Senhri Journal of Multidisciplinary Studies Vol. II No.2 (July - December. 2017) ISSN 2456-3757 (pp :90-116)

## Assessment of Food Contractors Serving Mid Day Meals in Mumbai's Civic Schools

## Geeta Ozwald Menezes\*

## Abstract

Designed to provide hot cooked nutritious meals to the children in government owned primary and upper primary schools, the Mid Day Meal Scheme's (MDMS) main objective is to provide to the children who benefit from it at least a third of the nutrition that they require daily. This endeavour has been a massive one to undertake, given the magnitude of the area being covered and the number of mouths that the programme must feed. While the intention behind the scheme is undoubtedly commendable, the scheme has been regularly marred by accusations of inefficiency, corruption and substandard efforts. Although detailing the shortcomings of the scheme would take a very long time, the main disadvantages can be enumerated in the interest of brevity as a lack of feedback, substandard food quality, a lack of effective monitoring, inefficiency in keeping the children informed of their rights, corruption and a mercenary rather than compassionate attitude on the part of the Food Contractors that leads to a degradation in both the moral quality of the scheme and in the meals that it provides. This study evaluates food contractors on various assessment parameters in relation to adherence to MDMS guidelines and highlights some of the problems faced by them in the effective implementation of MDMS. Food Contractors have to realize that there can be no room for compromise and laxity

<sup>\*</sup>Assistant Professor, Department of Economics, Mithibai College of Arts, Vile Parle (W), Mumbai; Email: gomenezes@rediffmail.com.

*in the implementation and execution of such a critical welfare programme which has a direct bearing on nation-building.* 

*Keywords:* Mid-Day meals, Food Contractors, nutrition.

## Introduction

The Mid-Day Meal Scheme (MDMS) has been a subject of interest of various leading economists as well 'right to food' activists. Unarguably, one of the largest school feeding programmes in the world, it was launched with a mission to eradicate classroom hunger and promote elementary education among school going children aged between 6 and 14 years. A starving child will be loath to focus on studies, thus affecting his ability to learn. Children are the greatest assets of any nation, and their needs in terms of nutrition and hunger have to be accorded the utmost priority. Fourty eight years after it attained freedom, India launched a welfare scheme aiming to address this pressing issue. Belated though was its inception, the effort in itself was laudable, as the goal it had assigned to itself was immensely daunting and wellnigh unattainable, since India for centuries had been plagued by poverty and illiteracy. The MDMS is specifically targeted at reducing classroom hunger by specifically seeking to provide one-third of a child's recommended dietary allowance. Through mid day meals, apart from classroom knowledge, children can also be expected to inculcate good habits such as personal hygiene, a balanced diet etc., and also have access to health interventions like micro-nutrients supplementation and de-worming. MDMS also envisions realigning the social fabric of India.

## **Relevance of the Study**

Horrifying incidents of food poisoning due to consumption of mid day meals infested with lizards, rats, caterpillars, snakes, worms, glass shards etc., are reported not only from Bihar, but also from other parts of the country with frightening regularity. On July 16, 2013, India woke up to the horrific news of its worst mid day meal tragedy, wherein 23 children aged between four and twelve died at a primary school in the village Gandaman, close to the town of Chapra in Bihar's Saran district after consuming mid day meal of rice and soya beans. Very high toxic levels of the pesticide monocrotophos had been detected by scientific tests in the contaminated vegetable oil used to prepare the food (Kumar, 2016). The Brihanmumbai Municipal Corporation (BMC) blacklisted Sumangal Mahila Sangathana, a women's self-help group, after rodents were found in khichdi that it had supplied to a civic school in Chembur (BMC blacklists mid day meal provider, 2015). 247 children had to be admitted to a primary health centre after consuming mid day meal khichdi at a Zila Parishad school in Palghar (Palghar: 247 children taken ill, 2016). The success of any endeavour, however well-conceptualized and zealdriven, is heavily dependent on seamless execution, and herein lies the crux. Food Contractors (FCs) play an extremely important role in the successful implementation of MDMS, as the morsel of food that a school child ingests is symptomatic of the efforts and initiative put in by the respective FC to make the mid day meal nutritious, healthy and appetizing. It is therefore a matter of deep introspection, when mid day meals are prepared by FCs in sub-human conditions in

dark, dingy places, where the danger of food contamination is a very plausible threat.

## **Review of Literature**

MDMS has been studied extensively for analyzing its impact on school enrolment, attendance, retention, nutritional needs, educational attainments of school children, especially those from impoverished sections of the society and for pin-pointing various inherent deficiencies and operational bottlenecks impeding its successful delivery.

