Chapter 5
Summary, Conclusion and Suggestions
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SUMMARY, CONCLUSION AND SUGGESTIONS

5.1 SUMMARY

A Perfect research conducted scientifically follows certain procedural steps. First introduction, second objectives and hypothesis followed by review of literature, methodology and analysis and interpretation in a same order. In present research work all the steps have already been discussed. Now it is time to sum up and concluded.

IMPORTANCE OF MDM (MID-DAY MEAL)

Mid-day Meal was started on 15th August 1995; its objective was to boost “universalization of primary education by increasing enrolment, retention and attendance in primary classes.” Many poor children come to school from long distances partly hungry or even with empty stomach; they could hardly concentrate on their study. Mid-day Meal was implemented on small scale and then in 2001 on large scale by the order of Supreme Court of India. The object of the programme is in tune with principles of “Welfare” state.

A programme of providing Mid-day Meal in school’s can be expected to help in Universalization of Elementary Education (UEE) in following ways: -

1. by improving enrolment and regularity of attendance.
2. Reducing drop-outs particularly girl child.

3. by improving children’s level of learning and self-esteem.

It should now even be clear that Mid-day Meal is only a supplement and input meant to provide 1/3 of caloric requirement in children none the least for those poor children who have only the best two Meal a day Mid-day Meal is significant contribution of better health.

(Mid-day Meal) programme is principally based on one supplementary meal provided to children, who attend elementary schools (popularly known as primary schools). The Mid-day Meal programme was initiated with the intention to provide one third of the total calorie and half of the protein, RDA per child per day

The survey work for this programme was conducted by National institute of Nutrition (NIN) shows that the diets of pre-school children are deficient in energy, not in protein. After a supplementation, the result of this study demonstrated recovery from malnutrition and increase in growth rate. Encouraged by the result similar feeding program was planned for the school children. Due to lack of information and work in this field there were doubts about the success of the programme. As it is said earlier that low socio-economic status had reduced the elementary education, reduce the intellectual development and physical growth. After the review of available information on the effectiveness of the programme, this programme was launched by the Central Government. Now the Mid-day Meal is the largest nutrition programme in terms of coverage, approximately 10.76 crore children from 8.67 lacs schools being served the Meal. On November 28, 2001 the Supreme count of India directed all the state government to introduce cooked meal in all the government primary schools within six months. Except two states (Uttar Pradesh and Bihar) rest of the state
followed the directives of the court. Now this programme has become a part of the school routine across the country.

The Mid-day Meal Scheme is the popular name for school meal programme in India. It involves provision of lunch free of cost to school-children on all working days. The key objectives of the programme are: protecting children from classroom hunger, increasing school enrolment and attendance, improved socialisation among children belonging to all castes, addressing malnutrition, and social empowerment through provision of employment to women. 12 crore (120 million) children are so far covered under the Mid-day Meal Scheme, which is the largest school lunch programme in the world. Allocation for this programme has been enhanced from Rs 3010 crore to Rs 4813 crore (Rs 48 billion 1.2 billion) in 2006-2007.

The present study describes the introduction, Review of Literature, Objectives and Hypothesis, Methodology, Results and discussion and analysis and Interpretation which include physical development, Intelligent Quotient, Dietary survey, Hygienic Conditions, Infrastructure facilities in Government Primary School in Kawardha City.

First Chapter describes meaning of Mid-day Meal, MDM guidelines, Supreme Court’s Order about Mid-day Meal, History of Mid-day Meal, regulation of Mid-day Meal in Chhattisgarh, Strength and Weakness of Mid-day Meal. In this chapter objectives and hypothesis and plan of proposed work is also mentioned.

**OBJECTIVES OF THE RESEARCH**

**General objectives**

1. To study the quality of food, which is being served in the schools?
2. Whether the quality of food is sufficient for the physical and mental development of children?

3. To study the effect of Mid-day Meal on the enrollment and the dropout rate of the children particularly girls.

Social Objectives

1. Whether the Mid-day Meal programme enhance the process of socialization among children?

2. Whether the Mid-day Meal programme enhance the retention rate of girls in schools?

1.8 HYPOTHESIS

- The Mid-day Meal programme would be beneficial for the improvement of the nutritional status of the children as it supplies 1/3 amount of total calories and ½ of total protein.

