

Mid Day Meal Scheme in India: The Road Ahead

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Abstract

Malnutrition has a far more powerful impact on child mortality than is generally appreciate. It involves long term deficit in mental, physical, social and emotional development that leaves children unable to take maximum advantage of learning opportunities in schools and are more likely to grow into malnourished adults, with a greater risk of disease and early death. Despite the fact that the prevalence of malnutrition has decreased in the past decades but still close to 1.3 million children die every year in India because of malnutrition, according to the World Health Organization (WHO). While it is a serious problem in sub-Saharan Africa, even higher rates of stunting are found in South Asia, particularly in India. According to the UNICEF India is the home to one in every three malnourished children in the world). Along with Nepal and Bangladesh, India has the world's highest rate of malnutrition. In an effort to improve nutritional levels among children, and to encourage school attendance, in 2001, the Indian Supreme Court mandated a school feeding program, known as the “**Mid-Day Meal Scheme.**” The study indicates that the scheme has been successful in addressing ‘classroom hunger’ and raising enrolment rates in the beneficiary schools. The contribution of mid day meal to **food security** and **child nutrition** seems to be particularly crucial in tribal areas where hunger is endemic. However, inefficiencies and leakages in the delivery system have severely limited the impact of the program. This paper aims to understand how the mid day meal scheme actually works on the ground and to identify the achievements so far as well as the remaining challenges.

Keywords: *Mid Day Meal Scheme; NP-NSPE; Primary School Education, Food Safety; Nutritional Deficiency*

INTRODUCTION

The concept of supplementary nutrition support through educational institutions has had a long history in India. In 1925, a Mid Day Meal Programme was introduced for disadvantaged children in Madras Municipal Corporation. However, it was about 50 years later that such a program was given any serious attention at the national level by the Government. In the year 1974, the National Policy on Children declared that country's children are its supreme human resource. This policy encouraged the state to ensure full physical and mental development of children. By the mid 1980s three States viz. Gujarat, Kerala and Tamil Nadu and the UT of Pondicherry had universalized a cooked Mid Day Meal Programme with their own resources for children studying at the primary stage. By 1990-91 the number of States implementing the mid day meal programme with their own resources on a universal or a large scale had increased to twelve states. Later, the National Programme of Nutritional support to Primary Education (NP-NSPE) was launched at the national level in 1995 (GOI, 1995). The objective of this program was to give boost to universalization of primary education and impacting on nutrition of students in primary classes. At about that time the union territory of Delhi implemented a Mid-Day Meal program. The program was revised in 2004 and government at the centre emphasized its implementation in its Common Minimum Programme. It envisaged provision of cooked, nutritious Mid-Day Meal to primary and secondary school children. Importantly, it also mentioned of setting-up of an appropriate mechanism for quality checks. . Despite the broad-based efforts of the central government for more than a decade and a half and a few pioneering efforts earlier on, the problem of malnutrition, anaemia, deficiency in vitamin A and Iodine is very common among children in India. Today, 94 percent of children in the age group of 6 to 9 are mildly, moderately, or severely underweight. About 67.5 percent of children under 5 years and 69 percent of adolescent girls suffer from anaemia due to iron and folic acid deficiency [GOI, 1996].

CONCEPT OF MID DAY MEAL PROGRAM

The National Programme of Nutritional Support to Primary Education which is popularly known as the Mid Day Meal Scheme is a flagship programme of the Government of India launched on 15th August 1995. It was initially launched in 2408 blocks in the country but by the year 1997-98 the NP-NSPE was introduced in all the blocks of the country. NP- NSPE aims to enhance enrolment, retention and attendance and simultaneously improving nutritional levels among children studying in Government, Local Body and Government-aided primary and upper primary schools and the Centres run under Education Guarantee Scheme (EGS)/Alternative & Innovative Education (AIE) and Madrasas/Maktab. Since, 2009-10 the scheme covers children studying in National Children Labour Project (NCLP) schools of all areas across the country. MDM is also served in drought-affected areas during summer vacation also. The world's largest school feeding programme reaching out to about 12 crore children in over 12.65 lakh schools/EGS centres across the country also seeks to address issues of food security, lack of nutrition and access to education on a nationwide scale. The scheme is implemented through the

State/UT Governments. The central and state governments share the cost of the Midday Meal Scheme, with the centre providing 75 percent and the states 25 percent. In relatively short period of time mid day meal has become a part of daily school routine across the country.

