Indicators for Success of Obesity Reduction Programs in Adolescents; Body Composition and Body Mass Index: Evaluating a School-Based Health Promotion Project in Iran after 12 Weeks of Intervention

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Abstract : Background: Obesity in adolescence is a primary risk factor for obesity in adulthood. The objective of this study was the assessment of the effect of a comprehensive lifestyle intervention on different anthropometric indices in 12 to 16 years old boy adolescents. Methods: 96 adolescent boys of two schools of District 5 of Tehran have participated in this study. The schools were randomly assigned as intervention school (n=53) and control school (n=43). The height and weight of students were measured with a calibrated tape line and digital scale respectively and their BMI were calculated. The amounts of body fat percent (BF) and body muscle (BM) percent were determined by Bio Impedance Analyzer (BIA) considering the age, gender and height of students at baseline and after intervention. The intervention was implemented in the intervention school, according to the Ottawa charter principles. Results: 12 weeks of intervention decreased body fat percent in the intervention group in comparison with the control group (decreased by 1.81 % in the intervention group and increased by .39 % in the control group, $P < .01$). However, weight, BMI and BM did not change significantly. Conclusion: The result of this study showed that the implementation of comprehensive intervention in obese adolescents may improve the body composition, although these changes may not be reflected in BMI. It is possible that BMI is not a good indicator in assessment of the success of obesity management intervention.