

## Contribution of Mid-Day Meal Scheme in Increasing Enrolment and Retention in Schools: A Study in Nayapalli Region of Bhubaneswar

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### ABSTRACT

*In this paper, an attempt is made to assess the extent to which the Mid-Day Meal Scheme (MDM) has succeeded in contributing towards increasing enrolment and retention of primary school students of Nayapalli region of Bhubaneswar in Odisha. The study is based on primary data collected from five MDM schools of Nayapalli region and descriptive analysis has been used therein. It shows that MDM scheme has positively contributed towards enrolment and retention in primary schools in the study area. In majority of the cases, the number of pupils currently studying in a particular grade have stayed the same or have increased when compared to their year of enrolment in these schools and the fact that attendance in most cases has been consistent in all the surveyed schools, testifies the positive effect of the meal scheme in enhancing enrolment and retention in the schools of the study area.*

**Keywords:** Enrolment, Retention, Mid-Day Meal, Education

**JEL Classification Codes:** I2, I21, I28

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### I. INTRODUCTION

Countries around the world offer various kinds of school meal programs, and altogether, these are among the world's largest social safety nets. Finland implemented universal free school lunches in 1943, and Sweden followed suit in 1945. As per the United Nations Report 2013, currently around 170 countries around the world have access to such programmes. School lunches in developed countries usually focus on improving food quality, particularly for low-income children. They are required in many nations to promote healthy growth and cognitive development, eliminate food insecurity, and obesity. These programmes



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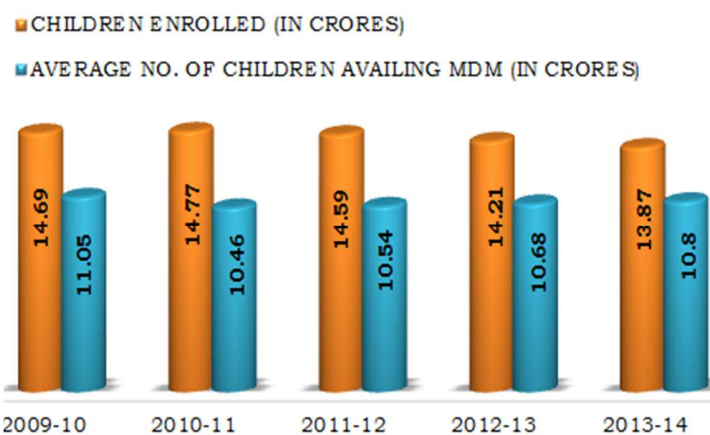
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provide free or reduced-price school lunches to low-income kids, promoting children's nutrition and potentially lowering school administrative costs.

In developing countries, school feeding programmes act as targeted social safety nets that offer educational and health advantages to the most disadvantaged children, therefore raising enrolment rates, decreasing absenteeism, and enhancing home food security. In addition to increasing access to food, they have a favourable effect on nutritional status, gender equality, and educational standing, all of which contribute to the enhancement of national and human capital development. India's