The original program provided 100 grams of food grains per child per day, with the objectives of improving the nutritional status of public school children, encouraging poor children from disadvantaged areas to attend school more regularly, helping children concentrate on classroom activities, and providing nutritional support to children in drought affected areas during summer breaks (Government of India). In 2002, the Supreme Court directed the Government to provide cooked Mid-Day Meals (as opposed to providing dry rations) with a minimum content of 300 calories of energy and 8-12 gram protein per day for a minimum of 200 days in all Government and Government aided primary schools. Thus in September of 2004, the program transitioned from raw grains to cooked meals, consisting of a minimum of 300 calories and 8-12 grams of protein per child. Finally, in July of 2006, the Program standards were increased, requiring 450 calories and 12 grams of protein per child per day, with special stipulations to provide iron, folic acid, and other essential stipends. The 2006 revision also provided subsidies to schools to cover cooking and preparation costs (GOI 2006).

OBJECTIVES OF THE MID DAY MEAL SCHEME

The MDMS is the world's largest school meal programme and reaches an estimated 12 crore children across 12 lakh schools in India. The objectives of the Mid-Day Meal Scheme are to address two of the pressing problems for majority of children in India, viz. hunger and education by:

- (i) Improving the nutritional status of children in classes I – VIII in Government, Local Body and Government aided schools, and Education Guarantee Scheme (EGS) and Alternative and Innovative Education (AIE) centres, National Child Labour Project (NCLP) Schools and Madarasa and Maqtabs supported under Sarva Shiksha Abhiyan (SSA).
- (ii) Encouraging poor children, belonging to disadvantaged sections, to attend school more regularly and help them concentrate on classroom activities.
- (iii) Providing nutritional support to children of elementary stage in drought-affected areas during summer vacation (33).

MEAL PROVISION

Since its inception, the scheme has been revised from time to time and the present provisions are as given below (26):-

1.	Free supply of food grains @ 100 grams per child per school day at Primary and @ 150 grams per child per school day at Upper Primary.
2.	Subsidy for transportation of food grains is provided to 11 special category states at PDS rate prevalent in these states and up to a maximum of Rs.75.00 per quintal for other than special categories States/UTs
3.	In addition to foodgrains, a mid day meal involves major input, viz.,cost of cooking, which is explained below:

- Cost of cooking includes cost of ingredients, e.g. pulses, vegetables, cooking oil and condiments as given below:-

Table 1: Food Norms with effect from 1-12-2009

Sl. No.	Items	Quantity per day/Child	
		Primary	Upper Primary
1.	Foodgrains	100gms	150gms
2.	Pulses	20gms	30gms
3.	Vegetables(leafy also)	50gms	75gms
4.	Oil & Fat	5gms	7.5gms
5.	Salt& Condiments	As per need	As per need

Source: *mdm.nic.in*

Table 2: Revised Cooking cost per child per school day w.e.f 1.07.2014

Stage	Total Cost	Centre- state sharing			
		Non- NER States(75:25)		NER- State (90:10)	
		Central	State	Central	State
Primary	Rs. 3.59	Rs. 2.69	Rs. 0.90	Rs. 3.23	Rs. 0.36
Upper Primary	Rs. 5.38	Rs. 4.04	Rs. 1.34	Rs. 4.84	Rs. 0.54

Source: *mdm.nic.in*

COVERAGE OF COOKED MID DAY MEAL SCHEME(CMDM)

The table below shows, state-wise, the total number of schools, number of schools covered under CMDM, the number of schools covered under MDM, and the number of uncovered schools. The table highlights that in all the sample states, a large proportion of schools have been covered under the CMDM scheme (31).

