CHAPTER- II

REVIEW OF RELATED LITERATURE

2.0 Introduction

Related Literature what we understand is the similar or related studies made by the previous research workers in the same field. Review of the related literature allows the researcher to acquire the current knowledge of the field in which the researcher is going to conduct the research. It works as a guidepost in perceiving the gap and lacuna in the concerned area of research work. According to C.V, Good (1959), “survey of related literature helps us to know whether evidence already available to solve problem adequately without further investigation and thus may solve duplication”. Thus it acts as a lighthouse to dislocate, what is already known, what the pitfalls of the previous studies are and also widen our outlook, knowledge, insight and experience with regard to the problem.

By reviewing the related literature, the researcher can avoid the elements which seem to be irrelevant. It can avoid unintentional duplication of well established finding. The review of related literature gives the researcher an understanding of the research methodology which refers to the ways the study is to be conducted. It helps the researcher to know about the tools and instruments which proved to be useful and promising in the completion of her research study. The advantage of the related literature is also to provide insight into the statistical methods through which validity of results is to be established. Careful consultation of the recommendations made in the various research studies guides the researcher regarding the suitability of a problem and delimiting the research study. In the words of Walter, R. Borg (1965), “The literature in any forms the foundation upon which all future work will be built.”
The author further observes that if we fail in the review of literature, our work is likely to be shallow and naïve, and will often duplicate work that has already been done better by someone else. The researcher has gone through some of the relevant literature in India and aboard covering the literature related to Mid Day Meal programme.

2.1: Studies conducted on MDM in Arunachal Pradesh

Josephine, Y. (2008) found that Mid Day Meal programme in Arunachal Pradesh in papumpare district is quite satisfactory. Attendance of the learners has been improved, Cooks are engaged from the available women from the same locality belonging to S. T. category, and phase wise sanction was done by the government for the Construction of kitchen sheds, VEC meetings are taking place regularly for discussing the various issues pertaining to civil works, drinking water, and smooth running of schools. But the delay in release of conversion cost by the government causes problems to the institutional head other than that Mid Day Meal scheme has been implemented in the Papumpare district is successful. The quality of MDM needs to be improved. There is need to have some matching between the supply of food grains and demand for the food grains and conversion money. The regularity in providing Mid Day Meal is required to be maintained.

2.2: Studies conducted in India

Dreze, J. & Goyal, A. (2003) conducted a study on Future of Mid-Day Meals. The data were collected from three districts of three states: Chhattisgarh, Rajasthan and Karnataka. The field survey involved detailed interviews with teachers, parents and cooks. The study concluded that mid-day meals are in place in each of the three sample states. All the sample schools have a cook, who prepares the mid-day meal
after obtaining the grain and other ingredients from the teacher or sarpanch. Infrastructural facilities (cooking shed, water supply, utensils, and so on) vary a great deal between different states and districts, and leave much to be desired in many cases. Yet, the mid-day meal usually materializes at mid-day, and children seem to enjoy the lunch break. The provision of a mid-day meal in the local school is associated with a 50 per cent reduction in the proportion of girls who are out of school. In each of the three sample states, there were serious problems relating to the infrastructure and logistics of mid-day meals. The investigator further suggested that qualitative improvements are urgently required if mid-day meals are to achieve their full potential. The survey findings suggest a number of priorities for action.

Satish et al. (2007) made a study on Mid Day Meal Scheme: Understanding critical issues with reference to Ahmadabad city with the objective to evaluate the program in terms of efficiency in delivery system and service quality. Out of 538 schools, 3 schools were visited in Ahmadabad. The major findings were that the kitchens staffs wore clean uniform with caps on; the overall process of cleaning the grains, sorting was being done quite hygienically. It was also informed that the quality of food grains supplies coming from FCI is not good as compared to the one provided by the state. Once the food is prepared, it is distributed to various schools by tempos and it takes time for the tempo to reach all the schools, either school recess time has to be advanced, delayed or extended, or the food does not stay warm till children get to eat. It was also observed that despite paid employees of the scheme, teachers have to spend their time to served food to the students. Often recess time is not enough for the teachers to served food and have their own lunch as well. The study also revealed traces of uric acid and aflatoxins which if taken for a longer period of time could be
carcinogenic for the children. Therefore the investigators suggested that there should be implementation of the HACCP system in preparation and serving of the meals.

**Afridi, F. (2007)** completed a study on the Impact of School Meals on School Participation in Madhya Pradesh. The objective of this study was to assess the impact of a nationally mandated free cooked meal program in public primary schools on participation rates using school and household level data that he collected in a rural area of the central Indian state of Madhya Pradesh. He applied both survey and experiment method and data was collected at three levels – household, school and village. 15 households were sampled through systematic random sampling and came to conclusion that the cooked school meals did not have an impact on enrollments over and above the effect which may have been induced by the pre-existing program of distributing raw food grains to primary school students. But the differentially larger subsidy provided by the cooked meals vis-à-vis raw food grain distribution did lead to an overall increase in the enrollment level of ST girls.