**Figure-1: Performance of MDM in India (2009-14)**



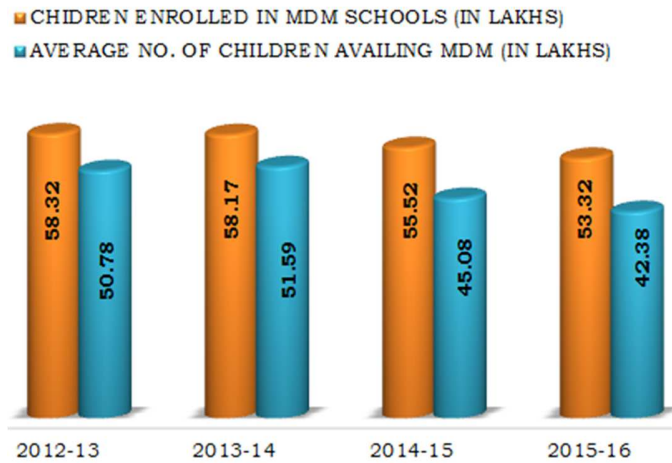
Source: MDM India Website

The Indian government established the Mid-Day Meal Programme on 15<sup>th</sup> August 1995 to ensure universal education. The school meal programme in India aims to improve the nutrition of school children. This programme offers free lunches to primary and upper primary students in government, government-aided, local body, Education Guarantee Scheme, and alternative education centres, supported under Sarva Shiksha Abhiyan. This programme provides lunches with 300 calories and 12 grams of protein to children in grades I-V. National Programme of Mid-Day Meals in Schools was renamed National Programme of Nutrition Support to Primary Education in October 2007 to include classes six through eight in educationally disadvantaged blocks. The majority of states (excluding those that already provided cooked food) provided students with "dry rations" rather than cooked food. Later, cooked school meals resumed. Figure-1 shows that the enrolment of children has registered a consistent decline over the years (except during 2010-11). It may be seen that coverage of children vis a vis enrolled children remained between 71 to 78 per cent.

The cost of the Midday Meal Scheme is shared by the central and state governments, with the central government contributing 60% and the states 40%. The central government provides grains and funds for the purchase of other foods. The federal and state governments share the costs of infrastructure, transportation, and labour. The participating states contribute varying monetary amounts. The scheme has been assisted by international organisations, NGOs from around the world. It is independently monitored twice a year. Figure-2 shows that enrolment has been slightly declining during 2012-16. Coverage of children vis a vis enrolled children under the programme has varied from 79% to 86%.

The objectives of the programme are: (1) To increase enrolment and retention, as well as to reduce dropout rates (2) Reduce cast prejudices, class inequality, and gender gap (in education) (3) Emphasise the right to life and the right to food for disadvantaged segments of the population (4) Provide nutritional support to schoolchildren in areas affected by drought during the summer break.

**Figure-2: Performance of MDM in Odisha (2012-16)**



Source: MDM Odisha Website

**II. MOTIVATION**

The literacy rate of India is comparatively less than its developed counterparts and has students dropping out of schools every year. The Government of India has set up various schemes in order to ensure universalization of education across the country. Mid- Day Meal Programme is one of them. It has evolved for better over the years but it is yet to achieve its objective of increasing enrolment and curtailing dropouts in India as well as in Odisha. So we intend to study the success of the programme in increasing enrolment and retention of primary school students in Nayapalli region of Bhubaneswar in the state of Odisha.

**III. THE REVIEW OF LITERATURE**

*International Studies on Impact Of School Feeding Programmes on Students’ Enrolment, Attendance, School Performance*

Njuguna (2009) intended to establish the effects of a feeding programme on enrolment and drop out in Kenya. The study used simple descriptive statistics in analysing data. The data extracted from questionnaires and observation checklist was analysed using frequency tables and percentages. Based on the findings, it is recommended that the community in conjunction with government to double its support, by employing pre-school teachers and support feeding programmes in ECD centres.

Kidane (2012) evaluated the impact of school feeding program on student enrolment and dropout and constraints that hamper its effective implementation in Ethiopia. Data was collected from primary and secondary sources. Analysis was carried out using descriptive statistics and Propensity Score Matching. Results showed that SFP brought a positive and significant impact with regards to student enrolment. SFP did not bring significant difference when it comes to student drop out. Thus efforts were made to improve student enrolment and reduce dropout and understand the barriers to imparting quality education in schools.

Abotsi (2013) studied the impact of the school feeding programme in Ghana on students’ enrolment, academic performance and attendance in six public schools



coming under the supervision of the programme and six schools that did not. 120 students from twelve schools were interviewed and descriptive and multivariate analysis were used for analysis. The feeding programme had positive impact on enrolment and attendance, but lesser effect on attendance for the period under study.