Blue (2005) evaluated MDMS in Udaipur and observed that summer meal programme organized during holidays had less attendees resulting in wastage of food.Cooks used their own discretion to determine the quantity of meals to be prepared on any given day, resulting in smaller than requisite portions per child, a travesty as far as MDMS guidelines were concerned and often took home, unconsumed quantities of mid day meals. Shortage of funds coupled with inordinate delays in delivery of food grains seemingly affected the quality of meals and cooks resented the pittance paid to them in the guise of salaries. Children often complained about the bland and vapid food served and it was observed that shortage of eating plates left children with no option but to using leaves and paper to eat their food from.

Cheriyan et al. (2007) reviewed the MDMS in Chittorgarh district, Rajasthan and found thatGram Panchayats and Parent-Teacher Associations played a peripheral role in supervising the mid day meal affairs.79 per cent of the schools complained of a delay of two-six months in receipt of funds which hampered the smooth implementation of the MDMS. Most of the

schools reported delivery of fair to good quality of food grains but faced difficulties in measuring the quantities due to unavailability of weighing scales. Quite a few schools were handicapped by the lack of adequate cooking and storage facilities with 62 per cent of the cooks forced to prepare mid day meals in the open among unhygienic surroundings. Teachers complained of losing 20 per cent and more of their teaching time in managing mid day meal operations in the school premises.

Gangadharan (2006) while reviewing the Noon Meal Scheme (NMS) in Kerala observed that the cooks hired for NMS were unqualified for the job in terms of expertise, experience, age and education. NMS guidelines pertaining to fair quality of rice and payment of remuneration to cooks as per number of beneficiaries were flouted. Fine-tuning the menu to make it more appealing and extending the scheme for teachers was a much sought-after demand. The study in addition to strongly recommending setting up of society-monitored centralized kitchens, also rooted for e-governance and soliciting funds from the private sector for shoring up finances to effectively run the scheme.

Kent (2007) has observed that universally, school feeding programmes by virtue of being rolled out through state patronage, easily make it to the top of the list among other similar programmes. More significantly, the students should be made aware of their rights to evaluate whether the nutrition provided to them complies with taste and health norms and is satisfactory in terms of quantity and quality. Moreover, they also need to know about the implementing agencies involved in providing food to them, and in the event of

non-compliance on any of the above fronts, they have the supreme right to voice their opinion and dissent.

Shukla (2014) while delving into the nitty-gritties of MDMS in Delhi hinted at sheer duplicity on the part of NGOs running centralized kitchens in Delhi who on one hand complained difficulty in adhering to nutritional norms in the face of rising inflation while on the other hand, made illicit gains by compromising on the quantity and quality of food served to children under the MDMS. Some NGOs despite raising funds through donations from the private sector (as desperate bids to shore their bottom-line) made recurring demands to the government for an increase in the cooking cost.

## **Objective of the Study**

The successful delivery of the MDMS revolves around the manner in which it is implemented with utmost integrity by the FCs.This study evaluates FCs on various assessment parameters in relation to adherence to MDMS guidelines and highlights some of the problems faced by them in the effective implementation of MDMS.

## Research Methodology

The study is descriptive, based on field survey (personal observation and interview schedules (both based on a five point rating scale, with higher points indicating a more favourable response) used during unannounced visits to food contractor's units) undertaken during November 2016-March 2017 and secondary data obtained from the Annual Work Plan and Budgets of Government of Maharashtra for the last four years. The sample consisted of 34 FCs (Mahila

Sansthas and NGO) appointed by the civic corporation to provide cooked meals to children in municipal schools, randomly selected through stratified random sampling from 273 FCs catering to all civic and private aided schools in Mumbai.

## **Results and Discussions**

Awareness levels of FCs: Since the MDMS is routed (i) through the FCs, and they are solely responsible for cooking, serving and cleaning activities related to school meals, it is imperative for them to be extremely aware of MDMS rationale (the scheme is an important step towards the right to food and education among the impoverished school children), precise entitlements of the children (primary and upper primary students are entitled to a 250 grams and 375 grams of a rice based dish respectively), prescribed food and nutritional norms (a primary school student must get a minimum of 450 calories and 12 grams of protein per meal per school day, while an upper primary student must get 700 calories and 20 grams of protein per meal per school day. A mid-day meal should include 100 grams of grains (rice), 20 grams pulses, 50 grams vegetables, and 5 grams oil for primary students, and 150 grams grains (rice), 30 grams pulses, 75 grams vegetables, and 7.5 grams oil for upper primary students. The nutrition content should further be improved by using green leafy vegetables and double fortiûed salt), and their intrinsic role and responsibilities in the whole process of effective implementation and successful delivery of MDMS (creating a sterile environment with zero compromise on food safety and hygiene to avoid any untoward incident within the school premises and living up to the

essence of MDMS by providing nutritionally dense cooked meals rather than just filling hungry stomachs within the stipulated cost norms).

