



Impact of Mid-Day Meal Scheme on Health, Education, and Rural Economies of students studying in Primary Schools of Delhi

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ABSTRACT: The research aims to understand the scheme's provisions, and its implementation's impact, focusing on students studying in the primary schools of Delhi. It seeks to analyse the effects of the scheme on education, health, and nutrition, as well as the economies of the households of these students over the years. It does so by analysing literature reviews and working on a case study with the help of techniques such as interviews and survey questionnaires. The outcome of the research paper will assess how the scheme affects all spheres of life of students studying in primary schools in Delhi.

KEYWORDS: Government Scheme, Local Governance, Hygiene, Rural Households, Primary Schools, Delhi

I. INTRODUCTION

The Government of India launched the Mid-Day Meal Scheme, the world's largest school feeding program, to provide students in government schools and government-supported facilities with hot, nourishing meals.[1].

The National Capital of Delhi has the largest set up of the Mid Day Meal Programme (MDM) in its schools especially MCD schools which cover the largest proportion of children enrolled in government primary schools, and which have the highest proportion of children from slum areas and disadvantaged socioeconomic backgrounds. MDMS was implemented gradually beginning in July 2003. By July 2005, this programme had 100% coverage in 2400 schools, serving 11,34,000 students. Slum communities are characteristically most marginalised and poverty-ridden. Many people move from rural areas to slum clusters in big cities like Delhi due to the need for work, higher pay, marriage, and education, among other factors. Lack of employment and extremely low wages forced parents of these slums to put education as a secondary priority [2].

Many children, even if they get the chance to pursue education, are affected by "classroom hunger," making it hard for them to concentrate. This eventually leads to poor performance and in turn, causes dropout. This paper examines the need for the Mid Day Meal Scheme in schools in Delhi and its effect on improving student health and school enrolment rates. It also highlights the impact of the program on the economies of rural households.

II. BACKGROUND

The Government of India's noon meal programme is the first of its kind and the most extensive nutritional initiative. The National Nutritional Support Program for Primary Education (NP-NSPE) was launched on August 15, 1995, as a centrally funded program. In 2001, MDMS became a cooked lunch program under which every child in every state and state-sponsored elementary school should be served a prepared lunch that should contain a minimum of 8-12 grams of protein and 300 calories of energy per day for at least 200 days. The program was further expanded in 2002 to cover children studying at Alternative & Innovative Education (AIE) centres and the Education Guarantee Scheme (EGS). Provision has also been made for serving lunchtime meals during the summer holidays in drought-affected areas. In 2008, the programme's reach across the nation was increased. In order to cover acknowledged and unrecognised madaras/maqtabs sponsored under SSA, the programme was further updated in April 2008 [7]. On September 29, 2021, the Cabinet Committee on Economic Affairs (CCEA), presided over by Prime Minister Narendra Modi, authorised the Pradhan Mantri Poshan Shakti Nirman programme [8] for the following five years (from 2021–22 to 202–25). The majority of Mid-Day Meal Programs (MDM) are offered in Delhi's public schools, which are overseen by the Directorate of Education, the Municipal



Corporation of Delhi (MCD), and the New Delhi Municipal Corporation (NDMC). In July 2003, MDM was gradually put into use. By July 2005, this programme had covered 2,400 schools and 11,34,000 students completely in just two years [9]. The efficiency of the lunch menu in Delhi, the nation's capital, is the subject of the study. It highlights the impact of MDMS on the health of students studying in primary schools in Delhi and answers whether it has any impact on the economy of rural households. The information was sourced through various literature reviews, government documents along with a case study approach. This research will help us to understand the importance of such a large-scale programme and its implementation in the capital city of Delhi with its impact on various spheres of life.

III. LITERATURE REVIEW

The Mid-Day Meal Scheme came in response to eliminating hunger in the classroom. However, analysis is required to assess the impact of the scheme on enrolment and attendance, health, and on the household economies of primary school children of Delhi who are beneficiaries of the scheme. The National Programme of Nutritional Support to Primary Education (NP-NSPE), also referred to as the Mid-day Food Program was introduced by the Government of India in 1995. According to NP-NSPE, its goals include addressing "classroom hunger," to motivate disadvantaged students from under-represented groups to attend school more often and support them to concentrate on their academic work. The Indian government's diverse lunch program aims, among other things, to address national challenges in the areas of food security, inadequate nutrition, and access to education. The Program, which serves around 12 crore students across more than 12.65 lakh schools and EGS centres nationwide, is the largest school feeding program [7]. This Scheme has been amended and modified various times. It was first implemented in the state of Tamil Nadu. With the Supreme Court ruling of 2004, there was a transition from dry ration to cooked food [3]. In April 2002, the Cooked Mid-Day Meal (CMDM) programme was implemented in all public and government-aided primary schools. All children in Grades I through V in public and federally funded schools should be fed meals containing 300 calories and 8 to 12 grams of protein, according to the CMDM schedule [7]. With the cooked mid-day meal programme coming into practice, the relationship between NGOs and the Government and the role NGOs play in providing healthy and clean food through automated machines has also been

highlighted, one such NGO being 'STRI SHAKTI'. [4].

