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## A study to assess the knowledge about mid-day meal scheme in Bikaner district of Rajasthan

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**Abstract**

Mid-day Meal (MDM) offers free cooked meals to students in primary and upper primary schools, aiming at improving nutritional status and school enrollment which was launched, as a centrally sponsored program on 15th August, 1995, by the Government of India. The Mid-day meal program was started with two major objectives: firstly, to enhance the child's nutrition level and secondly, to provide the basic education. The present study was conducted in Lunkaransar block of Bikaner district of Rajasthan which was selected by lottery method. The overall sample constituted 280 respondents. Ten upper primary government schools were selected to get the sample of 200 students studying in 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> classes, 50 parents and 30 teachers which were selected randomly. Interview schedule and spot observation technique were used to collect the data. The data was analyzed by using suitable statistical parameters such as frequencies, percentages, rank and standard deviation. The present study revealed that Majority of school children (78.5%), parents (80.0%) and teachers (70%) had medium level of knowledge about Mid-day Meal scheme whereas maximum no of respondents had less knowledge about year of start, launching state, dietary requirement of a child per day and revised guidelines of GOI.

**Keywords:** MDMS, nutrition, education, knowledge

**1. Introduction**

A hungry child cannot be attentive in school. Nutrition plays important role in the development of a child. Children are vulnerable to growth retardation as a result of malnutrition. Morbidity and mortality are high among the malnourished children. In addition, such children tend to have low I.Q. and impaired cognitive ability which affect their school performance and productivity in later life. It has been observed that Food and education are interconnected. One of the main reasons of remaining out of school or dropping out from regular schooling is financial crisis. The Government of India initiated the Mid-day Meal Scheme as a supporting pillar to educational schemes. The Scheme 'National Programme of Nutritional Support to Primary Education' commonly known as Mid-Day Meal Scheme (MDMS) was launched on the 15th August, 1995 on nationwide scale by the Department of Elementary Education and Literacy, Ministry of Human Resource Development, Government of India. The Mid-Day-Meal-Scheme (MDMS) is under implementation in the state of Rajasthan under the administrative control of the School Education Department, Government of Rajasthan (GoR). The State Government of Rajasthan started providing cooked meal to the children in schools under the mid-day-meal-program from July 2002. In the year 2008, itself the mid-day-meal-menu in Rajasthan also included with a provision to provide seasonal fruits once a week along with cooked Mid-Day-Meal (MDM). During 2016-17, 71,344 institutions are covered under MDM Scheme. About 62, 83879 school children are enrolled in schools and 69.52 per cent of school children are benefitted by MDM Scheme in Rajasthan. ([www.mdm.nic.in](http://www.mdm.nic.in)).

The Mid-day Meal Programme promises to provide each child one third of the daily nutrient requirement in the form of cooked meal to combat his/her food and nutritional deficiencies. The Mid-day meal programme is the India's second largest food security programme. Many children reach school with an empty stomach in the morning, since a good early morning breakfast is not a part of the household routine. Mid-day meal could thus be a means for not only promoting school enrollment but also better learning in schools.

**2. Review of Literature**

Kerile and Thomas (2000) conducted a comparative investigation involving two school situations; one identified as being health promoting and having a comprehensive policy and a

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defined programme of health education. The results revealed that students from the more health promoting secondary school had more knowledge of what constitutes a healthy diet and the benefits and the risks to health. The implications of these results are considered within the context of the many factors that could influence students' knowledge and behavior.

Kabedi *et al.* (2001) <sup>[3]</sup> observed that about 85 per cent of all the respondents expressed that programme aims to improve attendance and enrolment. Only 28 per cent of them were aware of nutritional importance of the programme. Higher percentage of functionaries (80%), teachers (44%) and children (39.5%) had good knowledge. While mothers (43.5%) were having better knowledge compared to rural respondents. Significant positive relation was found between knowledge of children and their mothers and that of teachers with functioning of MDMP in the school.

Shetty and Vallesha (2014) <sup>[6]</sup> revealed that majority of school children from rural area (52.5%) had poor knowledge on Akshara Dasoha Yojana whereas it was 24.5 per cent in urban area. Attitude towards Akshara Dasoha Yojana was found to be neutral amongst 51.5% of rural and 58% of urban school children. Study indicated the need of educating the school children about nutritional program like Akshara Dasoha Yojana and importance of developing more positive attitude towards it.