- The Mid-day Meal would increase the physical and mental development of school children.

- The Mid-day Meal programme would increase the enrolment and decrease the drop-out rate of the children particularly girls.

- The Mid-day Meal programme would develop better resistance to diseases among children.

- The Mid-day Meal programme would be increase the process of socialization among children.
1.9 INTRODUCTION OF PROPOSED WORK

The present study is planned for the Kawardha town. This is a remote area and about 115 to 120 km from Raipur, Durg, Rajnandgaon, and Bilaspur. This town is famous for Bhoramdev Temple. It is surrounded by tribal area.

There are 1088 Govt. & Govt. aided schools in Kabirdham District. In Kawardha town there are 11 Govt Primary schools, out of 11 schools only 01 School belongs to boys, 2 schools belongs to girls and 8 schools belongs to co-education pattern. Out of 11 Govt primary schools we have selected 6 Govt. schools (01 boy, 02 Girls, 03 co-education) for the proposed work.

1.10 NOTEWORTHY CONTRIBUTION IN THE FIELD OF PROPOSED WORK

1. There will be improvement in the nutritional status of the children belonging to low socio economic class. Mid-day Meal can help in improvement of memory and learning capacity

2. Today’s child will be better parent with respect to nutrition status.

3. This will improve their physical and mental health.

4. This will improve children’s social status.

Second chapter deals with Review of Literature. Several studies have been carried out on Mid-day Meal in our country and in other countries. However the studies pertaining to the impact of Mid-day Meal on Intelligent Quotient and supplementation of Iron, Zinc and Calcium are not studied in the state as well as in Kabirdham District. Therefore an attempt has been made in the present study to assess the impact of Mid-day Meal on physical development and other parameters.
Third Chapter deals with Material and Methods which covers research design, selection of subjects, assessment of nutritional status, assessment of mental development, infrastructure facilities etc. In the present study pre and post test research design was used to find out the efficacy of Mid-day Meal programme. Since the investigator wanted to compare the impact of Mid-day Meal programme between two groups i.e. experimental and control group respectively, gain score (Post test – Pre test score) was calculated and design which is comparative in nature was adopted.

For collection of data 500 school children between the age group of 6 to 11 years from Kawardha town were selected by stratified random sampling method. Nutritional status was carried out by using anthropometric measurements, clinical examination and bio-chemical estimation. Similarly mental development was assessed by using draw a men test.

Height & weight was measured to calculate BMI. While screening, subjects with low BMI (<18) and hemoglobin (<11), 320 children were selected for the further study. 320 subjects from 6 government school were selected randomly. Other infrastructure facilities like drinking water, toilet facility, kitchen shade, hygienic condition along with dropout rates was analysed. For the analysis of data various non parametric and parametric statistical methods were used in this study. Percentage, frequency, T test, Gain score were used to analysed the data to obtain the relevant findings.

Fourth Chapter deals with Results and discuss. In the present study 320 school going children were selected, out of them 50% were boys and 50% were girls. The data collected on denoted aspects is presented in the following manner.
Anthropometric Measurements

Girls Height

The overall results of anthropometric measurements reveals that the mean height of the girls belonging to experimental group was increased significantly (from 120.06 ± 9.08 to 126.92 ± 9.40) as compared to control group (120.10 ± 9.30 to 124.85 ± 9.12) during study period i.e. 1 year after additional nutritional supplementation besides mid day meal. It is evident that mean height of girls belonging to experimental group was increased during study period in all age groups.

Girls Weight

Similarly the mean weight of the girls belonging to experimental group was increased significantly (from 17.74 ± 3.24 to 21.10 ± 3.64) as compared to control group (18.54 ± 3.24 to 20.60 ± 3.05) during study period i.e. 1 year after additional nutritional supplementation besides mid day meal. It is evident that mean weight of girls belonging to experimental group was increased during study period in all age groups.

