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Prevalence of overweight children aged 7 years: Results of the World Health Organisation Childhood Growth Surveillance Initiative in the Republic of Ireland

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Obesity in children is an important health problem in Europe⁽¹⁾. It has been linked to adverse psychological, social and health consequences in childhood and later in life⁽²⁾. The World Health Organisation (WHO) Childhood Obesity Surveillance Initiative was established in 2008 to measure systematically childhood obesity in the European region. The present study provides an assessment of the prevalence of obesity from three sweeps of 7 year old Irish children measured in 2008, 2010 and 2012. The core objective was to measure weight, height and waist circumference in primary school children according to the WHO protocol⁽³⁾. A nationally representative sample of schools was chosen on a probability proportional to size basis. In large schools, the average class size was estimated to be 20, small schools having less than 20 pupils per class.

Body mass index was standardised by age and sex and overweight and obesity were classified using the International Obesity Taskforce (IOTF) cut-off points⁽⁴⁾. Pearson's chi-squared tests were used to determine differences and to assess a linear trend in the prevalence of overweight across different sweeps.

In total, 4,349 children had their measurements recorded (2,153 boys and 2,196 girls). Overall response rate for first class in schools was 73.8% for 2008, 64.6% for 2010 and 54.6% in 2012. When categorised by IOTF standards, the percentages of overweight children were 22.7%, 20.7% and 17.8% for sweeps 2008, 2010 and 2012, respectively. For obesity, these percentages were 6.2%, 4.2% and 3.8%, respectively. There was a significant difference between different sweeps for prevalence of overweight ($\chi^2 = 10.1$, $p = 0.006$) and of obesity ($\chi^2 = 10.7$, $p = 0.005$) for all children. Also, a significant inverse linear trend was observed for both overweight (p for trend = 0.002) and obesity (p for trend = 0.002). When analyses were done separately for boys and girls, no significant differences were observed for overweight and obesity among boys, although a significant inverse trend was observed for obesity (p for trend = 0.02). For girls, a significant difference and a significant inverse trend was observed for both overweight and obesity ($\chi^2 = 6.1$, $p = 0.046$, p for trend = 0.02) and for obesity ($\chi^2 = 6.1$, $p = 0.049$, p for trend = 0.05). We investigated whether the drop in prevalence rates could have been attributed to the drop in response rates for first class over the years. However, there was no significant difference in prevalence of overweight and obese children among high response rate schools ($\geq 60\%$ children in first class examined in a school) and low response rate schools ($< 60\%$) within each sweep. Also, there was no significant difference in prevalence among schools that did participate in 2008, but did not participate in the other sweeps.

In conclusion, it seems that the prevalence of overweight and obesity in Irish children aged 7 years has stabilized and maybe even dropped over the years.

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