Ayoola (2014) evaluated the impact of free lunches on students of Osun in Nigeria. 450 pupils each from intervention and control group schools were interviewed along with teachers, parents, cooks and other stakeholders. Multi stage random sampling was adopted for the study. Data were analysed using descriptive and inferential statistics. School feeding programme in Osun state made a positive impact on pupils 'enrolment, attendance, retention, nutrition status and academic achievement and benefited a wide range of stakeholders.

Jennings (2016) examined the attendance patterns by region of schools which participated in School Feeding Programmes (SFPs) in rural areas of Jamaica. The study revealed fluctuations in the average annual attendance by region, but found no significant difference in attendance by lunch type. Variations in poverty levels and the effect of a conditional cash grant to poor parents were offered as possible explanations for the variations in attendance.

*National Studies on Impact of School Feeding Programmes on Students' Enrolment, Attendance, School Performance*

Laxmiah et al (1999) studied the effect of MDM program on enrolment, attendance, dropout rate and retention rate in the schools and its impact on nutritional status as well as on the school performance in Karnataka. The primary schools providing MDM and non- MDM schools were taken into account. It was found that the number of children enrolled in schools with the MDM program was higher as compared to that in schools in non-MDM areas. The percentage of children with better attendance was higher in MDM schools than in non-MDM schools. They concluded that the MDM program needed to fill its nutrient gap and strengthen its operations.

Dreze and Goyal (2003) studied the impact of MDM in Chhattisgarh, Rajasthan and Karnataka using a CES survey. They found that Mid-Day Meal had a major impact on child nutrition, school attendances and social equity. However the quality issues needed urgent attention. If MDM programme realised their full potential then MDM would be significant step towards the realisation of the right to food.

JAIN AND SHAH (2005) studied the impact of MDM scheme in Madhya Pradesh. The mid-day meal programme of the MP government had resulted in drastic rise in enrolment in schools despite the poor meal quality and inadequate infrastructure. These schools needed better management and distribution of meals, enhancement in the quality of meals served, more recruitment of teachers and related staff for better functioning of the scheme as whole.

Rani Si and Sharma (2008) studied the performance of MDM programme in Khurda district of Odisha. The study used primary and secondary sources of data. It was found that the rate of increase in enrolment during the cooked meal scheme was much higher compared to the growth rate of enrolment when the dry ration scheme

was in operation. Out of 10 schools there was increase in the attendance ratio in 6 schools and in four schools attendance remained constant and in one school the attendance declined. Out of 10 schools 5 schools reported a decrease in dropouts after the introduction of the scheme and four schools talked about constancy in the dropout rates so far as cooked meal period is concerned. In case of dry ration 4 schools reported a decrease in dropout after the implementation of MDM and 6 schools said that dropouts had remained same. It was concluded that schools didn't have adequate infrastructure and staff to implement the cooked meal scheme. There was no hindrance from the parents in implementation of the scheme; the parents also didn't complain of mismanagement. Dry rations did have certain advantages but these are outweighed by the benefits of cooked meals.

Paul and Mondal (2012) studied the impact of MDM on enrolment and academic performance of the students in West Bengal. Primary data was collected from 300 students and 150 guardians, teachers and authorities in upper primary school in both urban and rural areas. Chi-square test was used to examine relationship between MDM and academic achievement of students. Enrolment, attendance, retention, dropout all these factors were selected to analyse the effect of MDM programme on academic performance of students. It was found that there was strong association between MDM programme and academic achievement of students. Rural students were benefitted more than the urban students in terms of effect of MDM programme on enrolment. The benefit of MDM scheme in terms of daily attendance was more in case of rural students than urban students. It was concluded that MDM programme has a positive impact in some selective cases by enhancing enrolment and attendance, academic achievement of students lowering dropout of students.