Boys Height

The mean height of the boys belonging to experimental group was increased significantly (from 125.65 ± 7.50 to 131.05 ± 7.59) as compared to control group (127.50 ± 7.72 to 132.63 ± 7.44) during study period i.e. 1 year after additional nutritional supplementation besides mid day meal. It is evident that mean height of boys belonging to experimental group was increased during study period in all age groups.
Boys Weight

Similarly the mean weight of the boys belonging to experimental group was increased significantly (from 20.30 ± 2.60 to 23.57 ± 3.05) as compared to control group (from 21.13 ± 2.88 to 23.20 ± 3.11) during study period i.e. 1 year after additional nutritional supplementation besides mid day meal. It is evident that mean weight of boys belonging to experimental group was increased during study period in all age groups.

Biochemical estimation

Mean haemoglobin of the girls belonging to experimental group was increased significantly (from 9.11 ± 0.92 to 10.43 ± 0.85) as compared to control group (from 9.26 ± 1.20 to 9.66 ± 1.45) during study period i.e. 1 year, after additional nutritional supplementation besides mid day meal. The reported t=11.07 and mean difference between pre test mean Hb (M=9.11) and Post test mean Hb (M=10.43), which is statistically significant at .01 level, confirms the above finding.

Mean haemoglobin of the boys belonging to experimental group was increased significantly (from 9.40 ± 1.44 to 11.48 ± 0.89) as compared to control group (from 10.24 ± 1.80 to 11.06 ± 1.37) during study period i.e. 1 year, after additional nutritional supplementation besides mid day meal. The reported t=11.40 and mean difference between pre test mean Hb (M=9.40) and Post test mean Hb (M=11.48), which is statistically significant at .01 level, confirms the above finding.

Intelligence Quotient

To find out the efficacy of Mid-day Meal programme along with additional nutritional supplementation on IQ of selected subjects and to gain score (Post test - Pre test scores on IQ) for both the groups were calculated and compared. The
resultant t=2.81, which is statistically significant at .01 level, clearly indicates that mean IQ of girls belonging to experimental group was increased significantly (M=4.27) as compared to that of girls of control group (M=1.92).

While comparing the impact of Mid-day Meal programme with additional nutritional supplementation on intelligence quotient of selected boys, gain score (Post test - Pre test scores on IQ) for both the groups were calculated and compared. The resultant t=0.28, which is statistically insignificant reveal that the improvement in intelligence quotient of boys from experimental and control group was almost the same.

**School Environment**

The Mid-day Meal programme has initiated a process of socialization and discipline in children. While analyzing school environment, the result reveals that the overall environment was satisfactory, as children have learned to be in a queue, learned about the cleaning of surrounding, learn to live together, eat together, recitation of Vedic mantras before the Meal and they were found to be perfect food habits. They use clean plates, some of them were found having napkins to clean their hands and plates.

**Infrastructures**

**Kitchen shade/ Kitchen facility**

As per Supreme Courts’ order there should be a Pucca Kitchen shade in each school. The present study revealed that out of six schools, only five schools had separate kitchen shade for the cooking purpose. It was noticed that each centre were having proper storage facility in there centers. The results reveal that most of the
school were keeping dry ration on the floor. Teachers suggested and requested as government school should provide the requisite infrastructure for the storage of ration.

The overall result reveals that Kabirdham District (Kawardha Town) is following the MDM guidelines.

**Hygienic Condition**

The assessment of hygienic conditions in school premises in Kawardha town confirmed that more than 83% children were having meal in verandas or open areas in the school, where as only 17% were found having their Meal in separate room. This gives important pointer with reference to hygienic condition in MID-DAY MEAL. The overall results confirm that hygienic -conditions were good.

**Drinking Water Facility**

Out of six schools the perfect drinking water facility was observed in two schools namely – Pramukh Prathmik Shala Kawardha (Co-education) and Nagar Palika Kanya Prathmik Shala Kawardha (Girls School), where as in rest of the four schools the drinking water facility was satisfactory.

It was also noticed that in Prathmik Pramukh Sala and Nagar Palika Kanya Prathamik Shala there was a separate bore for drinking water and at the same time drainage system was good in these schools and we did not find stagnant water in the school premises.