Bisht and Goel (2014) <sup>[1]</sup> studied that the majority of mothers possessed medium knowledge about the MDM programme. The knowledge of the mothers was significantly influenced by independent variables (caste, education, land holding, cosmopolitaness, mass media exposure, and attitude towards the programme.)

Gupta *et al* (2017) <sup>[2]</sup> reported that only 1.2% parents had good knowledge, 71.2% parents had average knowledge and 27.5% parents had poor knowledge regarding MDMS and there was no statistically significant association between demographical variables like age, sex, gender, source of information, educational qualification and occupation.

Kantawala *et al.* (2013) <sup>[4]</sup> found in their study that majority of the teachers were able to identify objectives of MDM such as to improve nutritional status of children (76.9%), improve attendance (67.7%), improve scholastic performance (37.4%) and reduction in classroom hunger (37.4%).

Singh N. and Badiger C. (2018) <sup>[7]</sup> study revealed that most of (96.70%) rural school children had high knowledge level about MDMS with overall knowledge index of 88.28 percent. Rural school children had higher knowledge i.e. 98.30 per cent each with respect to the helper distributes the food to children in the school and Mid-day meal is provided with proper hygiene. Rural school children had very less knowledge i.e. 30.00 per cent about that Mid-day meal is prepared by the cook. Most of (80.80%) parents had high knowledge level and overall knowledge index was 73.53 percent. In case of teachers cent percent teachers had high knowledge level with knowledge index of 95.65 percent. Community leaders had high knowledge level i.e. 92.50 percent and overall knowledge index was 83.33 percent.

### 3. Methodology

#### 3.1 Locale of the study

The study was conducted in Bikaner district of Rajasthan.

#### 3.2 Selection of panchayat samiti

There are seven panchayat samities in Bikaner district. These

are namely- Bikaner, Lunkaransar, Sridungargarh, Khajuwala, Kolayat, Nokha and Panchu. Out of them one panchayat samiti was selected by lottery method i.e. Lunkaransar.

#### 3.3 Selection of schools

A list of upper primary schools was collected from Directorate of Education, Bikaner district. A total of 10 schools from Lunkaransar block were selected through random sampling technique.

#### 3.4 Selection of respondents

The sample of the study comprised of 200 school children studying in 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> standards (20 school children from each school), 30 teachers (3 teachers from each upper primary school) and 50 parents (5 parents per village) of Lunkaransar block of Bikaner district. The final sample constituted 280 respondents.

#### 3.5 Research tool developed by investigator

Interview schedule was prepared to collect the required information from the respondents. Questions based on knowledge of rural school children, parents and teachers about Mid-day meal scheme were framed with the help of subject experts and pilot test was conducted in non-sample area. Finally on the basis of the experience gained in pre-testing, list of total 45 questions (14 questions for rural school children, 14 questions for parents and 17 questions for teachers) were selected. They were presented to the respondents with 'Multiple choice' questions. A score of 2 was given to the right answer and 1 to the wrong answer.

#### 3.6 Statistical analysis of data

After data collection, coding was done and then data was compiled and tabulated for analysis and interpretation. The suitable statistical tools such as frequency, percentage, mean score, rank and Standard Deviation were used.

### 4. Results and Discussion

#### 4.1 Knowledge of school children regarding Mid-day Meal Scheme-

The data in table 4.1 shows that majority of the school children (96.0%, 94.5%, 93.5%, 89.5% and 89.0%) had very good knowledge about timing and frequency of meal served, duties of helper such as cleaning the eating premises and distributing the food to children and getting plates from school ranked first, second, third, fourth and fifth with mean score of 1.96, 1.94, 1.93, 1.89 respectively. Similarly, Singh and Badiger (2018) <sup>[7]</sup> revealed from their study that rural school children had higher knowledge i.e. 98.30 per cent each with respect to Mid-day Meal is served everyday in the afternoon with proper hygiene and helper distributes the food to them.