Sahoo (2013) studied the performance of MDM programme in schools of Bhubaneswar, Odisha. Data obtained was analysed by using both descriptive and inferential statistics. The study revealed that schools needed adequate infrastructure to keep the raw material, separate cooking shed for cooking, they took their lunch in open field, few teachers were not satisfied with the mid-day meal programme they felt burdened as the no extra member was there to look over the mid-day meal program. Taste and smell of the food could be improved. All the students were satisfied with mid-day program and there was no significant association between students' satisfaction level and the demographic variables. Students' enrolment did not increase in school due to growth of private schools in the city.

Molla and Sheikh (2015) studied the impact of MDM in raising students' enrolment in West Bengal and concluded that the Mid-day Meal programme helped to increase the school attendance children in primary level but quality of the students was deteriorating due to lack of management of this concerned programme.

From the articles reviewed here in it can be concluded that researchers stand united on the effect of MDM programme as a means of raising enrolment and retention of students in their respective study areas. Majority of them found out that the scheme had positively contributed towards enrolment and retention. Almost all researchers have called for better implementation of existing norms and provision of men, material and other resources necessary for strengthening the roots of the MDM programme helpful for achieving its objectives.



#### IV. RESEARCH QUESTION AND OBJECTIVES

The present study attempts to explore: Does the MDM programme initiated by the government have an effect on primary enrolment and retention in the study region?

##### *Objectives*

- To study the contribution of the mid-day meal programme towards enrolment and retention of the primary school students in Nayapalli
- To study the perception of school staff, parents and children about the effectiveness of MDM programme in the study area

#### V. DATA AND METHODS

The data for the study has been collected from both primary and secondary sources. A total of 5 mid-day meal schools of Nayapalli area of Bhubaneswar city have been surveyed for the study using the technique of purposive sampling. 5 headmistresses, 10 teachers and 20 parents and 50 students have been interviewed using a structured questionnaire. Records of schools have been used for obtaining data on yearly enrolment and retention for five years spanning from 2012 to 2017.

Variables under study: Enrolment and Retention of Primary School Students, Perception of Headmistresses, Teachers and Parents regarding continuing MDM and its effect on raising enrolment and retention, Perception of Children regarding Quality and Quantity of Food provided under MDM

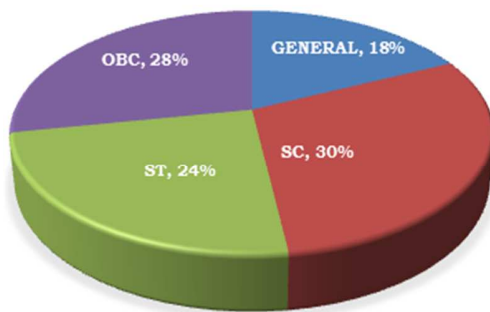
Descriptive statistical tools like tables, pie-charts, bar graphs have been used for data analysis.

#### VI. ANALYSIS AND RESULTS

##### *Socio Economic Profile of the Sample Surveyed*

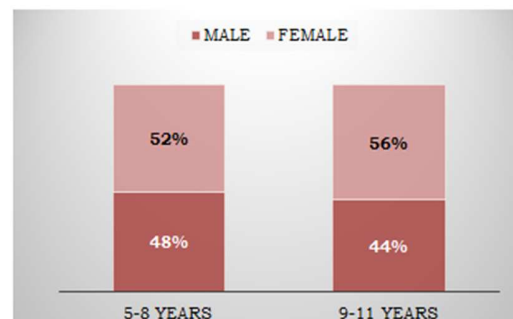
Out of the 50 students surveyed, 15 students (30%) belonged to SC category, 14 students (28%) to OBC category, 12 students (24%) belonged to ST category, and 9 students (18%) belonged to the general category.

**Figure-3: Caste Profile of the Students Surveyed**



Source: Primary Data

**Figure-4: Age Distribution of the Students Surveyed**



Source: Primary Data

25 students (50%) belong to the age group of 5-8 years of age and the remaining 25 students, (50 %) belong to 9-11 years of age . From among them, 24 students of age group of 5-8 years (48 %) are boys and the remaining 26 students (52%) are girls. Similarly, 22 students of age group of 9-11 years (44%) are boys and the remaining 28 students (56%) are girls.