Evaluation of the sample FCs on awareness parameter reveals that (i) a majority of FCs (76.5 per cent) are 'moderately aware' of the meaning and rationale of MDMS (ii) only 2.9 per cent of FCs are 'extremely aware' of the precise entitlements of children under MDMS (iii) 73.5 per cent of the FCs are 'somewhat aware' of the prescribed food and nutritional norms under MDMS, and (iv) only 2.9 per cent are 'extremely aware' of their role and responsibilities under the MDMS.

Food and nutrition being a critical component of MDMS, the role of FCs in the process cannot be underestimated. Though the objective to involve Mahila Sansthas and Bachat Gats is not subject to debate, it needs to be stressed that their relatively low awareness levels about 'precise entitlements' and 'nutritional norms' as warranted by MDMS guidelines is a cause for concern, more so as non-compliance in any manner whatsoever, intentional or other-wise, would have a direct bearing on the health and growth of thousands of young children, that each of the FC caters to.

(ii) FC Site Details: Since mid day meals are provided to around 4.94 lakh students on every school working day in Mumbai's municipal and aided private schools, it is important that these meals are strictly prepared under hygienic conditions by the FCs. The selected FC units have been evaluated on the basis of their locational accessibility, vicinity hygiene, illumination, ventilation and seepage. An overwhelming number of FC units (64.7 per cent 'difficult' to access and 11.8 per cent 'very difficult' to access) are tucked away in the hearts of

claustrophobic chawls and so are not easily accessible on the basis of their contact details collected from the schools.Locating FCs based on the contact details provided in schools is nothing short of an ordeal and disproportionate amount of time and effort is needed to pinpoint the location, which is beyond comprehension, as in the interests of transparency and accountability, the FC kitchen unit should ideally be accessible to all stakeholders. In most instances, only the name and mobile number of the FC is mentioned in some corner of the Principal's office. In other cases, the kitchen unit location differs from the address listed in the school.

Quite a few of FC units (41.2 per cent) are located in the most unhygienic places, flanked by garbage dumps and nullahs, potentially endangering the lives of children who consume the mid day meals prepared in these units. Further, only 44.1 per cent and 50 per cent of the sample FC units have 'acceptable' levels of illumination and ventilation arrangements respectively, two vital parameters for ensuring food safety. In contrast to MDMS guidelines, 44.1 per cent of the FC units are plagued with 'unacceptable' levels of seepage problems, exposing the stored food grains and other ingredients to the perils of decay and rot. Only 2.9 per cent of the FCs sites are 'perfectly acceptable' in terms of all the aforementioned parameters. More than half of FCs (52.9 per cent) have not displayed any FC details, making it very difficult to locate them. A large majority (67.6 per cent) were 'rarely' willing to share relevant MDMS detailsGiven that FC details are not displayed by most of the units, one can only assume that they were loath to disclose their operational aspects for fear of

inviting unfavourable media attention, which in turn could expose their inadequacies in terms of intent and competency.

(iii) Available Infrastructure with FCs: Assessment of the sample FCs on the basis of availability of sufficient infrastructure in terms of adequate space for storage, prepreparation, cooking, assembly and washing activities and usage of commercial burners to prepare food inlarge quantities reveals that the infrastructural capacities of half of the sample FCs are perilously close to the 'unacceptable mark'. The same holds truefor fire safety precautions taken at the FCs level, as 55.9 per cent of the sample FCs fall in the 'unacceptable' category. Though, exclusive monitoring structures are in place, they are functional only on paper, as some of the FCs defy logic as to how they were authorized to prepare mid day meals given the grossly inadequate infrastructure at their disposal. Even more mind boggling is the ironical fact that they seemed to have fulfilled all guidelines and obtained all approvals to secure the contract. But the ground realities are in blatant contravention of all laid out guidelines. There can only be two reasons to justify the inherent contradictions: political patronage or graft. And statistically both are difficult to prove. Case rested.

(iv) Food Safety Precautions taken by FCs: Evaluation of sample FCs on food safety parameter reveals that only 47.1 per cent and 52.9 per cent of FCs have 'acceptable' level of cleanliness in the storage and cooking areas respectively. Personal hygiene of Cook-Cum-Helpers (CCHs) is a cause for concern for 29.4 per cent of the FCs. Almost all FCs (97.1 per cent) have defaulted on food safety precautions taken in terms of CCHs doning aprons, headgears and hand gloves while handling food.

