Prevalence of overweight and obesity among primary school children in Nairobi province, Kenya

Authors: JW Kamau, MP Wanderi, WWS Njororai, EK Wamukoya

Abstract

The prevalence of childhood overweight and obesity is increasing at an alarming rate worldwide and has implications for a variety of diseases. This has been due to various causes such as poor nutrition, inactivity or both. The purpose of this study was to establish the prevalence of overweight and obesity among primary school children aged 10-15 years in Nairobi province, Kenya. The study was carried out in two phases. A cross-sectional design was used in the first phase to assess the prevalence of overweight and obesity using BMI. The subjects in this phase included 2,620 males and 2,705 females aged 10-15 years in both private and public schools. A classic experimental design which involved an experimental group (48 pupils) and a control group (21 pupils) was then used for the second phase of the study, which involved further assessment of overweight and obesity using bioelectrical impedance analysis and skin fold measures. Data were analysed using percentiles, correlations, paired sample t-tests, independent sample t-tests and one way analysis of variance at 0.05 level of significance. Post hoc tests using Tukey HSD were applied to determine inter-group differences upon obtaining significant F ratios. The results indicated that out of the 1,479 pupils in private schools 103 (6.9%) were obese while 245 (16.7%) were overweight. On the other hand, out of the 3,846 pupils in public schools 62 (1.6%) were obese, while 220 (5.7%) were overweight. Among the 2,620 male subjects, 170 (6.5%) were overweight while 67 (2.6%) of them were obese. The results also showed that out of the total 2,760 female pupils, 295 (10.9%) were overweight while 98 (3.6%) were obese. These results showed that overweight and obesity are prevalent among primary school children aged 10-15 years in Nairobi, Kenya. The results further showed significant differences in body composition between boys and girls (p<0.05) with female pupils being more susceptible to overweight and obesity as indicated by higher mean BMI scores compared to their male counterparts. The study therefore recommended that similar assessments in other cities of Kenya as well as among the older individuals above 15 years and younger population below 10 years be conducted so as to indicate the big picture of overweight and obesity in Kenya. Additionally the study recommended that studies focusing on the major factors influencing overweight and obesity amongst children in Nairobi province be assessed. This will help in forming the basis for prevention and management of overweight and obesity.