**Toilet facility**

As per MDM guidelines there should be clean and separate toilets in each school premises. We observed that out of six schools separate toilets were present in four schools, we did not find toilet in two schools. While observing toilet facility in schools it was noticed that in three co-education schools there was separate toilet for
boys and girls. In our study the water facility was up to the mark but we did not find soap and buckets for cleaning hands.

**Dropout Rate**

Earlier studies in this field reported that the Mid-day Meal enhanced the school participation among girls. The present study reveals the same results. In the present study the enrolment status of all the schools was increased. The sharp increase in enrolment shows the positive impact of Mid-day Meal particularly on girl child.

### 5.2 CONCLUSION

Education is a fundamental right of every human being, but in our society girls were deprived of this right. The status of girl child was not satisfactory. Several efforts have been made on part of the government to deal with illiteracy in females. In the year 1992 the Govt. of India incorporated a policy based on free and compulsory education irrespective of their sex, caste, creed and social status up to the age of 14. Similarly, the Mid-day Meal scheme came into the existence for the enhancement of nutritional status of the children

The present study on Mid-day Meal reflects the benefits of Mid-day Meal on the nutritional status of the school children. The result shows the positive impact of Mid-day Meal on girls’ health status, as it was increased remarkably. The present study also indicates that the enrollment of girls was increased after its implementation since 2001. The present study reflects the full implementation of MDM guidelines in Chhattisgarh, but the malnutrition among school children is alarming. In the present study all the students between the age group of 6 to 11 years were malnourished. All the results were increased after the supplementation of iron, zinc and calcium syrup. In our opinion the major cause of malnutrition in this age group attributed to lack of
health education. In our opinion the risk of malnutrition is mainly due to germs, unhygienic environment, illiteracy and, lack of balanced diet. Malnutrition among children can be lowered by adding health education in curriculum.

It can be concluded that Mid-day Meal is beneficial for the children’s growth and development, as today’s children are the future of the nation. Last but not least there is an urgent need of proper application of the prestigious scheme with public participation and proper health education.

**LIMITATIONS**

- The proposed work and the samples were drawn from the Kawardha town only.
- In the present investigation, fixed pattern was used to collect the data. Therefore, the results of this study can be generalized only for these students.

**5.3 SUGGESTIONS**

- Help of NGO’s and/ or parents should be taken for supervisory purpose. The NGO’s should be asked for check the quality of the food served in the schools for smooth implementation of the programme. Participation of NGO’s would release the Teachers of additional burden and shall make the programme more objective oriented.

- The wages paid to cook should be regularly revised after a certain time.

- It was noticed, that all purchases are made on credit, as the funds are released afterward. There will be no problem in proper release of funds which shall make the supervision work easier.

- In the School’s Kitchen the fire protection equipment should be made available with each kitchen.
The Mid-day Meal and other facilities should be quarterly monitored by the officials and Parents.

The Mid-day Meal programmes should revise in three years with the consultation of nutritionist and home scientist.

In MDM guidelines there is a provision of annual health checkup, but it is not properly implemented, so it should be made mandatory as child’s health is important. There should be counseling about hygiene and dental care by the experts.

5.4 SUGGESTION FOR SOCIAL SIGNIFICANCE:

Increase awareness about health and hygiene through publications and symposia, for children as well as parents.

Mothers should be advised about the girl child health, as female is the key of any family. Leaflets should be distributed to all students on their eating habits.

The governments should take proactive initiative to promote good health awareness program across the civil society.

Official authority should arrange special lectures for school children.

Facilities at the schools should be made available to promote and regular monitoring of weights of the school children, encourage physical exercises, participation in sports and games made mandatory in the school curriculum.

Special attention to what schools canteen offer for children.

5.5 FUTURE PLAN AFTER THE WORK

Further follow-up studies in the field of Mid-day Meal by selecting a large area and large number would make it more effective.
A Study to investigate whether the malnutrition problem among adolescent girls (middle school) is due to the social status of the girl child in the family.

A comparative study of nutritional status of children studying in govt. Schools and public school can give a clear picture of child’s health status.