**Angom, S. (2008)** Studied on the the implementation of MDM scheme in Manipur and visited five districts. They were Imphal East, Imphal West, Senapati District, Bishempur District and Chandel District and it was found that most of the good practices are common in most of the school except for the idea of having kitchen garden, using gas for cooking, maintenance of register and display of day to day menu. The exceptional good practices need to be encouraged by the implementing agencies. It is also found that though there is delay in the released of maintenance fund, but the Headmaster take proper initiative to get the necessary cooking items in time. However investigator suggested that the State government should take immediate action relating to the common problem of kitchen sheds, drinking water
facilities, insufficient number of utensils and toilet facilities. The Directorate of School Education of the State need to have a cell for running the Mid Day Meal Scheme effectively and efficiently.

Singh, A. (2008) conducted a study on School Meals Work for overall evaluation of the Midday Meal Scheme in India. The data was used from a longitudinal study of children in poverty collected by the Young Lives Project in the state of Andhra Pradesh (A.P.) in India. The main finding of the study pointed out that the children in the younger cohort show some health benefits from the scheme after merely a year of treatment whereas the children in the older cohort do not even after four years of receiving the treatment. The program acts as a security net for children, cushioning them from negative nutritional factors; in particular, among younger children there are large and significant gains for children who suffered from the impact of drought. The results on drought, indicating that drought had a negative impact on health but that this was counteracted by the Midday Meal.

Chugh, S. (2008) conducted a study on the implementation of Mid-Day Meals Scheme at Primary School, Government of Maharashtra by covering 34 districts and found as follow; - Maharashtra has been successfully implementing the MDM scheme with the involvement and active participation of Village education Committee/ Ward Committees, Parents, Community. Self Help Group and NGOs are contributing positively in the successful execution of the mid day meal scheme. Each child in primary school/ EGS Center is provided nutritious cooked meal. Since January 2008, the scheme has been extended to 30 educationally backward blocks of 10 districts and it is going to be further expanded for all the children of upper primary classes.
At the system level initiatives have been taken for the regular and timely supply of the food grains. Food grains are provided timely and the utilization by the school is also done efficiently. Funds are most often released on time in order to have uninterrupted implementation of the scheme.

In Maharashtra, involvement of the self help groups in the cooking and supply of cooked meal is worth praising. They have kept the kitchens neat and stored the food grains in neat bins. It is heartening to observe that these self help groups work with a spirit of social welfare and profit is not the main motive. Cooking is generally carried out at the place of self help group which are located in the close vicinity. This has dual advantage as it does not create disturbance in the school and children get hot meal due to closeness to the school premises. It also reduces the burden of teachers because they do not have to be physically present while the food is being cooked. Another significant feature observed in Maharashtra is that the community, parents and teachers monitor the quality of food grains and cooked meal regularly with keen interest. Numbers of NGOs are also contributing in the implementation of scheme by donating utensils, and also helping in the cooking and delivery of cooked food in few schools. The main objective of the scheme is being accomplished as it has been able to improve the enrolment and retention.

Chugh, S. (2008) conducted on the Implementation of Mid-Day Meal Programme in Punjab with a sample of ten schools from four districts were selected. Observation and semi structure interview were used for data collection and concluded that in all the schools the provision of meals was never interrupted though there has been delay in the delivery of funding. Teachers were able to keep the meal programme going either by spending out of their pockets or borrowing from the store and vegetable vendors on loan basis. The food prepared was delicious in all the
schools and the students were seen to be having second helping. Some of the students reported that they found it to be better than prepared at home. In few schools the parents were regularly visiting to supervise the quality of food grains and also the cooked food. All the schools had displayed on board the attendance for the day. Some schools had also displayed the quantity of food cooked on that day and the expenditure incurred on it. It was pointed out by most of the school that the cooking should take place at cluster level and then the food may be distributed to all schools situated within the cluster.

**Josephine, Y. & V.P.S. (2008)** researched on the Implementation of Mid-day Meals Programme in Andhra Pradesh. Out of 23 districts, six educational districts are selected and data was collected by using interview schedules, observation schedules, information schedules, and open-ended questionnaire and Focus group discussions. The major finding was that the Programme covers children studying in Primary and Upper Primary Government, Local Bodies, Aided, Education Guarantee Scheme and Alternative Innovative Education Centres and Madrassas. MDM effectively alleviated classroom hunger and persuading poor families to send their children to school, the cooks employed in many places are Dalit women, reduced dropout rate and shown improvement in retention and curbed teacher absenteeism and narrowed social distances. However still few constraints are still exists like in some places such as water supply, lack of proper kitchen sheds, shortage of LPG Gas during rainy season cooking with fire wood and vigorously Monitoring of MDM Programme.