The findings also reveal that about 45.5 per cent of children knew about type of programme i.e. school feeding programme and year of start (42.5%) ranked tenth and eleventh with mean score 1.45 and 1.42 respectively. Further, it can be seen that less than forty per cent of school children had knowledge regarding aspects such as MDM scheme develops good eating habits among them (39.55), involvement of school development management committee members (36.5%) and improvement of attendance due to MDM scheme (35.0%) ranked twelfth, thirteenth and fourteenth with mean score 1.39, 1.36 and 1.35 respectively.

**Table 4.1:** Knowledge of school children about Mid-day Meal Scheme (MDMS) (n1=200)

Statement	Frequency (F)	Percentage (%)	Mean score	Rank
1. MDMS was started in 15 august 1995	85	42.50	1.42	XI
2. The MDM is given in the school to reduce the hunger	140	70.00	1.70	VII
3. The MDMS is provided to develop good eating habits	79	39.50	1.39	XII
4. Food is important for healthy mind, provides nutrients to body and act as a fuel for body	130	65.00	1.65	VIII
5. The MDMS is given for improving attendance	70	35.00	1.35	XIV
6. Helper distributes the food to children	179	89.50	1.89	IV
7. MDMS involves the members of school development management committee at school level	73	36.50	1.36	XIII
8. Mid-day meal is served in the afternoon, 1 pm	189	94.50	1.94	II
9. MDM is provided with proper hygiene	121	60.50	1.60	IX
10. Mid-day meal is served everyday in the school	192	96.00	1.96	I
11. Mid-day meal is prepared by the cook-cum-helper	150	75.00	1.75	VI
12. After eating the food helper cleans the eating premises in the school	187	93.50	1.93	III
13. Students get plates for eating from school	178	89.00	1.89	V
14. MDMP is a school feeding programme	91	45.50	1.45	X

**4.1.1 Overall knowledge of school children about mid-day meal scheme**

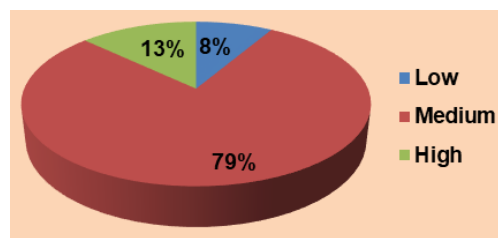
The results in table 4.1.1 and fig. 4.1 reveal that majority of the school children (78.5%) had medium level of knowledge about Mid-day Meal Scheme followed by 13.0 per cent of school children having high level of knowledge whereas only 8.5 per cent had low level of knowledge.

Thus, it can be concluded from above findings that majority of school children knew about the duties of helper, timing and frequency of serving meal with proper hygiene, whereas less no. of respondents knew about year of start, role of school development management committee (SMC) and the objectives of mid-day meal scheme.

**Table 4.1.1:** Overall knowledge level of school children about MDMS (n1=200)

Sl. No.	Category	Frequency (f)	Percentage (%)
1.	Low (below 20.40)	17	8.50
2.	Medium (20.40-26.24)	157	78.50
3.	High (>26.24)	26	13.00

Mean = 23.32, S.D. = 2.92



**Fig 4.1:** Distribution of school children according to their overall knowledge about mid-day meal scheme

**4.2 Knowledge of parents regarding mid-day meal scheme**

The findings from the table 4.2 reveal that cent percent of parents had knowledge about timing and frequency of serving cooked meal and fruit once in a week whereas majority of parents (72.0%, 70.0%) knew about children get plates from school and they go to school for education, meal and good habits and also had knowledge about the distribution of food served on different days with mean score 2.00, 1.72, 1.70 and ranked first, second, third respectively.

**Table 4.2:** Knowledge of parents about mid-day meal scheme (n2=50)

Statement	Frequency (f)	Percentage (%)	Mean Score	Rank
1. MDM scheme is mainly for primary school children.	34	68.00	1.68	IV
2. MDMP is regulated by central and state government.	20	40.00	1.40	IX
3. The Mid-day meal has been served everyday in the school, where your child studies	50	100.00	2.00	I
4. Cooked food is distributed to your children in school	50	100.00	2.00	I
5. Nutritional and educational benefits are the benefits of Mid-day meal programme	23	46.00	1.46	VII
6. You send your children to school daily to get education, to inculcate good habits and to get meal	35	70.00	1.70	III
7. Dal-roti is given on every Friday to their children.	35	70.00	1.70	III
8. MDM scheme was launched in 1995 and firstly started in Tamil Nadu state.	14	28.00	1.28	X
9. You visit to school once in a week regarding MDM	24	48.00	1.48	VI
10. MDMP daily fulfills the one-third diet requirement of a child	20	40.00	1.40	IX
11. The fund is regulated by central government and state government	22	44.00	1.44	VIII
12. There is provision to provide fruit once in a week under MDM scheme.	50	100.00	2.00	I
13. Parent-teacher association is responsible for monitoring the MDM scheme at school level	33	66.00	1.66	V
14. For foods, plates are provided by school	36	72.00	1.72	II