Table 3: Schools Covered under CMDM, MDM and Uncovered Schools in the Selected States*

Sl. No	State	Total schools	Enrolment	Schools Covered under CMDM	Schools Covered under MDM	No. of Uncovered Schools	Enrolment in Uncovered Schools
1.	Andhra Pradesh	60780	6033039	607800	0	0	0
2.	Arunachal Pradesh	4593	218905	4593	0	0	0
3	Bihar	69204	12858653	69204	0	0	0
4.	Haryana	16589	2549331	12744	1702289	3845	847042
5.	Himachal Pradesh	10982	529843	10982	0	0	0
6.	Jammu & Kashmir	26648	1484887	23091	0	3557	391270
7.	Jharkhand	38524	5048908	37923	0	601	82768
8.	Kerala	10913	2160354	10913	0	0	0
9.	Madhya Pradesh	94905	8891737	94905	0	0	0
10.	Maharashtra	85821	9014434	79918	8187366	5903	827068
11.	Meghalaya	7940	627596	7640	0	0	0
12.	Punjab	20494	1767825	0	0	4506	280000
13.	Rajasthan	74690	6960000	74690	0	0	0
14.	Tamil Nadu	34710	4826835	34710	0	0	0
15.	Uttar Pradesh	107377	18917189	107377	0	0	0
16.	West Bengal	74993	10206608	698140	0	5179	1011227

*as per the state level schedules

Source : *Performance Evaluation of Cooked Mid Day Meal(CMDM) , Planning Commission, GOI, May 2010*

CONTRIBUTIONS AND ACHIEVEMENTS OF THE SCHEME

Research Findings on Mid Day Meal

Some research findings on Mid Day Meal Scheme conducted by independent agencies reported that MDM programme is a visible programme and has helped in increase in attendance and enrolment of children particularly girls. They also reported that there is an increase in retention, learning ability and achievement as well as greater social equity among caste, creed, sex and gender groups in the schools. The main research findings conducted by independent organizations in various states indicate the following impacts:

- Studies by economists show that there has been a positive effect on enrollment of disadvantaged children (Dreze and Kingdon), on attendance (by Chakraborty, Jayaraman, Pande), on learning effort (by Booruah, Afridi and Somanathan), on improving nutritional inputs (Afridi), on improving nutritional outcomes (by Singh, Dercon and Parker), and so on.
- The major findings of the PROBE (Public Report on Basic Education) Report indicated that 84% of households reported that the children get cooked mid day meal in schools and children enjoy varied menu. Good practices like washing hands before eating, & after eating are imparted in the schools (44)
- The National Institute of Public Cooperation & Child Development, Indore has reported that MDM has shown marked improvement in enrollment pattern of children in primary schools. As depicted in reports, the scheme helped reduce the burden on poor families relating to food and education with respect to girl child especially.[34]
- According to the reports of Annual Status of Education Report (ASER) 2010 reported in 83.4% schools served MDM on a day of visit and almost same percent of schools (81.3%) schools were having kitchen sheds for cooking mid-day meal.[34]

- An empirical study conducted on Mid Day Meal scheme in Khurda district of Orissa, revealed that cooked mid day meal has increased socialization among the children and helped in increasing enrolment and afternoon session attendance. MDM has created new employment opportunities for underprivileged sections
- According to the Research findings (2010) of Pratichi trust of Prof. Amartya Kumar Sen, implementation of MDM has been a success throughout the country. They have also proposed that the quality of food needs to be improved.(34)
- The National Council of Educational Research & Training's (NCERT) latest report states Learning Achievements of Students at the End of Class –V has inferred that children covered under mid day meal have higher achievement level than those who were not covered under it. (33)
- Supreme Court Commissioners undertake extensive review of various welfare schemes through field visits. They have observed that the MDM is widely acknowledged as one of the most successful schemes of GOI. Increase in enrollment and attendance of children in primary schools has been noticed after the introduction of MDM.
- Performance audit (2011) conducted by Centre for Environment and Food Security on food security schemes in Orissa and Uttar Pradesh; The sample survey in 130 villages spread over 12 districts of Orissa and Uttar Pradesh (Bundelkhand) was carried out and reported that performance of the MDM scheme is far better in Orissa in comparison with the Uttar Pradesh. An overwhelming 86.7 per cent of Orissa's children were getting second best category of MDM (regular but inadequate and unsatisfactory meal), only 51.8 per cent of children in UP were getting regular but inadequate and unsatisfactory meal in their schools.