**Mallik, S.K. (2008)** studied on the overall Implementation of Mid Day Meal Programme in Orissa. The Jharsuguda district of Orissa was selected and a sample of 15 schools from all the five blocks and two municipalities were covered and investigator had found that all the schools visited are having attendance rate of 80%
Women Self Help Group is very active in managing the MDM programme and they are appointed as cook and helper with a consolidated salary of @Rs. 200 and @Rs. 100, maximum visited school is well managed with excellent garden, toilet facility provided for the boys and girls separately, eggs are being provided by the schools twice in a week, fire wood are reserved if they do not get coal for cooking purpose, children are much disciplined while taking food and washing their hands before and after food, all the schools have purchased the utensils for the mid day meal programme and VEC members also visit the school during the lunch hours to oversee the MDM programme. Effort is made for the constructing of Kitchen sheds and regular monitoring of MDM programme.

**Narula, M. (2008)** conducted a study to evaluate the Best Practices Adopted in Mid-Day-Meal Scheme in Haryana. The investigator concluded that mid day meal scheme has been proven to be a strategic intervention in education as it provides an incentive to children to come to school. The scheme is covered in 100 percent of the primary schools and hot cooked meal with fixed menu is served in all the primary schools from 2004. From 2008-09 sessions, it had been extended up to upper primary level.

At the initiatives has been taken for successful implementation of the programme. For example, putting stamps on the food grain bags before supply to the schools, opening of saving account for the mid-day-meal programme at school level for ensuring timely purchase of the ingredients, supply of adequate infrastructure facilities, involvement of voluntary organization (ISKCON) in MDM, Community involvement in supervising and distribution of mid-day-meal, organizing “Mothers’ Sammelan”,. However, arrangements for regular health check-up and other related medical support is provided to students with great care. Even the state has made
obligatory for health check-up of cook, to ensure communicable diseases are not transferred and ultimately leading to universalization of elementary education.

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Srinivas, K. (2008) studied on the Implementation of Mid-Day Meal Programme in Karnataka by visiting 6 districts and 24 schools and the data was collected by using interview schedules, observation schedules and open-ended questionnaire and Focus group discussions. He found that Mid Day Meal practices are common throughout the state. Record Keeping, Display of information on school walls, SDMC member’s active cooperation and Mother Committees active involvement are some of the other best practices followed in the state. The Karnataka State Quality Assessment organization result for the year 2007-08 shows effect of MDM on students learning levels. One of the major finding is that to improve the public satisfaction on MDM Programme the government of Karnataka is providing
the hot cooked meal to the children at their local taste. They are also allowing the NGOs in the implementation of MDM at the rural/urban areas. For greater accountability Parents and Public are allowed to visit the kitchen centers at the time of cooking and serving. Also the parents are allowed to check the quality of the food grains.

Mallik, S.K. (2008) studied on the overall Implementation of Mid Day Meal Programme in Orissa. The Jharsuguda district of Orissa was selected and a sample of 15 schools from all the five blocks and two municipalities were covered and investigator had found that all the schools visited are having attendance rate of 80% and above. Women Self Help Group is very active in managing the MDM programme and they are appointed as cook and helper with a consolidated salary of @Rs. 200 and @Rs.100, maximum visited school is well managed with excellent garden, toilet facility provided for the boys and girls separately, eggs are being provided by the schools twice in a week, fire wood are reserved if they do not get coal for cooking purpose, children are much disciplined while taking food and washing their hands before and after food, all the schools have purchased the utensils for the mid day meal programme and VEC members also visit the school during the lunch hours to oversee the MDM programme. Effort is made for the constructing of Kitchen sheds and regular monitoring of MDM programme.

Rani, A. & Sharma, N.K (2008) researched on entitled,” An Empirical Study of the Mid-Day Meal Programme in Khurda, Orissa” was conducted by The major objective of the study was to critically analyze the Mid Day Meal Programme in khurda. The major finding tells us that the schools did not have adequate infrastructure and staff to implement the cooked meals scheme. The menu was monotonous but nutritious; there was no interference or hindrance from the parents in
implementation of the scheme; the parents also did not complain of mismanagement. However due to inadequacy of required staff, the teachers had to spend much time and effort in running the cooked meal scheme.