**Table-1: Monthly Income Distribution of the Households Interviewed**

INCOME ( in Rs.)	NO. OF HOUSEHOLDS	PERCENTAGE
Rs.10000-Rs.15000	3	30%
Rs. 15000-Rs. 20000	5	50%
ABOVE Rs. 20000	2	20%

Source: Primary Data

Two households from each of the five schools have been surveyed. Out of these ten households, three households (30%) earn between Rs. 10000-15000 on a monthly basis, five households (50%) earn between Rs. 15000-20000 and remaining two households (20%) earn more than Rs. 20000 on a monthly basis. The parents are engaged in occupations ranging from casual labourers, drivers to that of government officials and businessmen. Apart from them, two teachers and headmistresses from each school have been interviewed.

**Table-2-Level of Education of Parents**

LEVEL OF EDUCATION	NO. OF PARENTS	PERCENTAGE
ELEMENTARY	4	20%
HIGH SCHOOL	7	35%
GRADUATION	5	25%
POST GRADUATION	4	20%

Source: Primary Data

Out of the 20 parents interviewed for the study, four parents (20%) have completed elementary education, seven parents (35%) have completed high school, five parents (25%) have completed their graduation and four parents (20%) have completed their post-graduation respectively.

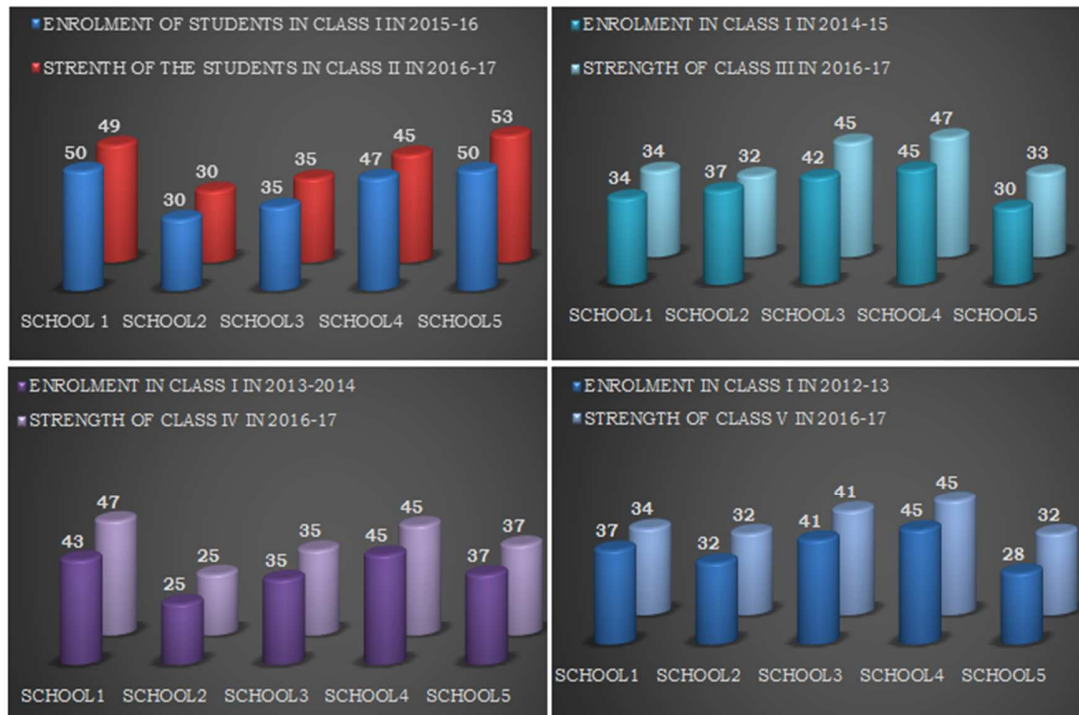
*Contribution of Mid-Day Meal Scheme in Increasing Enrolment and Retention in Schools: A Study in Nayapalli Region of Bhubaneswar*