With the change in the provisions of the scheme, there was thus a need to capture the viewpoints of various stakeholders - parents, teachers, suppliers, and children. By conducting a case study in 12 schools of the Municipal Corporation of Delhi, it was found that there is a need to improve the quantity of food, adhere to the minimum nutrient requirement, educate parents about the importance of cooked meals and keep a check on the suppliers [3]. There are still complaints from school authorities about the quality and quantity of food being served as well as the condition in which the food is being processed [4]. Apart from school authorities, opinions and suggestions of parents on MDMS is also of great importance. Research conducted in the Nizamuddin Khadar and Madanpur Khadar slum areas of Delhi, whose children benefit from the midday meal scheme, found that 85% of parents thought MDMS was beneficial for their children and 90% said that the Quality of the food served in the school is good [2].

Taking the advice of these stakeholders into account, various studies have focused on analysing the nutritional content of the mid-day meal across India and the results indicate a lack of nutritional value in the meals provided in various primary schools [1]. Suggestions to include chikki, sukhdhi, fortified nutrition bar, and fruits in the menu have also been put forth. In order to improve the quality of food, there are also recommendations to partner with private entities and NGOs. [5]. Metropolitan cities such as Hyderabad show similar results as in the case of studies conducted in peripheral villages of India. There is a lack of nutritional value in the meals and significant improvement needs to be made in the area of hygiene among students, suppliers and the lunch area. [1].

Another aspect of the scheme is its effect on the enrolment, retention and attendance of students. In the case of Delhi - NCR, the impact of the midday meal program on student enrolment, retention and attendance in government schools was generally positive. [6]. According to the official government reports, all primary schools under the Municipal Corporation of Delhi are benefited from MDMS and have seen the proper implementation of the scheme as well as a positive impact on dropout rates and the fight against 'classroom hunger'. [8,10].

The impact of the scheme is fairly visible on the enrolment, attendance, and health of the primary school students of Delhi, this research however emphasises on the impact of the scheme on



household economies while verifying the impact of MDMS on other spheres as well.

I. PROVISION OF MDMS

The Government of India introduced the Midday Meal Scheme in 1995, also known as the National Nutritional Support Program for Primary Education (NP-NSPE). According to NP-NSPE, its goals include addressing "classroom hunger," motivating underprivileged students from underrepresented groups to attend school frequently, and assisting them in focusing on their academic work. The Government of India's multifaceted mid-day meal programme, among other things, aims to address national challenges with food security, inadequate nutrition, and access to education. The Program, which serves around 12 crore students across more than 12.65 lakh schools and EGS centres nationwide, is the largest school feeding programme in the world[7].

In April 2002, the Cooked Mid-Day Meal (CMDM) was offered in all public and state-sponsored elementary schools. The CMDM programme proposed providing meals with 300 calories and 8–12 grammes of protein to all students in grades I–V attending public and private schools as well as Alternative and Innovative Education (AIE) and Education Guarantee Program (EGS) centres.[7] The program was subsequently expanded to upper elementary schools in 2006-07. Beginning in 2009-10, the program was extended to students attending National Child Labour Program (NCLP) schools.[8]

The official guidelines for MDMS include-

1. Free food grains are provided, with upper primary students receiving 150 grams per day and primary students receiving 100 grams.
2. Eleven special category states receive transportation subsidies for food grains at the local PDS rate, and all other States and UTs receive subsidies up to a maximum of Rs. 75.00 per quintal.
3. A midday meal requires a significant input in addition to food grains, namely the expense of preparation.[8]

II. IMPLEMENTATION OF MDMS UNDER SOUTH DELHI MUNICIPAL CORPORATION

The Mid-Day Meal scheme has been implemented in Delhi based on the above provisions since its inception. The area of study under this research falls under the jurisdiction of South Delhi Municipal Corporation.

