

## **ABSTRACT**

School feeding programmes are defined as interventions that deliver a meal or snack to children in the school setting, with the intent of improving attendance, enrolment, nutritional status and learning outcomes. The Primary School Nutrition Programme (PSNP) was introduced in South Africa as a Presidential Lead Project in 1994 with the specific aim to improve education by enhancing active learning capacity, school attendance and punctuality. However, not all children qualify to participate in the PSNP and a variety of alternative products, of which little information is known, are used as part of school feeding programmes implemented by non- governmental organisations (NGOs). The aim of this study was to investigate such programmes used in the Vaal Region.

Five different products used in school feeding programmes in a primary school in Eatonside and two primary schools in Orange Farm were compared in terms of the nutritional content of the products, the impact of these products after a seven month intervention on the nutritional status of the children by analysing their dietary intakes as well as biochemical and anthropometrical measurements, menu cost, compliance of the products by conducting sensory analyses and shelf life studies, and the impact on school attendance. Based on the results of this study, guidelines on the optimal school feeding strategy would be provided to NGOs and to the Gauteng Department of Education.

The five products were a micronutrient dense “vetkoek”, PSNP, two commercial products namely Corn Soya Blend (CSB) and Sejo and, lastly, fruit, which was used as the control. In the Sethlabotja school in Eatonside, the sample consisted of 160 randomly selected boys and girls (40 children participating in the PSNP, and 60 children in each of the vetkoek and fruit groups) and in Sinqobile and Reitumetse schools in Orange Farm the sample included 45 randomly selected children in each of the CSB and Seja groups.

Pre-intervention results indicated poor nutritional status. Mean daily energy intake of all the children was below the Dietary Reference Intakes for children between seven and ten years. A mainly carbohydrate-based diet was followed, with inadequate fruit and vegetable intake. The anthropometric indices indicated acute and chronic food shortage. The biochemical results indicated that normal values were present for the majority of the parameters.

The post-intervention results indicated that the food consumption patterns did not change substantially during the intervention but the mean energy intake of the children as well as weight, height and body mass index increased with all the interventions. Although few statistically significant differences were observed between the five groups with regard to nutritional status indices, positive changes were observed in each of the groups.

The products evaluated in this study proved to be within the range of the provincial school feeding budget. CSB and Sejo were the cheapest programmes because they are subsidised. Compliance to the products was good. No significant differences between commercial and home-prepared food items were found. School attendance was not formally recorded in all the groups. However, a decrease in absenteeism was noted in those groups where it was recorded. It is recommended that further research is conducted on the impact of school feeding on the cognitive performance of school learners in the Vaal Region.