We have tried to compare the present strength of the students of a particular grade across all the 5 schools to the enrolment of the same students in the year they began their schooling i.e. class I. Strength of class II students in 2016-17 remain same as their enrolment in the year 2015-16 for school 2 and school 3. So they



have maintained consistency in enrolment and cent percent retention in grade II. School 1 and school 4 have seen a minor fall in their strength in class II as compared to their enrolment in class I in 2015-16 implying a decline in enrolment as well as retention. On the contrary school 5 has seen an increase in enrolment and a cent percent retention.

**Figure 5: Enrolment and Retention of Students in Schools**



Source: Enrolment Records

Strength of class III students in 2016-17 remain same as their enrolment in the year 2014-15 for school 1. So they have maintained consistency in enrolment and cent percent retention in grade III. School 2 has seen a minor fall in its strength in class III as compared to its enrolment in class I in 2014-15 implying a decline in enrolment as well as retention. On the contrary school 3, school 4 and school 5 have seen increase in enrolment and a cent percent retention.

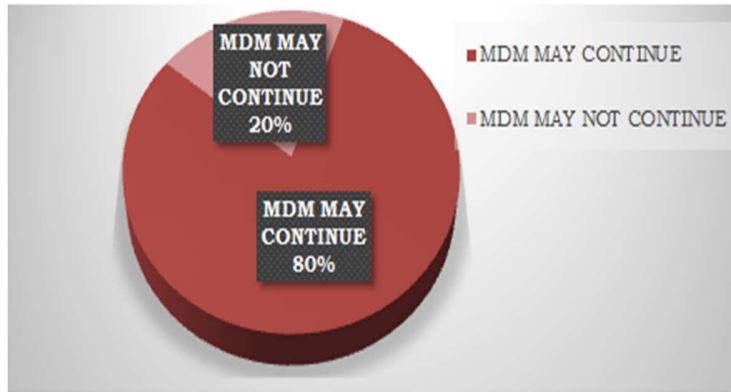
Strength of class IV students in 2016-17 remain same as their enrolment in the year 2013-14 for school 2, school 3 and school 4 and school 5. So they have maintained consistency in enrolment and cent percent retention in grade IV. School 1 has seen an increase in enrolment and a cent percent retention.

Strength of class V students in 2016-17 remain same as their enrolment in the year 2012-13 for school 2, school 3 and school 4. So they have maintained consistency in enrolment and cent percent retention in grade V. School 1 has seen a minor fall in its strength in class V as compared to its enrolment in class I in



2012-13 implying a decline in enrolment as well as retention. On the contrary school 5 has seen an increase in enrolment and a cent percent retention.

**Figure-9: Perception of Parents Regarding Performance of MDM**

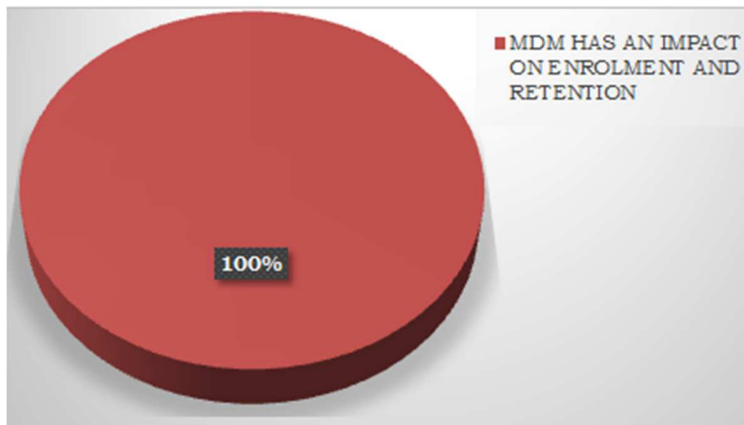


Source: Primary Data

Out of the 20 parents surveyed 16 people opined that mid-day meals should be continued in schools as they have positively enhanced their children’s learning abilities. The remaining 4 people opined otherwise as they were dissatisfied with the quality of meal provided and felt that their children liked the home cooked food better and also felt that it

did not have any significant contribution in enhancing their children’s learning ability.

