

OP 01

Prevalence of Overweight and Obesity: Assessment of body composition in adolescents aged 12 – 16 years in Colombo District, Sri Lanka

Abeyratne RMTB ¹, Perera PPR ¹ and Senaratne BCV ¹

Objective

To determine prevalence of overweight and obesity in adolescent aged 12 – 16 years in Colombo District and to find a better tool in assessing childhood obesity.

Methodology

A cross-sectional study was conducted on 1374 adolescents from 25 schools in Colombo District selected by stratified random cluster sampling. Students of grades 7-11 were included. Anthropometric measurements were measured as described by the WHO (1995). Body mass and percentage of total body fatness (%FM) were measured by Bioelectrical Impedance analysis (BIA).

Age- and the sex-specific reference for Body-Mass Index by International Obesity Task Force (BMI >25 and >30 respectively) and Sex- specific centile charts for percentage of fat (2nd, 85th and 95th centiles for under fat, over fat and obese respectively), developed by McCarthy et al were used as cut-offs of overweight and obesity.

Results

Majority of the total sample (51.2%) were girls. According to age specific BMI, 3.1% were obese and 8.4% were overweight. Based on Sex- specific centile charts, percentage of over fatness and obesity were 14% and 5.4% respectively. Although Overweight and obesity were high among girls depending on BMI (8.8%, 4.2%) overfat and obesity were more prevalent among boys (14.3%, 6.3%) according to %FM. Further BMI has overestimated under-nutrition (61.5%) while under fatness is only 31.5%.

Conclusion

BMI showed the lowest values of prevalence of overweight and obesity while BIA showed the highest values. Since the consequences associated with obesity are mainly due to the excess fat mass the better monitoring tool has to directly assess the adiposity. Therefore, obesity has to be diagnosed on a simple and accurate method of assessing %FM.