In many a kitchen, CCHs in hot humid and claustrophobic conditions are found sweating it out, in bare minimum clothing (aprons, head-gears and handgloves were nowhere in the picture) stirring khichdi in oversized vessels, perched atop blazing furnaces. One can only imagine the hygienic aspect of the meals prepared, given the prevailing conditions. Small wonder, that there have been numerous instances of worms, rats, and all sorts of alien objects being spotted in the meals prepared and served in our civic schools.

Though majority of the FCs (64.7 per cent) have taken adequate food safety precautions in the form of clean utensils used for cooking, clean food containers used for transporting food to the schools, and keeping the food covered, 14.7 per cent FCs have 'unacceptable' levels of food safety precautions on the aforementioned aspects. Again, though a large number of FCs (67.6 per cent) have adequate food safety measures in place in the form of safe water used for cooking, proper dish washing and waste disposal, 11.8 per cent of the FCs are found wanting on the said criteria.

(v) Adherence to Guidelines with respect to MDMs: All the 34 sample FCs 'always' serve hot cooked mid day meals on all school working days and follow the MDM timings diligently. Majority of FCs (97.1 per cent) follow the MDM menu 'quite often'. While it was generally found that FCs followed the menu, there were a couple of occasions, where the menu of the day differed from the one that was listed on the notice-board.

Further, all the sample FCs 'rarely' prepare mid day meals as per prescribed food norms (strictly using 100 grams of rice, 20 grams pulses, 50 grams vegetables, and 5 grams oil per serving for primary students, and 150

grams rice, 30 grams pulses, 75 grams vegetables, and 7.5 grams oil per serving for upper primary students) and serve mid day meals as per the prescribed entitlements (where a primary student gets a minimum of 275 grams and an upper primary student gets a minimum of 375 grams of rice based dish). The servings are as per approximations and no effort is taken to feed the children as per prescribed food norms. All the sample FCs have failed to provide wholesome and nutritious mid day meals to our poor and nutritionally deprived school children as the MDM samples of these FCs have 'never' passed the laboratory tests for the prescribed calorific value and protein contents (a primary school student must get a minimum of 450 calories and 12 grams of protein per meal per school day, while an upper primary student must get 700 calories and 20 grams of protein per meal per school day) during the last two years (2015-16 and 2016-17).

Out of a total of 34 FCs, two have been alleged to 'sometimes' supply substandard mid day meals, infested with rats/worms/glass shards in the last three years (there is anecdotal evidence to that effect in the print media). Whenever a FC is in the news for supplying substandard meals, no meaningful corrective or disciplinary action is initiated by BMC officials, for fear of political pressure or in other instances lured by personal gratification, in some form or other. In the worst case scenario, atleast until now, the erring FC is blacklisted in one school and allowed to supply meals in another. And the show goes on. All the FCs admitted to have been levied penalty charges 'quite often' by the authorities for flouting MDMS guidelines.

While the state government and Corporation has issued specific instructions to all FCs concerned, on how to prepare meals as per prescribed food norms (precise quantities of rice, vegetables, pulses, oils, condiments to be used per serving), most of the FCs feign ignorance on preparing meals as per stipulated guidelines, expressing inability to prepare meals in large quantities as per the suggested norms. One would be tempted to thrash the above said claim, as common sense suggests that it is a matter of simple calculation of multiplying per meal serving with the number of intended beneficiaries. But it seemed more likely that the FCs have no intention of following guidelines because then there would prima facie be no scope for cutting corners to make illicit gains. Even in the matter of serving mid day meals, as per precise entitlements, most FCs serve each child one ladle each of rice and dal. A second serving follows, only when the child insists on a second helping. When the FC appointed helpers were queried on the reasons behind small servings, they defended their act by saying that children generally have small appetites and rarely ask for more. The general practice is to prepare and serve food by approximation. For argument's sake, if one were to accept this claim, then one could also make a reasonable assumption that FCs are making tangible savings on the quantities of rice used as well as on other related ingredients, in addition to cooking costs. But the facile argument of children eating less than prescribed quantities is conveniently forgotten, while claiming compensation on a precise basis or when it boils down to raising a demand for an hike in cooking costs.

(vi) Adherence to other MDMS Guidelines: All the FCs 'quite often' appoint helpers for serving and cleaning related to provision of mid day meals in the schools so that the school schedule is not disturbed. 44.1 per cent of the sample FCs have 'rarely' appointed women from marginalized sections of the community as CCHs.All the sample FCs have 'rarely' received any formal training in preparing wholesome, nutritious, tasty and easily digestible MDMsand the same holds true for training received by the FCs on fire safety.