Findings of Evaluation Study by Planning Commission

Performance Evaluation of Cooked Mid Day Meal Scheme - study conducted by Programme Evaluation Organization of Planning Commission (2010):

The highlights of the Study conducted by the Planning Commission are as under:

1. The Cooked Mid Day Meal Program has been successful in addressing classroom hunger in sample schools.
2. Cooked Mid Day Meal is reported to have created a platform for children of all social and economic backgrounds to take meals together, thereby facilitating achieving the objective of social equity.
3. It has also been observed that the programme has resulted in the diversion of the attention of teachers and students on activities related to it, rather than towards teaching and learning activities, which results in loss of studies.
4. In general, visible shortage of basic infrastructural facilities and manpower (that are crucial for the success of the Cooked Mid Day Meal programme) were noted.
5. Most of the states, it was observed, did not follow the guidelines of Government of India to deliver foodgrains at the school point by PDS dealer, thereby resulting in the leakage of foodgrains. There have been instances where due to long supply chain, foodgrains supplied got adulterated and pilfered.
6. While Cooked Mid-Day Meal Scheme seems to have contributed to an increase in the attendance in schools across the country, it does not seem to have any significant impact on fresh enrolments in sample schools.

Table 4: Achievements during the period 2005-06 to 2011-12

Components	2005-06	2006-07	2007-08*	2008-09*	2009-10*	2010-11*	2011-12*
Children covered (in Cr.)	11.94	10.68	11.37	11.19	11.36	10.46	10.35 up to 30.09.11
Food grain allocated (in lakh MTs)	22.51	21.60	24.79	29.30	27.71	29.40	29.09
Budget allocation (in Cr.)	3345.26	5348.00	6678.00	8000.00	7359.15	9440.00	10380.00
Total Exp (in Cr.)	3186.33	5233.47	5835.44	6688.02	6937.79	9128.44	7697.24 up to 29.12.11

Source: Annual Report 2011-12, MHRD, GOI

*Primary and Upper primary Combined

REPLICABLE BEST PRACTICES OF OTHER STATES

Innovative Practices of other states which could be adopted

Several state governments have evolved practices to improve the implementation of the MDMS in their states. These include involving mothers of students in implementation of the scheme in Uttarakhand and Jharkhand; creation of kitchen gardens, i.e., food is grown in the premises of the school, in Andhra Pradesh, Karnataka,

Punjab and West Bengal; construction of dining halls in Tamil Nadu; and increased community participation in the implementation of the scheme Gujarat. Following are some of the best practices in details:

Andhra Pradesh:

Public Private Partnership and the use of Ultra Rice

The Centralized Model of implementation of Mid Day Meal scheme was adopted in Vishakhapatnam, Andhra Pradesh in 2008. PATH and Global Alliance for Improved Nutrition (GAIN) partnered with Naandi foundation to provide iron-fortified lunches everyday to 61,000 school children, that comes in the form of Ultra Rice. The National Institute of Nutrition conducted a study from 2007-2008 to assess the impact of Ultra Rice on the iron status of school children participating in the Mid Day Meal programme. The study showed a significant increase in the iron stores (measured by serum ferritin levels) of the children. The children also experienced significant reduction in incidence of morbidity in comparison to the control group.

In Centralized kitchens, the incremental cost of adding Ultra Rice to rice-based meals is nominal because the fortified grains are easily blended with traditional rice either during or right before cooking. The incremental cost per day per child comes out to be Rs 0.1. Given the proven benefits of Ultra Rice on child health, this is an intervention which deserves attention and can be implemented in other regions for better results. The Mid Day Meal programme can thus be utilized to achieve the goals of greater student attendance as well as making focused interventions in the field of child health and nutrition.

Bihar:

Mahila Samakhyas's Role in implementation of Mid Day Meal

The State Government is implementing the MDM scheme through SHGs / Mahila Samakhyas / Mata Samitis in 9 districts. The practice of cooking the food, serving food and quality of food is taken care by these women. Food is cooked at the panchayat level and cooked food is safely transported to school within an hour of preparation. Role of Mahila Samakhya has been observed in terms of women getting employment and adequate income from these activities. Mahilya Samakhya is a successful intervention and a example of best practice in maintaining efficiency and quality of the Scheme.

Jharkhand :

Involvement of Community through Saraswati Vahini

Involvement of Saravati Vahini in the implementation of MDM is good example of the community participation. In Jharkhand, community participates through school children's mothers association called *Saraswati Vahini*. Out of the total mothers of children enrolled in the school, two mothers are nominated as *Sanyojika*, who are active and can do the cooking and other activities effectively. Remaining members of Saraswati Vahini supervise the cooking and distribution of meal on roster basis. Community's involvement also helps in improving the condition of school.