As of 2019, the total number of primary schools under SDMC is 581. Currently, the task of supplying cooked food to the students enrolled in all of the schools managed and assisted by the South DMC has been given to 05 Volunteer Organizations/service providers. Each of the five service providers has a fully functional, semi-automated kitchen. The kitchens are required to prepare a meal according to the prescribed food norms and nutritional values by the Ministry of HRD. [11]

The department has the multi-level method described below to ensure the regularity, wholesomeness, and overall quality of the mid-day meal supplied to children:

A committee made up of the principal of the school in question, the teacher in charge of the midday meal programme, three mothers of students, a senior citizen living nearby, or a member of the school management committee, checks the food daily. The principal or person in charge of the school weighs the meal to verify its quantity. All the schools keep a register at the school level for sampling and checking. In addition, the food is examined externally by the department's own NABL-approved laboratories. The approach of random sampling has been used to collect samples from kitchens and schools. Every month, each service provider collects three samples from schools and four samples from the kitchen of the meals they serve. Authorities from the Education Department conduct routine and unexpected inspections of kitchens at zonal and headquarters locations. MDMS under SDMC currently serves around 2.61 lacs of students.[11]



III. SURVEY BACKGROUND



Figure - Children who were surveyed [SDMC Boys School]

In order to assess whether the provisions of the scheme have been implemented in practice in the schools of Delhi as well as the impact of the scheme on the education and health of a child and economies of a rural household, a survey was conducted in 'MCD Primary School (Girls)' and 'MCD Primary School (Boys)' of Katwaria Sarai, New Delhi.

In order to capture the ground reality and record the opinions of various stakeholders, a questionnaire survey, as well as an observation technique, seemed most suited.

Questionnaire Survey focused on four target groups - school students (in order to analyse the impact of the scheme on health and education), teachers (in order to analyse the degree of implementation of the scheme and its impact on teaching), workers (to assess the quality of food and its nutritional requirements), parents (in order to assess the impact of the scheme on rural

economies as well as the health and education of their children). The survey concluded with observing the measures taken by the school to ensure sanitation while serving and eating food.

In order to assess the impact of MDMS on the three parameters - health, education, and rural economies, a questionnaire survey, as well as an observation method, was used in the schools of 'MCD Primary School (Girls)' and 'MCD Primary School (Boys)' of Katwaria Sarai, New Delhi. The target groups included - 20 parents (10 from each school), 4 workers (2 from each school), 50 school students (30 from boys' school - 6 from each class [I - V] and 20 from girls' school - 4 from each class [I - V]) and 10 teachers (5 from each school).

IV. ANALYSIS



Figure - MDMS Containers along with one of the workers

It is essential to study the impact of MDMS on the three parameters - education, health and rural economies in order to measure the success of the scheme.

There exists a significant connection between hunger and concentration among children. Hunger makes it difficult to concentrate, learn, and comprehend stuff. Hunger in early childhood

increases the risk of underachievement in school and difficulty taking tests in children. Children in disadvantaged rural communities, along with their parents, are not always able to make the connection between diet and brain development. Nonetheless, it is still true that children who do not eat healthily experience significant learning and high school graduation disadvantages.[12]



Thus, it is not just essential to provide a meal, the quality and nutritional value of the food also play a significant role in enhancing the concentration level of students as well as their health.

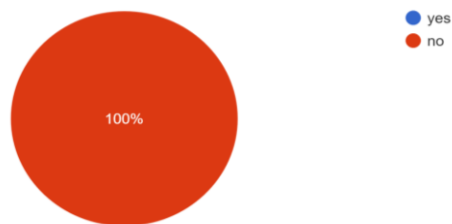
to it, 100 gms of food grains, 20 gms of pulses, 50 gms of vegetables, 5 gms of oil and fat and salt as per requirement should be included in every child's meal to have a perfect balance of nutrition.[11]

Presumably, providing a complete nutritional meal every day to children can cause a lot of hardships for parents coming from disadvantaged communities. Access to a properly cooked nutritional meal at least once a day can ease the burden on the parents psychologically as well as financially.

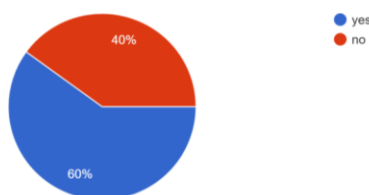
IV. IMPACT OF MDMS ON EDUCATION

The survey conducted proves that MDMS has a positive impact on enrolment rate as well as increased concentration of students in classrooms.

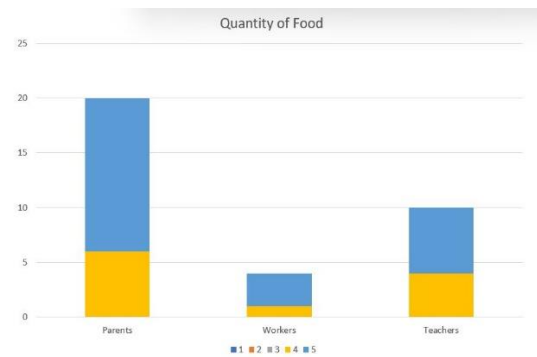
According to the survey, all teachers from both schools agreed that the time taken to serve and to eat food is separate and does not affect the teaching time.