Periodic supervision of all FC units is 'quite often' undertaken by BMC officials and/or School Management Committee (SMC) members. 11.8 per cent of the FCs have outsourced mid day meal preparation to a third party in lieu of mutually agreed commission. In four specific instances, the Bachat Gat is operational only on paper, and a completely different entity is supplying meals on behalf of the authorized one. FCs who have not appointed women as CCHs, defend their decision, saying that it is beyond the physical prowess of a woman to make food in large quantities in huge sweltering kitchens and worse, in inimical conditions. All the FCs have reported that their bills are 'never' timely settled by the BMC. On an average, there is a delay of eight to ten months in the settlement of cooking dues of the FCs.

(vii) Overall Quality of Meals Prepared by FCs: All the FCs were also evaluated on overall quality of meals prepared parameter. It is observed that the rice provided through the FCI to all the FCs is of 'fair' quality. Only 11.8 per cent of the FCs use 'very good' quality and 5.9per cent of FCs use 'good' quality of other food ingredients (pulses, oil, vegetables, condiments, etc.) required in the

preparation of MDMs. A cause for concern is the fact that 29.4 per cent of the FCs use 'poor' quality and 52.9 per cent of the FCs manage to use just about 'fair' quality of other ingredients required for preparing MDMs. The overall quality of MDMs churned out by majority (52.9 per cent) of FCs is 'fair'. The mean, median and mode for each of these three aspects of MDMs is 2 (code=2 for 'fair' quality).

(viii) Hypothesis Testing: The hypothesis tested is whether the MDMS guidelines are adhered to by the food contractors. For statistical testing, the hypothesis is formulated as: Null Hypothesis ( $H_0$ ): MDMS guidelines are not adhered to by BMC appointed FCs and Alternative Hypothesis ( $H_1$ ): MDMS guidelines are adhered to by BMC appointed FCs.

For testing the above hypothesis, data collected during field visits to sample FC units using FC checklist and observation schedule has been used. Each of the parameter taken into consideration for statistical analysis along with the item number from the FC checklist and observation schedule is tabulated in Table 1.

The details of variables, scores and normality tests for the stated hypothesis are presented in Table 2. It is observed that the p value of one sample Kolmogorov-Smirnov normality test for variable Food and Fire Safety Precautions is 0.151. This value is greater than critical p value of 0.05. Hence the null hypothesis that data is normally distributed is retained. Parametric

Table 1: Evaluation of BMC appointed FCs on the basis of compliance to MDMS guidelines with respect to different parameters

Evaluation of BMC appointed FCs on the basis of	FC checklist and
compliance to MDVS guidelines with respect to different	observation schedule
parameters	item number
Awareness of FCs	1, 2, 3, 4
Adequate Food and Fire Safety Precautions by FCs	11, 12
Food and Nutritional Norms followed by FCs	19, 20, 26
Overall Quality of Mid Day Meals prepared by FCs	31, 32, 33
Employment Generation for Women by FCs	22

Table compiled from Food Contractor Checklist and Observation Schedule

One sample t test is used for testing significance of this variable with hypothesized mean value 3. For other variables Awareness, Employment Generation and Meal Quality, p values are 0.00, 0.024 and 0.002 respectively. These are less than critical p value of 0.05. Hence the null hypothesis that data is normally distributed is rejected. Since the data is not normally distributed, nonparametric one sample Wilcoxon signed rank test is used for testing significance of these variables with hypothesized median value 3. For variable Food Nutritional Norms since the distribution has no variance, one sample Kolmogorov-Smirnov Test cannot be performed.

Descriptive statistics for variable Food and Fire Safety Precautions is given in Table 3 and results of parametric one sample t test for testing significance of variable Food and Fire Safety Precautions with hypothesized mean value 3 are presented in Table 4. Mean score value for variable Food and Fire Safety Precautions is 3.2834. Since this value is greater than

hypothesized value 3, it indicates that MDMS guidelines are adhered to by BMC appointed FCs for this variable.

From Table 3, it is observed that since the p value for Food and Fire Safety Precautions is 0.018 and is less than the critical value of 0.05, null hypothesis that there is no significant difference between calculated mean value and hypothesized mean value 3 is rejected in this case (at 5 per cent level of significance). Hence it may be inferred that mean score value for variable Food and Fire Safety Precautions is significantly greater than hypothesized value 3 and so MDMS guidelines are adhered to by BMC appointed FCs for this variable.