Perusal of the above data clearly depicts that more than fifty percent of parents (68.0%, 66.0%) had good knowledge about the MDM scheme followed by role of parent- teacher association at school level ranked fourth, fifth with mean score 1.68 and 1.66, respectively. Further, it can be seen that only 28.0 per cent of parents knew about launching of MDM scheme and year of start. Hence, it was ranked at last place with mean score 1.28.

**4.2.1 Overall knowledge level of parents about mid-day meal scheme**

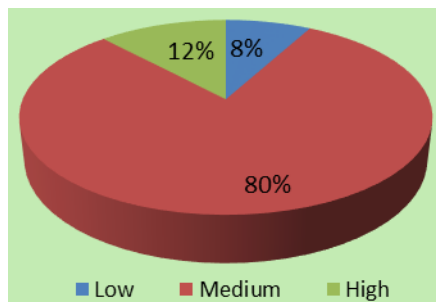
The results related to overall knowledge of parents in table 4.2.1 and fig. 4.2 reveal that majority of the respondents (80.0%) were having medium level of knowledge about Mid-day Meal Scheme followed by 12.0 per cent of parents possessed high level of knowledge whereas only 8.0 per cent had low knowledge level.

**Table 4.2.1** Overall Knowledge level of parents about Mid-day Meal Scheme (n2=50)

Sl. No.	Category	Frequency (f)	Percentage (%)
1.	Low (below 20.29)	4	8.00
2.	Medium (20.29-25.55)	40	80.00
3.	High (>25.55)	6	12.00

Mean = 22.92 S.D. = 2.63

Thus, it can be concluded from above findings that most of

**Fig 4.2:** Distribution of Parents according to their overall Knowledge about Mid-day Meal Scheme

### 4.3 Knowledge of teachers regarding mid-day meal scheme

The findings in table 4.3 show that teachers had cent per cent knowledge with respect to the benefits of MDM programme, responsibilities of teachers such as supervision and maintenance of records daily and duties of cook-cum-helper

the parents knew about the menu of MDMS because parents frequently ask to their children about the meal which they ate in the school. Whereas very less no. of respondents knew about year of start and launching state of MDMS as well as dietary requirement of a child per day. Similarly, Gupta *et al.* (2017) [2] found in his study that 1.2% parents have good knowledge, 71.2% parents have average knowledge and 27.5% parents have poor knowledge.

and ranked at first place with mean score 2.00 whereas, majority of teachers (83.3%, 80.05%, 76.7%) knew about the major objectives of MDM scheme as well as its regulation, implementation and monthly inspection by officials. Hence, these were ranked at second, third with mean score 1.83, 1.80 and 1.76 respectively.

