Abstract

Objective: To investigate relationships between nutritional status and growth among a sample of schoolchildren and adolescents living in a rural district of Kenya. Design: Cross-sectional nutritional and anthropometric survey. Setting: The data are from schools in a rural district of south-western Kenya. Subjects: Schoolchildren and adolescents aged between 5 and 17 years of age. Anthropometric measurements and interviews on dietary intake were carried out in 2001 and 2002 on 1,442 subjects. Results: In this African rural sample, the degree of malnutrition differs with age (increasing with age) and sex (more accentuated in males). Several correlations (P < 0.05) were observed between nutrient adequacy ratios and anthropometric values, particularly in males. There were no correlations between anthropometric characteristics and sodium or vitamin C (in males and females) and vitamin A or potassium (in females). Conclusions: Malnutrition was more evident in subjects at puberty. The diet was deficient in sodium, calcium and potassium. Although weight-for-age (WAZ) and BMI-for-age (BMIZ) did not show significant relationships with nutrients in girls, the anthropometric variables were significantly correlated with micronutrients and thiamine in boys. To develop effective intervention strategies, it is vital to understand both how changes in malnutrition do occur and how different factors influence nutrient intake. The different growth pattern of boys and girls could be caused by sexual differences in environmental sensitivity, access to food and energy expenditure.

Keywords

Schoolchildren, Nutrients, Sexual dimorphism, Rural environment, Kenya.