Variable	Five point rating scale with codes	Null for Normality	Normality Test	p value	Result of Normality
Awareness	1: Not at all aware; 2: Slightly aware; 3: Somewhat aware; 4: Moderately aware; 5: Extremely aware	Test The distribution of F_Awarene ss is normal with mean 3.4338 and S.D. 0.46	One sample Kolmogorov Smimov test	0	Test Reject null hypothesis
Food and Fire Safety Precautions	1: Totally Unacceptable; 2: Unacceptable; 3: Neutral; 4: Acceptable; 5: Perfectly Acceptable	The distribution of F_Food_an d_Fire_Saf ety_Precaut ions is normal with mean 3.2834 and S.D. 0.67	sample Kolmogorov Smirnov	0.151	Retain null hypothesis

Table 2: Details of variables, scores and Normality Tests for the stated hypothesis

Food Nutritional Norms	1: Never; 2: Rarely; 3: Sometimes; 4: Quite Often; 5: Always	The distribution of F_Food_Nu tritional_No ms is normal with mean 1.67 and S.D. 0	Vorionoo tor	this va	riable. One ov-Smirnov
Employment Generation	1: Never; 2: Rarely; 3: Sometimes; 4: Quite Often; 5: Always	The distribution of F_Employm ent_Genera tion is normal with mean 2.44and S.D. 0.86		0.024	Reject null hypothesis
Meal Quality	1: Poor; 2: Fair; 3: Good; 4: Very Good; 5: Excellent	The distribution of F_Quality is normal with mean 1.9988 and S.D. 0.61	One sample Kolmogorov Smirnov test	0.002	Reject null hypothesis

Senhri Journal of Multidisciplinary Studies Vol. II No.2 (July - December: 2017)

Source from: Statistical Analysis from Primary Data

# Table 3: Descriptive statistics for variable Food and FireSafety Precautions

	Ν	Mean	S.D.	Std. Error Mean
Food and Fire Safety	34	3.2834	0.6657	0.1141
Precautions				

Source from: Statistical Analysis from Primary Data

Table 4: One sample t test of mean vs hypothesized score 3 for variable Food and Fire Safety Precautionsregarding adherence to MDMS guidelines by BMC appointed FCs

	Test Value = 3			
	t	Degrees of	Sig. (2-tailed) p	
Variable	L	freedom(df)	value	
Food and Fire safety Precautions	2.483	33	0.018	

Source from: Statistical Analysis from Primary Data

Table 5: Descriptive statistics for variables Awareness, Employment Generation and Meal Quality

	Awareness	Employment Generation	Meal Quality	
N	34	34	34	
Median	3.25	2	2	

Source from: Statistical Analysis from Primary Data

Descriptive statistics for variables Awareness, Employment Generation and Meal Quality is given in Table 5. Results of non-parametric one sample Wilcoxon signed rank test for testing significance of variablesAwareness, Employment Generation and Meal Quality with hypothesized median value 3 are presented in Table 6.

From Table 5, it is observed that the median score value for variables Awareness is greater than 3. This indicates that MDMS guidelines are adhered to by BMC appointed FCs for this particular variable. For each of the variables Employment Generation and Meal Quality, median value is 2.00 and since it is less than 3, it indicates that MDMS guidelines are not adhered to by BMC

appointed FCs for these two variables under consideration.

From Table 6, it is observed that for the variablesAwareness, Employment Generation and Meal Quality, p values are 0.000, 0.001 and 0.000 respectively. Since these values are less than 0.01, the null hypothesis is rejected for each of the three variables under consideration. Hence it may be inferred that median score values for variableAwareness is significantly greater than 3 and so MDMS guidelines are adhered to by BMC appointed FCs for this particular variable. But for variables Employment Generation and Meal Quality, since median score value is significantly less than 3, it indicates that MDMS guidelines are not adhered to by BMC appointed FCs for these two variables under consideration. For variable Food Nutritional Norms, since the distribution has no variance and mean value 1.67 is less than 3, it may be inferred that MDMS guidelines are not adhered to by BMC appointed FCs for this variable.

Table 6: Hypothesis Test summary of non-parametric one sample Wilcoxon signed rank test for variables Awareness, Employment Generation and Meal Quality regarding adherence to MDMS guidelines by BMC appointed FCs

Null Hypothesis	p value	Decision
The median of Awareness equals to 3.00	0	Reject null
	0	hypothesis
The median of Employment Generation	0.001	Reject null
equals to 3.00	0.001	hypothesis
The median of Meal Quality equals to 3.00	0	Reject null
	0	hypothesis

Source from: Statistical Analysis from Primary Data

Overall summary with respect to the tested hypothesis reveals that MDMS guidelines with respect to awareness of FCs on MDMS details and on their role and responsibilities under MDMS, and food and fire safety precautions taken are adhered to by BMC appointed FCs. MDMS guidelines with respect to employment generation for women are not adhered to by the FCs. FCs are found wanting on compliance to MDMS guidelines with respect to overall food and nutritional norms and quality of mid day meals served.

