IMPACT OF MID DAY MEAL ON THE NUTRITIONAL STATUS OF SCHOOL GOING CHILDREN

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Objectives

i). To ascertain the nutritional status of children aged 9-12 years in Uttar Pradesh and Rajasthan.
ii). To find the factors responsible for nutritional deprivation.
iii). To see the effects of nutritional status on physical development.
iv). To find the impact of Mid Day Meal on the nutritional status of school going children.
v). To suggest measures for the amelioration of poor educational standards and improvement in health status.

Methodology

The present study involved school going children at three different areas - urban, rural and slum and school children were drawn from schools where the teacher-student ratio was, on an average, 1:40. To find out the development status and educational achievement, four groups of children from each area, belonging to the age group of 9-12 from both sexes, were selected.

Questionnaire methods for ascertaining the physical development status and evaluating the students' potentialities were employed. An interview schedule was used for collection of information regarding the nutritional intakes and family background. Anthropometric indicators such as height (cm.), weight (kg.), mid upper arm circumference (cm.), chest circumference (cm.), head circumference (cm.), skin fold thickness over triceps (mm.), level of hemoglobin (gm%) and clinical examination of sings of deficiency diseases were used. To measure the academic potentialities, Teacher Evaluation Inventory and Academic Achievement methods were used. For the assessment of nutritional status, calorie values of food consumed by the children for three consecutive days and for the data regarding home background, parents of children were interviewed using a structured schedule.

Data gathered were treated, scored and analysed using standard statistical procedures which helped in objective interpretation of the findings. Group means in objective interpretation of the findings. Group means were first computed to observe gross differences in various indices. Correlation coefficients were computed to establish and ascertain the relationship between groups across various dimensions. Analysis of Variance (ANOVA) was done on a few important dimensions to further examine the instructional pattern between background variable and the development of the child, and significant differences between different groups of subjects across area and age dimensions.

The data pertaining to various factors affecting nutritional status, physical development and educational achievement in three different locations across four age groups and both the sexes were analysed to find out mean differences, inter-correlation between various factors and degree of their variance. From each of the areas, five schools were chosen after discussions with the District Collector and Basic Shiksha Adhikari. Thirty students from each of the age group in each school were contacted. From each area in a district, six hundred children and their parents and teachers were contacted. In a district, the sample was 1,800 children, 900 parents and 60 teachers. In a state, the sample was 3,600 children, 1,800 parents and 120 teachers. For both the States, the overall sample was 7,200 children, 3,600 parents and 240 teachers.

Study Area

The study was conducted in the States of Uttar Pradesh and Rajasthan. From each State, two representative districts were chosen. The districts selected were Lakhimpur Kheri and Sitapur (Uttar Pradesh) and Bharatpur and Jodhpur (Rajasthan)

- Nutritional status of urban children was found to be better than that of rural and slum children.
- Children of each age group also showed a gradual increase in caloric intake with advancing age.
- Boys had a little more calorie intake than girls in the same age group.
- Nutritional status of children was significantly influenced by environmental factors and this held true for all the four districts studies in the two sampled States. This persists for the entire development sequence from 9-12 years of age and equally for both boys and girls.
- Level of education was found to be one of the important factors responsible for nutritional status of the child as was evidenced from its positive and significant correlation with nutritional status in case of both boys and girls and different age groups except for children in the age group of 9 years.
- Impact of income of the family on calorie intake of the child was found, from its significant correlation in case of all three areas, four age groups and both sexes in both the States.
- Correlation of size of the family including children with nutritional status was inverse and significant in Lakhimpur-Kheri, Sitapur and Jodhpur only.
- Physical development of the child was found to be affected by their nutritional status and environmental conditions irrespective of their place of living, age and sex. Physical space at home, particularly for children in Lakhimpur-Kheri was found to be affecting children's physical development.
- Educational achievement of the children in general was found to be strongly influenced by their nutritional intake, parental and home environmental condition.
- Educational achievement was also influenced by the number of children and members in the family which was proved by their inverse and significant correlation in all cases except Bharatpur.
- Relationship between educational achievement and physical development was strong. When boys and across different age groups were compared, the analysis revealed that better the state of physical health, the better is their educational achievement in schools.
- Children belonging to four different age groups in both the States were very well comparable, but there was little or no difference m respect of four major background variables (parent's education, family income, number of children and number of members in the family).
- Children of the three areas in all the four districts spread across two States greatly varied both in respect of calorie intake as well as, for their background variables. However, within group differences were marginal and non-significant in all cases except Bharatpur.
- The Mid Day Meal did not make any appreciable and significant impact on improving the nutritional status of the children. One important impact was that the reduced dropouts among the girls. The performance of Lakhimpur Kheri in reducing the dropouts among girls was significant followed by Jodhpur, Sitapur and Bharatpur.
- Educational achievement of the children was very much influenced by their nutrition, parental as well as home environmental conditions. This was clearly evident in Lakhimpur - Kheri followed by Sitapur, Jodhpur and Bharatpur.

Recommendations/Implications

- Since none of the children were getting adequate food in their daily intake as per the

Indian Council of Medical Research (ICMR) recommendations as confirmed by the findings of the study, the State and district administration and other Non-Government Organizations need to plan and implement development programmes for improving the nutritional status of the children in general, and those of the poorer, disadvantaged and downtrodden sections in particular.

- As the parents' education had proved to be of immense importance in improving the nutritional status, physical growth as well as development, and educational performance of the children, there ought to be multi-pronged efforts by the State and district administration and other line departments to educate the people.
- Effective ways of educating the parents, who are out of the formal education, could be through extension education programmes.
- Since economic conditions of the family has much significance in maintaining nutritional status of the children, the Government vis-a-vis Non-Government Organisations should take adequate steps towards improvement of the economic status of the communities.
- Since physical development and educational achievement of the children were hampered due to lack of sufficient food and nutrition, the current Mid Day Meal Programme being implemented in Uttar Pradesh and Rajasthan should be more effectively planned and strengthened on the basis of Tamil Nadu experience.
- As educational achievement was found to have been influenced by physical development, there should be systematic school health programme, comprising the following measures:

  I. Provision for medical check up of the children,
  II. Remedial measures and follow-up
 III. Preventive measures
 IV. Nutrition services
  V. Maintenance of mental health
 VI. Maintenance of health records

- Provision should be made and healthy school living which includes good hygienic environment of the school premises; adequate space in the class room according to the number of students, proper ventilation and light conditions; potable drinking water; facilities for sanitary toilets