Raju, V.P.S. (2009) also made an attempt to investigate into the nature of Implementation of Mid-day Meal Scheme in Assam. The study was confined to four Golaghat, Jorhat, Dibrugarh and Nagaon district of Assam with a sample of 13 schools from four districts. Data was collected by using interview schedules, observation schedules and Focus group discussions. The investigator witnessed that Community coordinator encouraging Mother’s committee members to participate in school activities like cooking and serving of MDM, teaching in the absence of the teacher, running anganwadi centre in CRC building, attending prayer meetings, preparation of teaching aids, painting on the walls, cleaning the school premises and class rooms and growing kitchen garden. Some of the good practices observed by the investigator in all the visited school are as follows:

1. Primary health centre staff is visiting the school every month and distributing vitamin tablets
2. Using water filter for drinking water purpose
3. Teachers contributing money for providing vegetables for mid day meal
4. School has separate room for serving mid day meal
5. Most of the students in this school are from economically poor families. They are getting nutritious food.

Wizarat, K. (2009) have completed a study on Best Practices Adopted in Mid-Day Meal Scheme in Uttar Pradesh and he concluded that revised menu has been written on 6/8 feet painted on the wall of the school and food was served accordingly, funds received against cooking cost is deposited in a separate account in village fund
so that account of expenditure can be maintained, a committee has been constituted at gram panchayat level to supervise day-to-day cooking at school level, the government has taken a lot of steps to streamline the process of serving hygienic and safe food, cleanliness and discipline among students is well taken in the school while serving the food. The head teacher and the other teachers first tasted the meal and then served to the students, government has facilitated availability of cooking gas cylinders and other equipments, a number of new kitchen designs have been developed by MDM authority and the have formed task force at state, district and block level to constant monitor the progress of the scheme.

**Kaushal, S. (2009)** has completed a study on Implementation of Mid-Day-Meal Programme in Rajasthan. The data was collected from both the primary and secondary sources. The field study was based on the observations of eleven primary/upper primary government schools in Jaipur and found that with the serving of cooked food, MDM appears to have raised the attendance of children in schools, children were not discriminated in the schools on the ground of caste, gender, religion, creed or disability, while serving cooked food to children in schools, all the cooks were women and majority of them were from scheduled caste or scheduled tribe background or widows, weekly menu information is permanently displayed on notice boards to make everybody aware about the Programme, all of the school having MDM keep the record and maintain registers for full transparency, children learned good habits such as: washing hands before and after meals, chew their food properly, do not waste food, do not scatter food while eating, clean the sitting place, eat in rows and discipline, provide help in cooking, cleaning utensils and keeping them on proper place.
Narula, M. (2009) A Case Study of Mid-Day-Meal Scheme in Jharkhand was conducted by and the study was concluded that in Jharkhand the nutritional programme was successfully implemented. All the initiatives have been taken by the state government for the regular and timely supply of food grains. Therefore in all the schools the programme is going on without break. The programme has been enthusiastically accepted by the community in the state. More girls have started coming to schools and their attendance and retention has increased over the years. No discrimination was observed in serving of the food between communities and gender. Children’s involvement in the form of ‘Bal Sansad’. The availability of teachers has improved. Another significant feature observed in Jharkhand is involvement of community in the name of Sanyojikas who cook as well as monitor the quality of food regularly and with interest.

A study was carried out on school lunches by Jayaraman et al. (2009) with the main objective to find out the impact of school lunches on primary school enrollment. Data was collected by referring District Information System for Education (DISE) and then aggregated at the district level, where it is checked for computational and consistency errors. The study provides evidence that India’s midday meal scheme has led to large increases in primary school enrollment. It was also found that midday meals, although effective at encouraging early school enrollment, but it was less effective at retaining students or encouraging re-enrollment in upper primary school. This means that the enrollment effects are encouraging, but the learning effects are less. So it was concluded that mid day meal programme in India does seem to corroborate anecdotal evidence that the administration of midday meals distracts from teaching, and that the enrollment response to the program has stretched limited resources, both of which compromise learning. However it was suggested that quite
apart from enrollment effects, there may be important nutritional or school attendance benefits which may still speak for the introduction of similar school feeding programs in these regions.

Another study was conducted by Satish, Y. et al (2010) they study the Evaluation of Mid Day Meal Scheme in Ahmadabad. The main objective was to test the sufficient nutrition, food safety, convenience and variety to the targeted children. They visited a total of 538 primary schools and it was found that there are unhygienic food delivery practices, lack of variety in food, inconvenience both to students and teachers, absence of balanced and nutritious diet. Therefore they suggest certain changes to address the above issues.