(ix) **Problems faced by FCs:** Since one of the objectives of the study is to highlight problems faced by the FCs, an attempt is made to understand the trials and tribulations they face in the effective implementation of the MDMS. One of the most common complaints of FCs is with regard to the quality of raw rice received from FCI, ranging from 'inconsistency in the quality of grain' to 'littered with husk, stones and other impurities' to 'weight variation (35 kgs received against the stipulated 50 kgs) on account of pilferage'. To clean the poor quality raw rice, FCs have to hire extra hands leading to cost escalation. Their problems are compounded when 'new' rice is supplied which turns mushy and viscous on cooking (as against 'aged' rice grains which remain non-sticky and separate out after cooking).

FCs complain bitterly about cooking costs not being sufficient enough to cover all the expenses incurred in preparing, transporting and serving mid day meals. According to them, just providing rice does not help them, as they have to incur additional costs on other food ingredients like pulses, spices,

vegetables, oil, and condiments, not to mention expenses incurred on warehousing, honorarium to CCHs, contract related investment (bank guarantee, earnest money deposit), utility bills, utensils, transportation, sundry overheads etc. Spiraling costs and inflation only exacerbate operational issues. An overwhelming majority complain of inordinate delay in clearance of payments (ranging 8-10 months) rendering it almost a herculean task to survive, least of all thrive. Greasing palms of officials to release long overdue payments is something that FCs have come to terms with and have accepted it as an intrinsic part of doing business.

FCs also complain about additional expenses incurred on keeping administrative officials in 'good humour' so as to avoid being harassed on account of trumped up charges of flouting MDMS guidelines. FCs live in constant fear of competition driven rival FCs trying to spike mid day meals in a bid to outdo each other to secure contracts. FCs wondered how they could be blamed for serving mid day meals that fail to meet the prescribed calorific and protein contents, when they have not been formally trained to churn out wholesome and nutritious meals as per prescribed nutritional norms. Another bone of contention is the general preference accorded to centralized automatic kitchens over and above them, their grouse being the unfair advantage centralized automatic kitchens have over them in terms of institutional infrastructure, wherewithal in terms of local donations, foreign funding, deep pockets, skilled manpower, excellent PR, professional expertise, official patronage etc.

## Conclusion

The fact that the presence of reptiles and dead animals in meals vital for daily nutrition exists anywhere beyond horror stories is appalling. Food is vital for survival, and is supposed to give and maintain life, not take it. These children who hungrily congregate in front of the servers for a meal every day deserve nothing less than affectionate care and adequate sustenance. The death sentences that they receive, born of gross negligence and filthy corruption are a far cry from the rightful repasts that the MDMS is supposed to provide. Such incidents of verminous meals may not be life threatening at all times, but one cannot even imagine the trauma, the children would undoubtedly have to undergo, in the unfortunate event of having to partake a contaminated meal. During interaction with FCs, many have been calloused enough to caustically comment that the children in BMC schools themselves live in slums and chawls, in dirty, unhygienic environments and the food they consume at their homes is far from healthy, and it's not as if they are being compensated for putting up units in decent locations. So, what's the big deal if the FCs prepare mid day meals in kitchens located in questionable localities and unhealthy environments.

This pathetic reasoning needs to be robustly condemned as the FCs while pitching for the food preparing contracts are fully aware about the specific ground rules regarding food hygiene and related safety norms. It's either in or out. It can't be optional. Whatever reasons, justified or otherwise, FCs cannot be allowed to circumvent, tweak and/or subvert MDMS guidelines to profit or prosper or for that matter offer the specious plea of survival as an excuse to play around with the

life of a child, who is at their mercy for that one bite, which might as well be their last (Bihar midday meal tragedy, a case in point). FCs have to realize that there can be no room for compromise and laxity in the implementation and execution of such a critical welfare programme which has a direct bearing on nationbuilding, as the life of every child whether poor or rich, well-fed or malnourished is the paramount responsibility of the State, and there can be neither ambiguity nor scope for discourse or dispute on that count.

The role of the BMC officials also needs to be dwelt on at length, while discussing mind boggling in-yourface kind of lacunae at FC level in implementation of the MDMS. While it will be highly convenient to ignore or thrash the claims of FCs, given their own propensity to cut corners, about endemic corruption prevalent at all levels in the State machinery, there can be no dispute that misuse of office, abundance of red tape and the lure of instant gratification is primarily responsible for widespread compromise of rules, procedures, safety and above all ethics and morality.

