Impact of Mid-Day Meal Programme on Nutritional Status and School Attendance of Girls in Allahabad

ABSTRACT

The Mid Day Meal is a welfare scheme funded by the Government of India, which offers free cooked meals to students in primary and upper primary schools, aiming at improving nutritional status and school enrollment. Research studies on the impact of the programme are negligible. An attempt was made: (i) to assess nutritional status of girls in schools which serve mid day meal and to compare the same with non-beneficiaries (ii) to find out the nutritional contribution of mid day meal towards the recommended dietary allowances of the school girls (iii) to find out school attendance of girls with and without mid day meals (iv) to find out the knowledge and attitudes/opinion of beneficiaries, parents and school personnel about mid day meals and (v) to develop a set of nutrition communication material for nutrition counseling of mid day meal beneficiaries, parents and school personnel. The study was carried out in eight schools of Allahabad. Four had mid day meal programme and four did not. A total of 500 girls, 5-16 years age group, studying in the schools formed the subjects, out of whom 250 formed the category of beneficiaries (MDM) and remaining 250 formed non-beneficiaries (NMDM). Data on mid day meals served in schools was collected by interviewing Principals or senior teachers and by the investigator’s own observations. Girls were surveyed by standard methods for data collection on general profile, dietary intakes, body weights and heights. Haemoglobin estimation was done by cyanmethaemoglobin method. Subjects were examined for clinical signs of nutritional deficiencies. School attendance of the subjects for six months was noted from school records. For finding out knowledge and attitude/opinion related to MDM programme, 130 MDM beneficiaries, 80 parents/guardians and 12 school personnel were surveyed. These were grouped into experimental and control groups. A booklet and C.D. containing nutrition information related to MDM was developed, using which nutrition counseling was given to the experimental group and impact was found out.

An average day’s mid day meal served in the primary schools was found to be containing: energy 463 kcal, protein 14 g, fat 6.24 g, calcium 67 mg, CHO 88 g, iron 4.30 mg, beta-carotene 11 µg, folic acid 33 µg and vitamin C 6.11 mg. In the upper primary schools the values were: energy 694 kcal, protein 21 g, fat 9.64 g, calcium 101 mg, CHO 134 g, iron 6.48 mg, beta-carotene 17 µg, folic acid 49 µg and vitamin C 9.16 mg. One third RDA of protein was met both in primary and upper primary categories; however only the latter’s meal provided 1/3 RDA of energy. Micronutrient content in general were low. The total day’s (MDM and home diet combined) nutrient consumption of MDM category was significantly higher than that of the NMDM category, although deficiencies existed in diets of both. Anthropometric measurements of both MDM and NMDM categories were lower
than the standards but in some age groups MDM category had better measurements. Proportion of subjects under different degrees of malnutrition was lower in the MDM than in the NMDM category. Mean Hb of MDM girls was 8.3g/dl blood whereas NMDM girls had a lower value of 8.0g/dl. The mid day meal exerted a beneficial effect on clinical nutritional status. MDM significantly improved school attendance. The proportion of girls having high attendance of above 80% in schools was much higher in the MDM category than in the NMDM category. The booklet and C.D. (Hindi) entitled “mid day meal ke dwara bachcho ki shiksha evam swashtya mai sudhar”(meaning: Improving children’s education and health through mid day meal) developed under the study significantly improved mid day meal related nutrition knowledge of MDM beneficiaries, parents/guardians and school personnel. It was concluded that mid day meal has a positive impact on the nutritional status and school attendance of girls.

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