Singh, M. (2010) has completed a study on evaluation of Mid Day Meal Scheme in Meghalaya to assess the performance of the programme in the entire state. A sample of seventy MDM centers from all seven districts of Meghalaya was exhaustively studied. The study was based on intensive fieldwork approach collecting both primary and secondary data. The major findings were that the scheme had improved enrolment, attendance and retention of primary schools. Half of the SMCs in the sample expressed that they are more or less satisfied with the quality of MDMS. Regarding the regularity parents stated that MDM served twice a week but the view of students is different. Out of 1503 students total 44 students were observed not eating mid day meal by their own choice in Meghalaya. Some school authorities expressed their dissatisfaction regarding monitoring of MDM as it was mostly limited to only road side schools. The investigator also found that there are some issues which are limiting the reach of MDMS to students in the fullest manner

1. Majority of stakeholders particularly parents and teachers felt that whatever they were receiving was free
2. Most of the teachers were lacking appropriate level of orientation regarding objectives of the MDMS and hence felt it as wastage of the time and energy.

3. The state-wide audit of the implementation of the scheme revealed weak internal controls and monitoring.

4. Government officials have a serious complaint regarding mismatching students statistics.

The main conclusion was that after a long span of implementation of MDMS in Meghalaya school enrolment is not universal. It is up to the Government to work out their logistics and choose the model / models most suited for their State.

Chauhan, S. D. (2011) carried out a study on midday meal programme in the government primary schools of the Gwalior city of Madhya Pradesh. The objectives of this study was to study mid day meal scheme in the government primary schools of the Gwalior city in terms of organizational structure, management of food grains, vegetables and ingredients, menu and monitoring of the programme. The sample consisted of 309 governments schools. The students, parents, staff in charge, CEO (Zilla panchayat), members of MDM cell, food supplier were included in the sample. The observation schedule was constructed and the information about was collected with observation and interview method. He found that the organizational structure of MDM programme at state and district level is very well defined. Menu is well studied with reference to its nutritional value. Introduction of NGO and PPP has increased the fruit fullness of the programme by reducing the issues related with the MDMP such as cutting of teaching-learning time, teachers work load, unhealthy atmosphere of schools as the food was cooked in the schools premises, social discrimination caused by the recruitment of Dalit cook, students in cooking process etc.
Garg, M. (2012) carried out a study on Impact of Mid Day Meal Programme on School Participation, Nutritional Status and Educational Attainments in Rajasthan. The objectives of this study were to examine, analyse and produce the role of mid day meal in improving nutritional status among rural primary school children. Jaipur district was chosen and a sample of 22 children was selected for the study from each of the eight selected schools. Data were collected through questionnaires at three levels: teachers, individual students, and their parents. The study found that school attendance for girls and SC, ST children, particularly from lower economic classes, has improved it can be said that benefits of Mid Day Meal programme, for school participation, nutritional status, and educational outcomes, are mostly accrued by girls and children from disadvantaged families with lower economic status.

Paul, P.K. & Mondal, N. K. (2012) researched on Impact of Mid-day Meal Programme on Academic Performance of Students: Evidence from few Upper Primary Schools of Burdwan District in West Bengal with the objectives to analyze the nature and impact of mid-day meal programme on academic achievement of students and to find out the nature of relationship between mid-day meal programme and selected factors (i.e., enrolment, attendance, retention and drop out of students) associated with academic achievement of students in urban and rural areas. The study covers 300 students both in urban and rural areas. A self made structured questionnaire was used and concluded that mid-day meal programme has had a positive impact in some selective cases (e.g., enhancing enrolment, attendance and lowering retention and drop out of students). The results also revealed a significant association between mid-day meal program and academic achievement of students and they suggested that to get satisfactory outcomes, mid-day meal program should be incorporated with the ongoing health awareness programs of Government.
Joseph, K. (2012) studied on Right to Adequate Food among women and children living in a slum area of Kampala city Uganda was carried out by Samples of 206 residential areas in Katanga were selected and a descriptive survey method was used to collect the data. From the study it appeared that the RTF as stipulated in article 11 of the ICESCR and GC 12 of CESCR and also reflected in Objective XIV of Uganda’s Constitution is not realized by women and children living in Kimwanyi zone in Katanga village. A number of factors are contributing to this situation ranging from lack of awareness about the RTF among right holders and duty bearers to failure on part of the Government in ensuring effective implementation of policies and programs arising from international covenants ratified. Further investigator suggested that Policy makers should consider clearly articulating the RTF in the law together with a description of the remedies that are available even if a single individual’s rights are violated and it was also suggested that Government and KCCA should embark on upgrading slum areas where decent and affordable houses can be constructed for residents with well-planned sewage systems, water and sanitation facilities in the area to ensure an adequate standard of living.

Paul, P. K, & Mondal, N. K. (2012) researched on role of mid day meal scheme in education and found that this scheme has had positive impact on student’s enrollment, retention and attendance. According to the parents of the children the education, health and nutrition of their children have improved because of MDMS. It has fostered the feeling of co-operation, sharing, co-ordination and fraternity, thereby, leading the development of children emotionally and socially also. Because of the implementation of MDMS, the children are feeling more relaxed, stress free and secure. It was also found that despite all those achievements, there were many problems in the implementation of this scheme. The teacher has to spend 2 to 3 hour
for the implementation of this scheme and the study time of students and quality of education suffers. Different survey also revealed the fact that in most of the schools, the basic infrastructure for preparing the meal, proper kitchen, store room and water supply was not available. It was also found that corruption hinders the path of success of this programme, so stern actions must be taken to eradicate the seeds of corruption from this scheme. It is possible for the country to achieve the objective of universalization of education by proper and effective implementation of MDMS.

