

Prevalence of Overweight and Obesity in Iron-Deficient Iranian Teenagers Girls

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Abstract : Background: Many Iranian adolescent girls are iron deficient, but it is unclear whether the iron deficiency is associated with other nutritional risk indicators. Objective: we aimed to investigate the association between iron deficiency and weight status (measured as BMI) among a representative sample of teenage girls. Methods: A cross-sectional study was performed in a region of southern I.R.Iran. One hundred eighty-seven iron-deficient participants (aged between 11 to 14) were selected by systematic random sampling among all students in grades 1 to 3 from high schools for girls. We assayed hemoglobin, hematocrit, serum ferritin, iron and total iron binding capacity and measured weight and height. Body mass index was calculated according to age and gender-specific BMI growth charts for children 2 to 20 years of age. Results: 13% were at risk for being overweight and 8.3% were overweight. The severity of iron deficiency increased as BMI increased from normal to at risk for overweight and overweight. Iron deficiency anemia was most prevalent among overweight adolescents than at risk for overweight and normal weight adolescents (28%, 18%, and 13%, respectively). Conclusions: The results of this study showed an inverse association of BMI with serum ferritin. Overweight adolescents demonstrated an increased prevalence of anemia. Because of the potentially harmful effects of iron deficiency, obese adolescents should be routinely screened and treated as necessary.

Keywords : adolescent, over weight, iron deficiency, Iran

Conference Title : ICOTA 2023 : International Conference on Obesity in Teens and Adolescents

Conference Location : Vancouver, Canada

Conference Dates : May 22-23, 2023