While it is understandable that budgetary issues tend to hold the food contractors back from creating culinary masterpieces to feed the children, the meals that they are given often fall far below even satisfactory. Often, rodents and reptiles are found in the meals-a sign of shocking negligence that is as deadly to the children as it is disgusting to most people. The blatant pilferage practiced by certain food contractors who desire overall profit rather than efficient provision is endangering the children's lives, and while it might be tempting for a supporter of the scheme to brush these incidents of MDM

casualties off as stray occurrences, the numbers tell a different story-one that makes the MDM seem more deadly than beneficial to the children. Statistically speaking, a lot of children receive meals, but numbers can't really quantify quality-a fact that food contractors who audaciously provide piecemeal nutrition frequently take advantage of. They seem completely unapologetic about the lack of quality and poor hygiene standards of the food and rely on political patronage to escape any trouble that their consistently substandard services get them into. Although efforts are made by the media to point out flaws in the process, course correction is severely lacking on the ground level of the scheme.

At the most, fines are imposed on the food contractors, which they pay without taking the slightest effort to improve their operations. Combined with corruption and graft that leeches money out of the pipeline and leaves precious little of it to actually help the children with, the scheme's working is severely compromised. How can a plant grow if parasites siphon away the water collected by its roots? As long as corruption exists, the flow of liquidity meant to improve the lot of the children will be a mere trickle, nowhere near sufficient to sate the thirst born of generations of poverty that persists in their parched throats.

All these flaws, debilitating as they are, can still be fixed. The MDMS is a step forward in welfare schemes for children, and with a little improvement, it can truly help better the nation's future. The MDMS has the potential to rebuild the nation from its base, and as such it is imperative for it to be managed and executed perfectly.

## **References:-**

- Blue, J. (2005). The government primary school Mid Day Meal Scheme: An assessment of programme implementation and impact in Udaipur district. *Sewa Mandir*. Available at http://www.righttofoodindia.org/data/ blue2005middaymeals.doc, accessed on 25<sup>th</sup> Februrary 2017.
- BMC blacklists mid day meal provider group. (2015) *The Times of India*, 22<sup>nd</sup> March. Available at http:// timesofindia.indiatimes.com/city/mumbai/BMCblacklists-midday-meal-provider-group/articleshow/ 46648519.cms, accessed on 24<sup>th</sup> Februrary 2017.
- Cheriyan, G., Sharma, K., Murthy, J., Agarwal, S. & Shah, P. (2007). Rajasthan, India: An assessment of the Mid Day Meal Scheme in Chittorgarh district. *World Bank*. Available at https://openknowledge.worldbank.org/ handle/10986/25019, accessed on 25<sup>th</sup> February 2017.
- Gangadharan, V. (2006). Noon Meal Scheme in Kerala: An empirical study for the director of public instruction. *State Institute of Educational Management and Training. Government of Kerala*. Available at http:// www.righttofoodcampaign.in/school-meals/articles, accessed on 25<sup>th</sup> February 2017.
- Kent, G. (2007). Designing rights-based school feeding programs. University of Hawaii. Available at w w w 2.h a w aii.edu / ~kent / Designingper cent20Revisionper cent202.doc, accessed on 25<sup>th</sup> February 2017.
- Kumar, A. (2016). Bihar Mid Day Meal deaths: Former principal jailed for 17 years. *Hindustan Times*, 29<sup>th</sup> August. Available at http:// www.hindustantimes.com/india-news/schoolprincipal-meena-devi-jailed-for-17-years-over-deadlymid-day-meal/, accessed on 24<sup>th</sup> February 2017.

- Ministry of Human Resource Development. (2006). *MDM Guidelines*. Available at http://mdm.nic.in/Files/ Guidelines/10.FINAL\_Guidelines\_MDM\_19\_sept.pdf, accessed on 25<sup>th</sup> February 2017.
- Ministry of Human Resource Development. (2017a). About the Mid Day Meal Scheme. Available at http:// mdm.nic.in/About the Mid Day Meal Scheme.pdf, accessed on 25<sup>th</sup> February 2017.
- Ministry of Human Resource Development. (2017b). Annual Work Plan and Budget. Available at http://mdm.nic.in/ F i l e s / P A B / P A B - 2 0 1 7 - 1 8 / M a h a / 1\_MAHARASHTRAper cent20Stateper cent20WRITEper cent20UP.pdf, accessed on 25<sup>th</sup> February 2017.
- Palghar: 247 children taken ill after consuming mid day meal. (2016). *The Indian Express*, 26<sup>th</sup> February. Available at http://indianexpress.com/article/india/indianews-india/palghar-247-children-fall-ill-after-eatingmid-day-meal-prepared-by-iskcon/, accessed on 1<sup>st</sup> March 2017.
- Shukla, S. (2014). Mid Day Meal: Nutrition on paper, poor food on the plate. *Economic & Political Weekly*, Vol 49, No7, p:51-57: Mumbai.