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SUKANYA SANGWIRACH : THE STUDY OF THE IMPACT OF SCHOOL LUNCH AND SCHOOL MILK PROGRAMS ON NUTRITIONAL ASPECTS IN PRIMARY SCHOOLS OF THE BANGKOK METROPOLITAN ADMINISTRATION. THESIS ADVISORS : URAIPORN CHITTCHANG, D.Sc., PRAPAISRI SIRICHAKWAL, Ph.D., THARA VIRIYAPANICH, M.Sc. 145 p. ISBN 974-661-638-2

This study was conducted with the primary schools under the auspices of Bangkok Metropolitan Administration (BMA) in 1995. From the 427 BMA schools, the sample schools were chosen by stratified cluster sampling method. Twenty one schools (5% of schools) were studied using interview questionnaires, activity observations, copied secondary weight and height data of individual students, school nutritional status report forms from that academic year, and 5-day menu records. A further 100 schools were studied using mailed questionnaires. Menu records were collected by mail from an additional 100 schools. Information on the management, meal services, practices, knowledge, and problems of programs was collected by using the questionnaire. The students' nutritional status was studied from the secondary weight and height data of kindergarten and grade 1 students in order to assess the effect of milk and lunches on growth, and from secondary weight and height data of grades 3 and 4 students in order to assess the effect of lunches on growth. The nutritive values of lunches were analyzed from ingredients of menus which were recorded by the teachers.

The study revealed that school lunch program implementation was started more than ten years ago while school milk provision was started in 1993. School lunches could be offered at a low price for all students or without charge for poor students. In addition, school milk was supplied by the government only for kindergarten up to grade 1 students in 1995. Therefore, the programs had many problems concerning inadequate funds for providing high quality lunches, expensive raw food, lack of trained personnel, late milk delivery, milk package damage and milk storage.

For school lunches offered, the nutritive values provided less than 100% of the energy and protein target values (79% and 95%, respectively). Vitamin A, thiamin, riboflavin and calcium were provided at less than 70% of the target (34%, 45%, 48%, and 19%, respectively). Vitamin C and iron were provided more than 70% of the target (80% and 90%, respectively). With school milk supplement (200 ml.), most of that micronutrients quality would be improved (calcium, vitamin A, and riboflavin contents would increase to 97%, 80%, and 128% of the target, respectively.)

Regarding the students' nutritional status, the prevalence of wasted and underweight grades 3 and 4 students decreased between semesters. For kindergarten and grade 1 students, only the prevalence of wasted students decreased between semesters. Although kindergarten and grade 1 students received school lunches and school milk, the prevalence of underweight and stunted students still increased slightly. If these students did not receive lunches and milk at school, their state of malnutrition may have been exacerbated and the prevalence of malnutrition may have increased.