**Uma (2013)** studied on mid day meal scheme and primary education in India: Quality issues. The main objective of the study was to find out the quality issues related to Mid Day Meal scheme and Right to Education act, 2010. Both primary and secondary data were collected for the study. For secondary data, recent government and non government reports on primary education, government websites, newspaper articles and journal were relied upon and for primary data random sample of teachers were taken from primary schools of mohali, panchkula and Chandigarh. The parents were also interviewed. The main findings were though the enrolment statistics have improved and dropout has reduced however the quality in education and food has also decreased. Further, the meaning of school for the students and their parents is more of food than education. Since the prime duty of teaching was not being done in these schools. The students get passed whether they study or not. It was suggested that to improve the quality of education, the students should be told the importance of education. The evaluation of the students should be done on the bases of their performance. The teacher must be engaged in their prime duty of teaching only. Further the government role should be more on monitoring and regulating the scheme.

**Ganguly, S. (2013)** carried out a study on methods of implementation of socio technological aspects of mid day meal programme for school children. The objectives
of this study were to review the whole programme of MDM by identifying the majors problems and recommendation of new technology and approaches to improve MDM programme. The sample consisted of 133 schools in which 79 primary and 16 upper primary schools were surveyed. The study was concentrated on the district Hooghly, west Bengal. The study followed survey method and the information about all the aspects of MDM was collected with the help of questionnaire. He found that the teachers participation in the MDM programme is very good. Despite of all the problems regarding cooking cost, pucca kitchen, store room etc, they do not stop giving midday meal to their students by paying cooking cost from their own pocket.

Nambiar, V. (2013) studied on Knowledge, attitude and practice of school teachers, students and mid day meal staff towards the mid day meal programme. The study involves assessing the knowledge, attitude and practices of the 35 school teachers, 140 students and 29 MDM staff members using a KAP questionnaire supported with the spot observation towards the implementation of the programme. Results revealed a high level of dissatisfaction among the MDM staff members with regards to infrastructure facilities, supply of raw materials, monetary allocation, salary and support from school authorities. Teachers felt it to be additional responsibilities while the children are not contented with the menu and the quality of food. It was suggested that there is urgent need for improved logistics, supervision and frequent capacity building trainings. Only community participation and or rigorous monitoring by the government can help to enhance the awareness and can develop a positive attitude towards the workers and beneficiaries.

Rajeev, J. (2014) conducted a study on assessment of the nutritional status of primary school children who are the beneficiaries of Mid-Day Meal Scheme: A Cross-Sectional Study in Kanjirappaaly Block Panchayat, Kottayam. The objectives
of this study were to assess the nutritional status and to identify the factors affecting the nutritional status of school children who are the beneficiaries of Mid-Day Meal scheme. The sample consisted of 21 government schools and 33 aided schools in Kanjirappally Block panchayath. Total number of 4,883 students was taken from both sectors (746 from government and 4137 from aided schools) in a 1:5.5 Ratio. The study followed cross-sectional survey method. She found that the prevalence of under nutrition among school age children is very high and there was an inadequacy of existing nutritional interventional programme in the country which calls for immediate attention. Another important finding was that Mid-Day Meal Scheme is advantageous to the children from low socioeconomic classes, yet it has to be strengthened to provide quality nutritional food in order to ensure good health and optimum growth of the children.

The experience of State Council for Educational Research & Training (SCERT), Chhattisgarh on the Impact of Mid-Day Meal Programme on School Enrolment & Retention (2014), by covering 96 upper primary and primary schools from six districts of the State came to the conclusion that the Mid Day Meal program in Chhattisgarh shows a positive and encouraging impact on education through improving the enrolment and retention rate, since GER has increased so is the retention rate. The meal is drawing children to school, particularly those from poor families. SMDC members have regular meetings to discuss the issues of school including MDM. As children learn to sit together and share a common meal, there is weaning of caste prejudices and class inequality. Further SCERT suggested that MDM to be directly linked to education: The existing curriculum may be linked with MDM like names of vegetables may be taught to the students by providing the same in their food. Also, practical lessons could be drawn on hygiene and sanitation,
importance of nutrition, kinds of food and their nutritive value, cooking methods that prevent the loss of nutritive value of food, weights and measurements. The methodology of such practical training could also involve children in some involvement in the programme.