Kerala:

Effective and efficient Public Distribution System "Maveli Stores"

"To provide essential requirements to the reach of everyone" is the mission statement adopted by the Kerala Sate Civil Supplies Corporation, better known as SUPPLCO which is fully owned Government Company. The public distribution system in the state is therefore an instrument to meet the needs of the children through a strong food chain starting from the FCI and Kerala Sate Civil Supplies Corporation, which finally goes down to the school through the *Maveli Store,s* which avoids the interruptions in implementation of the programme.

Rajasthan:

Pubic -Private Partnership

A policy for attracting public-private partnership in the MDM Scheme was launched by the Government of Rajasthan in January 2006. Commendable achievements have been made in attracting such partnerships in the programme. Akshya Patra Foundation, Naandi foundation, Adamyia Chetna Trust are examples which have partnered with the Government in success implementation of the MDM in the State.

Tamil Nadu:

The State Government not only makes sufficient budget provision for constant supply of food items and infrastructure facilities, but increased budget provisions are made every year for continuous improvement in the management systems and quality of Mid Day Meals supplied in schools. The Social Welfare and Nutritional Meal Programme Department at State Level and the network with the Tamil Nadu Civil Supplies Corporation ensure constant supply of food items. At the institutional level, preparation and distribution of MDM is a good team effort which includes not only the regular workers, noon meal organizers, cooks and the assistants, but also get the cooperation from teachers, head teachers, mothers and the members of the village education committee.

The option for delivering other services along with the nutritious meal to the students could be adopted, as already in practice in some of Indian states, details are tabulated below:

Table 5: Best Practices of MDM in Indian States

Sl. No.	States	Health	Infrastructure development	Capacity building	Others
1.	Andhra Pradesh	Routine health check up done once in two months/free necessary medicines / D.T.P/ TT injections in some districts			Creation of kitchen gardens in the premises of the school
2.	Bihar		B.E.P provides for hut construction	UNICEF provides training of officials and resource persons	
3	Haryana			Food & nutrition board, GOI for training	
4.	Himachal Pradesh		SSA provides for construction of kitchen sheds	Training through DIET	
5.	Jharkhand	Apna Swasthya Apne Haath – School health in Sanitation Education programme			i. Effective management of MDM through Bal Sansad (Child Cabinet) in Jharkhand ii. Kitchen Garden and Bio Intensive Garden (BIG) ensuring quality food in MDM in Jharkhand iii .Involvement of mothers of students in the implementation of the scheme -
6.	Karnataka	tory, a kind ofin A, Iron tablets & deworming tablets			i .Opening of Grievance Reddressal Cell ii. Kitchen garden iii. Wall Writing iv. Creation of joint account of Presidents of School Development , Monitoring Committee and Head cooks for the purchase of vegetables
7.	Maharashtra	Routine check-up done once in a year by the nearest PHC doctor			
8.	Odisha	-Routine check-up done twice a year -Supply of micro-nutrients, Iron, Folic Acid, Vitamin 'A' and deworming tablets in convergence with the National Rural Health Mission			

Source:

- 1) 328645/MCB/ISA/AA/01 05 August 2014
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- 2) <http://www.schooleducation.kar.nic.in/mms/bestpractices.html>
- 3) <http://www.mdmodisha.nic.in/aboutus.htm>

PROBLEMS WITH THE SCHEME

Key issues with implementation: While there is significant inter-state variation in the implementation of the MDSM, there are some common concerns with the implementation of the scheme. Caste based discrimination continues to occur in the serving of food mainly in Odisha, Rajasthan and Madhya Pradesh, though the government seems unwilling to acknowledge this.^[7] Sukhdeo Thorat and Joel Lee found in their 2005 study that caste discrimination was occurring in conjunction with the Mid Day Meals programme.^[24]

Some of the concerns highlighted by the Ministry for Human Resource Development based on progress reports submitted by the states in 2012 are detailed in Table given below:

Table 6: Key implementation issues in the MDMS

Issue	State(s) where these problems have been reported
Irregularity in serving meals	Karnataka, Madhya Pradesh, Orissa, Rajasthan, Maharashtra, Arunachal Pradesh
Irregularity in supply of food grains to schools	Orissa, Maharashtra, Tripura, Karnataka, Arunachal Pradesh, Meghalaya, Delhi, Andhra Pradesh
Caste based discrimination in serving of food	Orissa, Rajasthan, Madhya Pradesh
Poor quality of food	Rajasthan, Tamil Nadu, Delhi, Chhattisgarh
Poor coverage under School Health Programme	Orissa, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh, Manipur, Arunachal Pradesh, Himachal Pradesh, Chhattisgarh
Poor infrastructure (kitchen sheds in particular)	Andhra Pradesh, Tamil Nadu, Puducherry, Gujarat, Chandigarh, Himachal Pradesh, Jammu and Kashmir, Orissa
Poor hygiene	Delhi, Rajasthan, Puducherry
Poor community participation	Most states – Delhi, Jharkhand, Manipur, Andhra Pradesh in particular

Source: Ministry of Human Resource Development; PRS.

Media reports have also highlighted several implementation issues, including irregularity, corruption, hygiene, caste discrimination, etc. A few such incidents are listed below:

- In December 2005, Delhi police seized eight trucks laden with 2,760 sacks of rice meant for primary school children. The rice was being transported from Food Corporation of India godowns Bulandshahr district to North Delhi. The police stopped the trucks and investigators later discovered that the rice was being stolen by an NGO. [25]

- In November 2006, the residents of Pembong village (30 km from Darjeeling) accused a group of teachers of embezzling midday meals. In a written complaint, the residents claimed that students at the primary school had not received their midday meal for the past year and a half. [36]

- In December 2006, The Times of India reported that school staffs were inflating attendance in order to obtain food grains. [42]

- Twenty-three children died in Dharma Sati village in Saran District on 16 July 2013 after eating pesticide-contaminated mid day meals. [9] On 31 July 2013, 55 students at a government middle school fell ill at Kalyuga village in Jamui district after their midday meal provided by an NGO. On the same day, 95 students at Chamandi primary school in Arwal district were ill after their meal. [38]

- Nearly fifty students of a Government primary school fell ill in Bihar on 1 August 2014 after eating their mid-day meal in which a dead lizard was found. This was the fourth such incident in the last one month in the State. This follows 12 students in the Buxar district becoming sick, 33 students in Vaishali and 25 students in Siwan, all during the month of July. 12 students fell ill in Buxar district after eating their mid-day meal at Government school in July 2014. In Vaishali district, 33 students fell sick on 18 July, 2014 and in Siwan district 25 kids took ill on 11 July, 2014 after having their mid-day meal.

Some of the problem most commonly reported in various studies related to the MDM programme in different parts of the country include:

- Very poor Infrastructure Facilities (e.g. Cooking shed, Water Supply, Utensils, Plates etc.). Lack of proper storage facility or storing space at school level;
- Poor quality and variety of food. The quantity and quality of food were likely to be less than the minimum stipulated by the court;
- Poor hygiene;
- Delay in serving of Mid-Day Meal in schools;
- Absence of Health Check-up;
- Inadequate payments of salaries to cooks;
- Caste and religious bias among some parents in some places;
- Irregular and delayed delivery of foodgrains and funding in some cases

SUGGESTIONS

The main recommendations of the study are as under:

- Proper infrastructure for mid day meals should be mandatory, including cooking sheds storage space,

- drinking water, ventilation, utensils etc.
- The mid day meal should be expected to cover all children in the school going age irrespective of whether they are enrolled in school. The location of meal served can continue to be the school as this might further encourage those out of school to join schools.
 - There is a need to narrow the gap between enrolment vs. Actual number of children availing MDM
 - Nutritious items such as eggs and green vegetables should be provided regularly.
 - The quality of cooked food served needs to be enhanced
 - Government needs to establish a system to ascertain improvement in nutritional levels of children. It should coordinate with the concerned department and ensure maintenance of health cards in all the schools to monitor the health status of the children
 - There should be provision for training of cooks cum helpers on aspects of hygiene, health, sanitation, cooking and serving. It is recommended that apart from capacity building of SHG workers, a clear set of guidelines in terms of adequate level of hygiene should be prepared and strictly implemented.
 - Community participation in the monitoring of Mid Day Meal should be strengthened, particularly to prevent corruption and ensure quality.
 - Monitoring and Supervision should be implemented effectively. The state government needs to strengthen the internal controls as well as the inspection and monitoring mechanism at all levels
 - Health Check-up in schools should be made mandatory. This would ensure that proper nutrition is being provided to the students in school and in case of any health issue further diagnoses and treatment can also be given.
 - Parents need nutrition and health education so they can be aware of the effects of under-nourishment among children in this age group (6 to 14 years), its impact and what could be done about it.
 - Mobilization for kitchen garden in school premises should be encouraged.
 - Transfer of funds up to school level is needed to ensure full utilization of funds
 - The Grievance Redressal Mechanism should be widened and implemented at all levels. It must be within easily reachable distance of complainant and should therefore be decentralized to Panchayat level.
 - Mid day meal should be integrated with school health services, including immunization, de-worming, growth monitoring, health checkups and micronutrient supplementation.
 - Mid day meal in schools must be served at a prescribed time as often children come without taking breakfast to schools.
 - Priority should be given to disadvantaged communities (especially Dalits and Adivasis) in the appointment of cooks and helpers. All cooks and helpers should be paid not less than statutory minimum wage. Serious action should be taken in the event of any form of social discrimination in mid day meal such as discrimination against Dalit children or Dalit cooks.

