& UPY	174	78	4	3 EBC 1 Gen	Yes	Handpump	Firwood	No	Nil	Yes	No	No
			547	237	4	3 EBC 1 Gen	Yes	Handpump	Firwood	No	Nil	Yes	No	No
7	Jehanabad	Madhya VidyalayaUnta (P) UPY	720	198	4	3 EBC 1 Gen	Yes	Handpump	Firwood	No	Nil	Yes	No	No
			1142	240	8	7 SC EBC 1	Yes	Handpump	Firwood	No	Nil	Yes	No	No
8	Jehanabad	RajkiaPrathamikVidhyalayaJolhavigha	122	72	8	1 SC EBC 1	Yes	Handpump	Firwood	No	Nil	Yes	No	No
9	Jehanabad	Govt. middle School (p)	323	144			Yes	Handpump	Firwood	No	Nil	Yes	No	No
		UPY	227	113	3	2 SC 1 OBC	Yes	Handpump	Firwood	No	Nil	Register Poorly maintained	No	No
10	Jehanabad	Upgraded Middle school Sikaria (P)	224	MDM was not served from 4/8/13 to 21/8/13	3	OBC	YES	Handpump	Firwood	No	Nil	Yes	No	No
		Upy	142					Handpump	Firwood	No	Nil	Yes	No	No
11	Jehanabad	GPS Sukulchak	115	104	2	OBC	Yes	Yes	Handpump	Firwood	No	Yes	No	No
12	Jehanabad	Govt Upgraded Middle school Sukhdevvihar	78	66	2	OBC	Yes	Yes	Handpump	Firwood	No	Yes	No	No
		UPy	59	52										
13	Jehanabad	Govt. Middle School	251											
			623		3	OBC*	Yes	Yes	Handpump	Firwood	No	Nil	No	No
14	Jehanabad	Govt Pry school Nadiyava	118		2	OBC	Yes	Yes	Handpump	Firwood	No	Nil	No	No