

Evaluating an Intervention Programme on Obesity and Obesity Related Risk Factors in Children

The current prevalence of overweight and obesity among school-aged children (5-16 years) was 27.5 % in 2017. Between 1998 and 2017, the prevalence of combined overweight and obesity has doubled in children (from 11% to 27.5%) in Seychelles and is high or higher than many western countries.

Although childhood obesity is a concern in Seychelles there is little information about growth quality. The primary aim of this study was to assess body composition using the criterion stable isotope technique (deuterium oxide dilution [2H₂O]), and anthropometry (weight, height, waist circumference) in 8 to 10 year-old children in primary four level. The study had two phases. Phase 1, was a capacity building of personnel involved in the study on the use of the stable isotope technique, administration of questionnaires, anthropometric measurements and use of accelerometers. Phase 2 was a cross-sectional study which involved the assessment of body composition through the administration of deuterium oxide dilution to eligible children, completion of questionnaires and measurement of physical activity.

The main outcome from this study was that under-malnutrition is not a public health problem among the studied children but malnutrition by excess is an important health problem among schoolchildren. Indeed, the assessment of the obesity by using isotope techniques and William's recommendation (%FM >25% for boys and >30% for girls) show a very higher prevalence of obesity among those children (54%). However, the assessment by using anthropometry (BAZ) seems to underestimate the prevalence of fat excess. By using anthropometric technique 15% of children who are supposed to be normal had actually a higher percentage of fat mass. In comparison with other African countries, the prevalence of the obesity among schoolchildren using similar assessment technique and using similar cut-off point for obesity shows that Seychelles has the highest obesity prevalence followed by Mauritius 41%, Ghana being the lowest with only 3%. The food habit shows that more children consume daily sugar sweetened beverages, energy dense snacks, milk and milk product and refined grains. However, the fruits, vegetables and whole grains were consumed daily by fewer children. Otherwise, a higher percentage of children are exhibiting sedentary behaviour; 57% watched TV and 28% played electronic device on school days at least for 2hours per day. By using accelerometry, it seems that most children were engaged in sedentary or light physical activity. Only the quarter of children meet the recommendation for physical activity (MVPA ≥ 60 min/day). The only activity which seems to impact the fat mass compartment in our study is the vigorous physical activity. Indeed and according to fat mass excess, children who had a normal rate of fat mass spend more time (15min/d) in vigorous activity than those who had an excess of fat mass or obese (11.2min/d).

Obesity in school-aged children is a serious public health problem in Seychelles, one out of two children aged between 8-10 years old is obese. Integrated and complementary actions must be maintained to reduce and control this malnutrition recognized not only as risk factor for non-communicable diseases but as a disease of its own by WHO since 1997 (WHO, 2003).

Country

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