CONCLUSION

While it is acknowledged that the Mid Day Meal Scheme in India is the largest school feeding programme in the world, and that the Government is working to strengthen and improve its management, yet it must be considered that the scheme has many flaws and that qualitative action must be urgently taken if mid-day meals are to achieve their full potential.

It is more than two years since the school meal poisoning incident took place in Bihar that killed 23 children but the safety of meals is still a concern. Last year, 50 students of a government primary school had to be hospitalised in Bihar after eating a meal contaminated with a dead lizard. In May 2014, children in Delhi fell sick after eating food containing worms. The situation is worse in remote hamlets, where children are most in need of a nutritious meal. It has been found that too many layers of government are involved in the scheme, resulting in poor information, coordination and monitoring.

The experience so far clearly shows that mid-day meals have much to contribute to the wellbeing and future of Indian children. With adequate resources and quality safeguards, mid-day meals can play a major role in boosting school attendance, eliminating classroom hunger and fostering social equity. What we need is an emphasis on political will, community participation, responsible handling of food, greater accountability, continuous monitoring of the program and the creation of a structure that ensures that no school is left behind. Improved management and quality control of the Mid Day Meal Scheme implementation by the school authorities and communities is critical. The active engagement of School Management Committees (SMC's) and parents is crucial for quality assurance and monitoring of the programme.