**Figure-10: Perception of Headmistresses and Teachers**



Source: Primary Data

10 teachers and 5 headmistresses from all the 5 schools opined that the trends before and after the introduction of MDM show that there has been an increase in students’ enrolment and stability in their attendance.

Table-3 below shows that maximum number of students are satisfied with the quality and quantity of food provided.

**Table-3: Views of the Children Surveyed Regarding the Meal Provided**

OPINION	QUALITY	QUANTITY
ADEQUATE	45	43
INADEQUATE	5	7

Source: Primary Data



The findings of the study are as follows:

- Akshaya Patra Foundation has been providing the mid-day meals in all the five schools which have been surveyed. This has reduced the burden of teachers and other school staff who were otherwise engaged in cooking and distribution of meals earlier which affected their teaching time and ability. Forty five students out of the surveyed fifty, liked the mid-day meal better than their home cooked food. They preferred to come to school even during festivals rather than staying at home.
- The enrolment records of all the five schools show more or less similar results. The enrolment of students remains mostly stable or consistent across grades of all the 5 schools. They have been able to retain almost all of their students. The minor fall in enrolment in some cases could be attributed to students taking T.C due to irregular nature of their parents' jobs. Their parents don't have permanent homes as they move from place to place because of contractual /transferrable jobs. Attendance is taken twice a day that is once before having the meal and once after having it. The teachers opined that attendance of most of the students remained consistent throughout the day.
- A major part of the study relies on the perception of the headmistresses, teachers and parents regarding the contribution of the mid-day meal programme towards primary enrolment and retention. The school staff opines that MDM has positively affected students' enrolment and retention. It has brought consistency in their daily attendance and enrolment. Parents also opine that their children like the meal provided by the school and insist on going to school even during festivities. They also feel that their children's learning ability has improved due to increasing concentration in class after the issue of classroom hunger has been addressed.

## VII. CONCLUSION

The Mid-Day Meal scheme has undergone various changes over the years like from providing cooked food initially then switching over to provision of dry ration and then going back to providing cooked meals. The inclusion of NGOs as the Akshaya Patra Foundation has served as a boost for the successful implementation of the programme. From the present study we can conclude that MDM scheme has positively contributed towards primary enrolment and retention in schools of Nayapalli region. As we have found out that the number of pupils studying in a particular grade has stayed the same or has increased in most of the cases from the year they have enrolled in these schools and the fact that attendance in most cases has been consistent in the all the surveyed schools testifies the positive effect of the meal scheme in enrolment and retention in the schools of Nayapalli.

### *Policy Suggestions*

Breaking the monotony of meals provided in schools by providing special meals during festivities and including non-veg in the menu at least once in a week can positively affect students' enrolment and retention in schools. Creation of affordable hostels in schools and provision of more gainful opportunities for parents by the

government can curtail the chances of pupils taking T.C due to irregular nature of their parents' jobs

#### *Limitations*

The data has been collected from five schools only due to time constraint. Increasing the sample size and including more number of variables would have fetched better results. As the records of enrolment prior to the introduction of MDM are not available with the school authorities we have to rely on perception of school staff for knowing the trends in enrolment and retention before and after the introduction of MDM. Child population statistics of the study area have not been compared with the enrolment data for a better analysis of MDM. The programme is not only factor influencing the enrolment and retention of students in my study area. Factors like level of education of parents, conducive infrastructure and school atmosphere also play an important role

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