Chaudhury, B. S & Mondal, S. (2015) researched on Requirement of Mid Day Meal programme for secondary school students in the rural areas in west Bengal with the main objective to make an assessment of perception of guardians of students, teachers and school authorities about the role of mid day meal programme in academic performance of the secondary school going students. The primary data was collected from 80 students, 40 guardians and 40 teachers from different districts of west Bengal. A self made structure questionnaire was used to collect the data considering different anxiety like economic background, educational background and teaching strategy. Result revealed that mid day meal has a positive impact on students residing in the rural areas of west Bengal. There were also a significant association between midday meal programme and academic achievement of students. Furthermore midday meal programme has some other benefits in the state like removal of classroom hunger, social and gender equality and formation of good habits of students (like washing their own hands and utensils before meal) other than academic achievement in schools.

Sahoo, P. (2015) completed a study on Effectiveness of Mid-day Meal Programme in Selected Government Primary School of Bhubaneswar, Odisha. The main objective was to assess the performance of mid day meal scheme in the state. The sample size comprised of approximately 10% students of each primary school and 25 teacher or mid day meal in-charge of the primary school. Observational schedule and questionnaire were the tools developed for collection of data. On the
basis of the findings of the study, the following conclusions were drawn that few
school need adequate infrastructure to keep the raw material, few school need
separate cooking shed for cooking, few school have no facility veranda they take their
lunch in open field, few teachers are not satisfied with the mid-day meal programme
they feel burden as the no extra member is there to look over the mid-day meal
program. Taste & smell of the food can be improved but the appearance & texture is
appropriate. All the students are satisfied with mid-day program. And there is no
significant association between student’s satisfaction level & the demographic
variable. Based on finding it was recommended that, similar study can be replicated
on larger samples in different settings to have a wider applicability by generalization.

Sarkar, S. & Bhattacharyya, D. (2015) conducted a study on attitude of
teachers towards mid day meal with an objectives to understand teacher’s view
towards mid day meal and to know the role of mid day meal in favor of learners. The
sample consists of 67 teachers from 3 school of Hooghly districts in west Bengal. An
attitude inventory questionnaire for teachers view on mid day meal was developed to
collect the data and it was concluded that midday meal is an important instrument to
encourage children to attend school. It attracts children, especially from disadvantage
section to school. MDM improve regularity of class, academic performance, and
healthy growth, interest in further learning, socialization, gender equality, motivation
and interest of the students towards schools. Suggestion was made that the
supervision system must be effective, not only in paper pencil, rather in the practical
field then only the mid day meal programme will be really beneficial and helpful for
the poor students.

Verma, L. (2015) made a study on impact of mid day meal programme in
India: A review and she found that the mid day meal scheme is the well known name
for the school meal programme in India which started in the 1960s. India’s midday meal scheme is the largest school nutrition programme in the world. The caste wise investigation shows that the scheme has a great impact on the enrolment of backward classes and Muslim communities than other communities. Most of the studies revealed that there exist a positive relationship between mid day meal program and enrolment and attendance of students in schools including education and health outcomes of students. In many studies have shown that midday meal enhance school participation, especially among girls. In Chhattisgarh the provision of midday meals seems to have been somewhat half hearted, both financially and politically. In Varodara it was found that regular consumption of MDM did not have any influence on overall prevalence anemia. In Tamil Nadu MDM seems to enjoy all-round support from the village communities. Teachers too are enthusiastic. Midday meals scheme has had some impact on enrolment and attendance in Udaipur districts, but this effect has been uneven across age groups and communities. The national level impacts of midday meals in educational, nutritional and other dimensions remains to be understood in depth, the evidence available suggest that MDM have had positive effects at least on enrolments.

Giri et al. (2016) researched on effectiveness of mid day meal scheme on the nutritional status of children of ekalbara village, vadodara was completed by Randomly 2 primary schools were selected, out of which 6 teachers and 77 students formed the sample of the study, interview schedule and checklist were used to collect the data. Both the surveyed schools had well developed infrastructure with respect to food serving area, utensil storage space road accessibility. There is a consistency in the weekly menu and nutritional quality and the quality abides to the NP-NSPE norms. Teachers and students have reported health and academic improvement due to
MDM. However, the nutritional status assessment revealed high prevalence of undernutrition, anemia and infection especially among the girls. This indicates the need to integrate other approaches such as school health program, nutritional health education sanitation and hygiene, clean school premises, safe drinking water and toilet facilities in schools as well as home.