REFERENCES

1. Aggarwal, Y.P. (1986), "Statistical Methods, Concept, Applications and Computation", Sterling Publishers,

- New Delhi.
2. Annual Report, MHRD 2012-13
 3. Annual Report 2011-12, MHRD, Government of India.
 4. Annual Report of HRD Ministry for allocation Funds for Mid-day-Meal' Programme, 2012-13.
 5. Best J.W. (1978), "Research in Education", Prentice Hall of India, New Delhi.
 6. Bonds. Staphenie (2012), "Food for Thought: Evaluating the Impact of India's Mid Day Meal Program on Educational Attainment".
 7. "Caste and Gender Based Discrimination Under MDMS" (Press release). Press Information Bureau, Government of India. 14 December 2012. Retrieved 2 August 2013. The teams did not come across any discrimination except in one school in district Boudh in Odisha.
 8. Chandra shekhar sahai (2014), 'Mid Day Meal Scheme: Achievements and Challenges', *International journal of humanities and social sciences invention*, volume 3 Issue 10/ October. 2014/PP. 06-09
 9. "Chargesheet filed in Bihar midday meal tragedy". *The Hindu*. 22 October 2013. Retrieved 25 May 2015.
 10. Chauhan, S.S. (1981), "Mental Hygiene- *A Science of Environment on learning*", John Wiley and Sons Australia Ltd. Sydney.
 11. Dreze. Jean and Goyal. Aprajita(2003), *The Future of Mid Day Meals*, Frontline, Volume 20 - Issue 16, August 02 - 15, 2003, available at righttofoodindia.org/data/mdm.pdf
 12. Girl, S.V. (1995), "Nutrition Support to Education", A report of the committee on mid day meal
 13. Government of India. "Guidelines of National Programme of Nutritional Support to Primary Education [Mid Day Meal Scheme]
 14. Government of India. "Guidelines of Revised National Programme of Nutritional Support to Primary Education [Mid Day Meal Scheme]
 15. Government of India. (2011). *Mid-Day Meal Scheme*. Retrieved from <http://india.gov.in/sectors/education/index.php?id=7>.
 16. <http://mdm.nic.in/>
 17. <http://www.slideshare.net/inventionjournals/b031010609>
 18. http://www.unicef.org/india/children_2356.htm
 19. <http://yojana.gov.in/mid-day-meal-scheme.asp>
 20. Kingfisher (1989), "Children's Encyclopedia", Elsely House, 24-30 Great Titch Field London WIPTAD.
 21. Koal, Lokesh (1984), "Methodology of Educational Research", Vikash Publishing House, New Delhi
 22. Kothari, C.R. (1985), "Research Methodology, Methods and Technique" Wiley Eastern Limited, Ansari Road, Darya Gang, New Delhi.
 23. Lal, Krishan. "Execution of Mid Day Meal with special reference to Haryana- An Analysis" *American International Journal of Research in Humanities, Arts and Social Science*, , 4(2), September-November, 2013, pp. 121-127) ISSN (Online): 2328-3696
 24. ^ Lee, Joel; Thorat, Sukhdeo (24 September 2005). "Caste Discrimination and Food Security Programmes". *Economic and Political Weekly* **40** (39). JSTOR 4417187
 25. "Lid off massive scam in Mid-Day Meal Scheme: 2,760 sacks of rice seized". *The Tribune*, Delhi. 20 January 2006. Retrieved 2 December 2006.
 26. Meal Provision, available at <http://mdm.nic.in/Meal%20Provision.html>
 27. Mid Day meal, available at <http://www.archive.india.gov.in/sectors/education/index.php?id=7>
 28. 'Mid Day Meal Scheme', First Review Mission, February 2010, Published by Ministry of Human Resource Development, GOI, Uttar Pradesh.
 29. Nambiyar. Sunita, Pande. Greema and Solanki. Jagdish, 'Innovation in delivery of Mid Day Meal through Private Public Partnership' available at adbi.adb.org/.../2010.12.11.cpp.sess3.a6.nambiyar.paper.mid.day.meal.scheme.ppp.pdf
 30. Nutritional Support, available at <http://mdm.nic.in>
 31. Programme Evaluation of Cooked Mid Day Meal. Planning Commission, GOI, May 2010, available at planningcommission.nic.in/reports/peoreport/peovalu/peo_cmdm.pdf
 32. Report on Accountability of execution of 'Mid-day-Meal' programme 2012-13, published by Ministry of Education, Government of India, New Delhi.
 33. Report on 'Food Delivery System' Ministry of Human Resource Development, New Delhi.
 34. Research Findings In Mid-day Meals, p.1, available at http://mdm.nic.in/Files/OrderCirculars/Findings_of_Research_studies.pdf.
 35. Sa ena, Q.R. and Mittal, "Impact of 'Mid-day-Meal' Programme on enrolment and retention at primary stage" NCERT.
 36. ^ "Scam shadow on meal scheme". *The Telegraph*, Kolkata. 14 November 2006. Retrieved 2 December 2006.
 37. Sobti, Renu (1998), *Nutrition and Education*" Yojana, Oct. 1998, YojanaBhawan, New Delhi.

38. "Students fall ill after midday meal in Bihar". The Hindu. 31 July 2013. Retrieved 25 May 2015.
39. Study of Impact of Mid-Day Meal (MDM) Programme on School Enrolment & Retention, Study of Impact of Mid-Day Meal (MDM) Programme on School, Final Report, August 2014, State Council For Education Research and Training(SCERT), Chattisgarh
40. Shrivastava SR, Shrivastava P.S Ramaswamy J. 'The Mid Day Meal Scheme A holistic initiative to augment the nutritional and educational status of the children'. J Med Soc (serial online) 2014 (cited on 2015 May 26). Available from: <http://www.jmedsoc.org/text.asp?2014/28/1/38/135226>
41. Tandon, Aditi (2013), The Unpalatable Truths' Tribune July 21, pp. 11, col 1-5.
42. ^ "Teacher blows whistle on scam: School Authorities Pocket Money In The Name Of Mid-Day Meal Scheme". The Times of India, Bangalore. 2 December 2006.
43. UNESCO (1984), "Nutrition and Educational Achievement", Nutrition Education Services, Issue No. 9.
44. www.righttofoodindia.org/data/pratichi_report_on_mid_day_meal.pdf

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