The survey also shows that around 60 % of the teachers (out of which 50 % of the teachers have been teaching for more than 10 years) believe that with the implementation of the scheme, the enrolment rate and the concentration of students in class has significantly increased.



The Ministry of Human Resource Development has prescribed food norms and nutritional values of food. According



Apart from teachers, all the parents surveyed agreed that MDMS is one of the main motivations for sending their children to school every day.

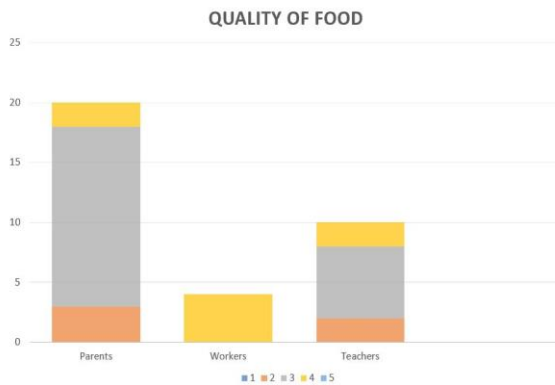
V. IMPACT OF MDMS ON HEALTH

Apart from the impact of the scheme on education, the quality and quantity of the food provided are also taken into consideration in order to assess its impact on health.

'Rao Raghuvver Sewa Samiti' an NGO provides food to both schools. They follow the following menu:

Day	Food Item
Monday	Khichdi
Tuesday	Aloo Puri
Wednesday	Rajma Chawal
Thursday	Daliya
Friday	Kadi Chawal
Saturday	Chhole Puri

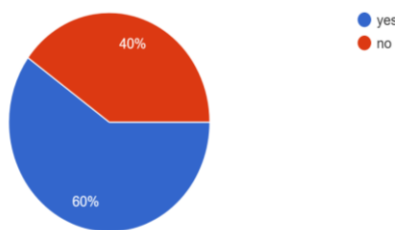
According to the data collected, the majority of the parents, teachers, and workers consider the quality of food as average (3) (on a scale of 1 to 5 where 1 is worst and 5 being best). However, when it comes to the quantity of food, it is always enough and in a good amount according to all three stakeholders.



Meanwhile, 94% of children enjoy the meal and 92% never fall ill after consuming it. Both the schools provide clean areas with carpets to sit on, food is tasted by the teacher - incharge, it is served with gloves on and containers are kept in a cool environment especially during summers, keeping hygienic conditions under check. Lastly, all stakeholders prefer cooked meals over dry ration and want the scheme to be continued.

VI. IMPACT OF MDMS ON RURAL ECONOMIES

According to the responses collected on the questionnaire, the impact on rural economies has not been very significant as in the case of education and health. However, it has been observed that there is some sort of relief psychologically as well as economically for parents.



VII. RESULTS

The impact of MDMS has been threefold - on education, on the health of the students as well as on rural economies. According to the survey conducted in two government schools [SDMC Boys as well as SDMC Girls Primary Schools], it can be inferred that there has been a positive impact on the enrolment ratio. The time taken to distribute and consume food during the scheme does not affect the time to teach negatively, rather it has been observed by most of the teachers that it increases the attention

span of the students. The impact on the health of students has also been positive. The quantity of food served is always enough, however, the quality of food is satisfactory. Children do not enjoy some of the items on the menu such as 'Daliya'. It was also seen that most of the students wanted to re-add 'poori - chana' to the menu. The sanitation measures taken in the school included - wearing gloves while serving food, spreading carpet for the students to sit, and keeping MDMS containers in a cool environment, especially during summer. Compared to the impact of MDMS on health and education, the impact on rural economies has not been very significant since most of the students go back home and have lunch again. However, many students skip breakfast or reach home late so MDMS provides psychological and to an extent economic relief.

VIII. CONCLUSION

The aim of this paper was to assess the impact of the Mid Day Meal Scheme on the health and education of students studying in primary schools of Delhi along with its impact on the economies of rural households. This research through its secondary data collection as well as questionnaire survey and observation concludes that MDMS has been properly implemented in Primary Schools of Delhi and has led to an increase in enrolment ratio and has also had a positive impact on the health of students. It has also decreased the burden on parents for providing a nutritional meal to their children. However, the quality of food needs to be improved. It is also essential that certain food items are changed in the menu [such as Daliya in the case of the above survey] to make the scheme more efficient. The scheme has had significant improvements over the past 20 years and should continue to revise its provisions.

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