

## Trend of Overweight and Obesity, Based on Population Study among School Children in North West of Iran: Implications for When to Intervene

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**Abstract :** Introduction: Childhood overweight and obesity is a major public health problem in both developed and developing countries. Overweight and obesity in children may have severe consequences later in adolescence and adulthood. The aim of current study was to determine the prevalence trend of overweight and obesity in school-aged children from 2009 to 2011. Methods: The present study was a population-based study and conducted in three consecutive years, from 2009 to 2011. The study population included all of primary, secondary and high school children in rural and urban regions of West Azarbijan province in West-North of Iran. Body mass index (BMI), the ratio of weight to height squared [weight (kg)]/[height (m)]<sup>2</sup>, was calculated to the nearest decimal place. Overweight and obesity were classified using CDC recommendations for age and sex: a BMI 85th-95th percentile was classified as overweight and a BMI >95th percentile was classified as obese. All statistical analyses were performed using the Excel Software. Descriptive statistics were used to characterize the sample in different time periods. The prevalence was calculated as the ratio of number present cases to a given population number in a given subgroup at a given time. Results: Overall, 165740, 145146 and 146203 school children were assessed at 2009, 2010 and 2011, respectively. Prevalence of overweight in primary school children among girls were 52.83, 86.93 and 116.36 and for boys were 57.07, 53.4 and 93.55 per 1000 person in 2009, 2010 and 2011 years ,respectively. The prevalence of obesity in secondary school children for girls were 22.26, 27.75 and 28.43 and 26.52, 25.72 and 35.85 for boys per 1000 person in 2009, 2010 and 2011, respectively, The highest prevalence of overweight was 77.58, 142.4 and 126.46 per 1000 person among primary, secondary and high school children, respectively, in 2011. The lowest prevalence of obesity was 12.52, 24.1 and 21.61 per 1000 person among primary, secondary and high school children, respectively, in 2009. Conclusion: However, the rapid increase in both obesity and overweight should have a special attention. Research on prevalence trend of overweight and obesity in children is poorly reported in Iran. So that, future studies need to follow-up on the associations between overweight and obesity with health outcomes when children develop and reach adolescence and adulthood.

**Keywords :** overweight, obesity, school children, prevalence trend, Iran

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