**Table 4.3:** Knowledge of teachers about Mid-Day Meal Scheme (n3=30)

Sr. No.	Statement	Frequency (F)	Percentage (%)	Mean Score	Rank
1)	Mid-day Meal Scheme was started by Government of India on August, 1995.	21	70.00	1.70	VI
2)	District Social Welfare Department, State Government decides the menu for Mid-day meal programme	22	73.30	1.73	V
3)	Supervision, maintenance of records under Mid-day meal programme are the responsibilities of the teachers	30	100.00	2.00	I
4)	The best quality of the food /food grains received for the Mid-day meal	17	56.70	1.56	IX
5)	Cook-cum-helper prepares the food for school children under Mid-day meal programme	30	100.00	2.00	I
6)	Helper(s)/cook(s) in the school is/are appointed by school committee members/community leaders	21	70.00	1.70	VI
7)	School Development and Management Committee (SDMC) is overall responsible for effective implementation of the programme at school level.	24	80.00	1.80	III
8)	The scheme was started first in Tamilnadu state.	14	46.70	1.46	XI
9)	MDMP daily fulfills the one-third diet requirement of a child	19	63.30	1.63	VII
10)	According to the revised guidelines of MDMP 2006, 450 kcal for primary school children (1-5 class) and 700 kcal for upper primary school children (6-8 class) was decided by the central government	18	60.00	1.60	VIII
11)	Government has introduced the MDMP to save children from malnutrition, universalization of primary education	25	83.30	1.83	II
12)	Central and state Government regulate the MDM programme	25	83.30	1.83	II
13)	Total cost of per meal provided by the government is Rs. 4.13 for primary children and Rs. 6.18 for upper primary children	16	53.30	1.53	X
14)	Nutritional and educational benefits are the benefits of Mid-day meal programme	30	100.00	2.00	I
15)	www.trgmdm.nic.in software developed by government to monitor the progress of MDM scheme.	18	60.00	1.60	VIII
16)	Mid-day meal programme is inspected monthly by the officials	23	76.70	1.76	IV
17)	The SDM Committee comprises of school headmaster, community members such as village Sarpanch and parents.	21	70.00	1.70	VI

It can also be observed that maximum no of teachers (63.3%, 60.0%) had knowledge regarding dietary requirement of a children followed by energy intake for upper primary school children and software for MDM scheme i.e. www.trgmdm.nic.in whereas about 56.7 per cent of teachers were aware about the revised guidelines of MDM scheme

ranked seventh, eighth, ninth with mean score 1.63, 1.60, 1.56 respectively.

Table 4.3 further reveals that only 46.7 per cent of teachers knew that the MDM Scheme was started first in Tamilnadu state. Hence, it was ranked at eleventh place with mean score 1.46.

### 4.3.1 Overall knowledge of teachers regarding Mid-day Meal Scheme

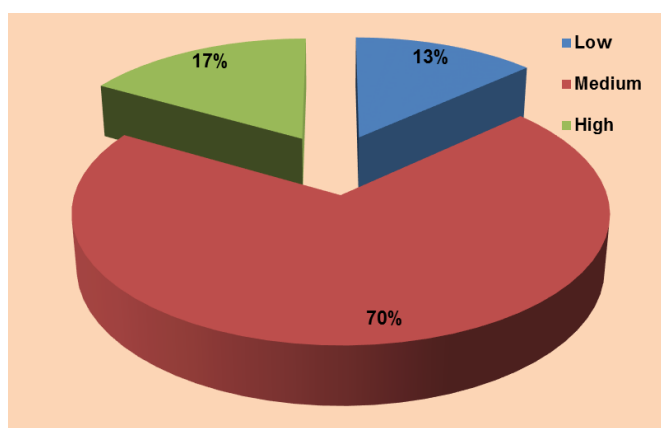
The results of table 4.3.1 and fig. 4.3 reveal that majority (70.0%) of teachers were having medium level of about Mid-day Meal Programme followed by 16.7 per cent of teachers were having high level of knowledge whereas only 13.3 per cent of teachers were having low knowledge level.

It can be concluded from above findings that majority of teachers belonged to medium knowledge level towards Mid-day Meal Programme. The probable reasons might be that the teachers play a very important key role in implementing the Mid-day meal programme and to make it successful. They were fully aware about their duties such as supervision, maintenance of records as well as regulation of the programme and purpose/objectives of the MDM programme whereas maximum no of teachers had low knowledge regarding the revised rules and guidelines of GOI.

**Table 4.3.1:** Overall Knowledge level of teachers about Mid-day Meal Scheme (n3=30)

Sl. No.	Category	Frequency (f)	Percentage (%)
1.	Low (below 27.73)	4	13.30
2.	Medium (27.73 - 31.19)	21	70.00
3.	High (>31.19)	5	16.70

Mean= 29.46, S.D. = 1.73



**Fig 4.3:** Distribution of teachers according to their overall knowledge about mid-day meal scheme

Thus, it can be concluded from above findings that majority of school children, parents and teachers belonged to medium level of knowledge regarding MDM scheme. They had good knowledge about the duties of helper followed by timing and frequency of serving meal with proper hygiene, menu of MDM and roles/ responsibilities of teachers whereas less no of respondents knew about the daily diet requirement of a child, year of start and state, as well as revised guidelines of MDM scheme by GOI.

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