2.3: Studies conducted on MDM abroad

Roofe, N. S. (2010) researched on the impact of nutrition and health education intervention on kindergarten students' nutrition and exercise knowledge. The focus of study was to examine the relationship among kindergartner’s knowledge of nutrition and health, parent’s knowledge and home environment choices related to nutrition and health, and children’s body mass index as it relates to health. The sample consisted of 100 kindergarten-age public school children in the State of Arkansas in the Conway Public School District attending Florence Mattison International Elementary School (experimental group) and Theodore Jones Elementary School (control group). Quasi-experimental research was used. The results of the study showed significant increases in nutrition knowledge for children in the experimental group. The treatment group and the control group were similar in terms of parent participation (students receiving free and reduced lunch assistance. The percentage of children in the experimental school in the underweight category decreased, the percentage of underweight children stayed the same, in the control school.

Schindler, J. (2010) studied on “The Effect of Nutrition Education on Children’s Healthy Food Choices” by 196 kindergarten students at two Williamsburg area and parents from Matoaka and James River were taken as sample with the main objective
to analyze the effectiveness of a nutrition education program at two local elementary schools. Individual testing procedure was adopted to record the height and weight of each child. The investigator concluded that children’s baseline performance on Task 1 at Matoaka and James River indicated that children at Minooka performed marginally better than those at James River. The only significant difference between white and non-white children’s willingness to try the foods was that non-white children were significantly more likely to try acorn-squash than white children. There was no significant race x time or income x time interactions in children’s willingness to try fruits, which means that race and income were not responsible for changes in children’s willingness to try fruit at the two schools.

Acham et al. (2012) researched on the study of midday meals and academic achievement of rural primary school in Uganda. The main objective was to assess and demonstrate the effect of midday meal consumption on academic achievement of school children. A sample of 645 school children were taken for the study and it was found that underachievement was high among the children, no significant difference in achievement between boys and girls, the children from less poor households scored significantly higher than others and there was a significant association between meal consumption and academic achievement. Finally by the observed link between regular meals and children’s academic achievement it was suggested that there is a need for policy-makers to re-consider the issue of school feeding, especially in the rural areas and among the most poor households, where performance at school proved to be important.

design a number of 79,558 primary school-aged children were selected and he found that children who receive the program are worse-off in development measures than those who do not. Program beneficiaries come from poorer, larger households in primarily rural areas, with both lower household income levels and lower levels of parental education but there are a number of highly significant explanatory factors of program participation. Girls are more likely to receive the program than boys, and children living in rural areas are more likely to receive the program than children living in urban areas.

Page, B. A. (2015) researched on the relationship between academic success and elementary students who practice a healthy lifestyle. The study was to examine if there was a relationship between students letter grades and their responses related to nutrition and physical activity. The sample was limited to one classroom in each grade. And the results revealed that there were no significant relationship between their health and academic success, the majority of students did. The majority of the students who reported B or below did not eat from the school cafeteria and did not eat most meals prepared from home, so perhaps they are eating most fast food, restaurant style food, or junk food from convenience stores. What children are putting into their body is likely a result of what is coming out of their minds. Further researcher suggested that more research is needed on this topic in order to show how health as it relates to nutrition and physical activity affects a student’s academically

Krueger, E. B. (2017) researched on the Teachers perceptions of school Breakfast in Utah. The objective of this study was to identify differences in teachers perceptions of benefits, challenges and preferences to different school breakfast
programme service models. Results indicated that traditional breakfast was the most preferred model with a mean score of 2.80 and the breakfast in the classroom was the least preferred model by teachers with a mean of -1.32. This study concluded that increased awareness and education amongst teachers regarding different models of SBP service could lead to increased efficiency, increased participation in SBP, decreased cost, decreased food waste, and increased academic performance and health benefits for students.

**Lavallee, J. R. (2018)** studied on evaluation of a high school nutritional education curriculum for the FCS classroom. The objectives of this study was to develop an experiential learning- based nutrition education curriculum to train FCS educators on the curriculum to implement the curriculum in high-school FCS classroom to evaluate the impact of the curriculum on educators and their students. Results revealed that 42% successfully implemented all eight lessons in their classroom. Many participation chose not to implement the lessons. Sociodemographic factors including teaching role, years teaching, technology skills or class schedule type did not influence change score.

**Conclusion**

To conclude, in this chapter the investigator collected related literature from studies conducted in India and abroad and provides a brief outline on researches done in the area of Mid Day Meal programme. On the basis of these research studies, the
investigator has been able to draw out appropriate guidelines in a systematic manner to make the research work effective.

Since it is for the first time in Arunachal Pradesh mid day programme has been studied, there is hardly any research work has been conducted on the same programme, so, there is no much studies was found by the researcher in this regard. Quality and compulsory education at the primary level is the need of the hour especially in the rural areas and the mid day meal programme is one of the Government interventions to achieve the objective of quality education by providing additional incentives-MDM at the elementary level of education. The result of this study n show the true picture about the present functioning of MDM, its drawbacks and further suggestion for the proper and effective implementation of the programme in Arunachal Pradesh.