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A national survey of the prevalence of overweight and obesity in Greece

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Introduction: In order to provide national estimates of overweight and obesity among Greek schoolchildren a nationwide survey was performed among fifth and sixth grade students aged 10–12 years-old.

Methods: A stratified sampling by regions of the country based on data provided by the National Statistics Service of Greece was used to obtain a representative sample. Data were collected from October 2009 to May 2009 from 10 regions of Greece. Body weight, height, waist circumference and percentage of body fat and was measured by trained staff.

Results: The students participation rate was 84.9%. The resultant sample consisted of 4876 children (49.3% males and 50.7% females). According to the International Obesity Task Force (IOTF) cut-offs, the overall prevalence of overweight was 29% (95% confidence intervals 27.7–30.2) and the rate of obesity was 11.2% (95% confidence intervals 10.3–12.1). When we defined obesity using the growth curves of the CDC, the overall prevalence was significantly higher and reached 18.1% (95% confidence intervals 17.0–19.1). Additionally, there was a gender difference concerning the prevalence of obesity with males showing higher percentages. When comparing the overweight and obesity prevalence (IOTF cut-offs) between urban and rural regions no significant differences were found. Moreover, no differences were found between different age groups concerning obesity prevalence, for both genders.

Conclusion: The present national survey confirms previous studies showing a significant increase in the prevalence of overweight and obesity during the last two decades. These findings suggest a community as well as individual interventions in all areas of the country.

Conflict of interest: None disclosed.

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Gestational weght gain and body mass index in pre-school children

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Aim: To examine the association between gestational weight gain (GWG) and body mass index (BMI) in pre-school children.

Methods: The study comprised a total of 281 children (55.9% boys) aged 4–6 years. GWG were assessed by questionnaire. We measured weight and height, and BMI was calculated. Children were categorized as non-overweight (NOW) and overweight/obese (OW) according to the sex-adjusted BMI z-score (<1 and ≥1, respectively).

Potential confounders were assessed by questionnaire and included: Mother's education and BMI, birth weight and BMI of the first two years and maternal smoking during pregnancy, time spent watching television, and playing video-games and sleeping time. Physical activity was measured by accelerometer.

Results: We found that 30.3% of women had excessive GWG. The prevalence of overweight was 14.6% in children. Reporting results of stepwise multiple logistic regression model, adjusted for BMI at first and second years of life, physical activity and mother obesity ($P \leq 0.05$ all of them), showed that children whose mothers classified as excessive GWG (OR = 4.0; 95%CI: 1.6–10.3; $P = 0.004$) were more likely to be classified as OW compared to mothers classified normal GWG.

Conclusion: Our data suggested that excessive GWG was a strong predictor of OW at pre-school age after adjustment for potential confounders.

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Preadolescent overweight - a risk factor for later weight misperception

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Introduction: Adolescents' perception of overweight often disagrees with objective measurements. However, whether factors explaining this discrepancy are potentially modifiable is unclear.

Methods: We analyzed data from 2001 Swedish adolescents (1026 females and 975 males) who self-reported anthropometric measures (height and weight) and body size perception at 15 and 17 years of age. Misperception of overweight was defined as overestimation of body size in relation to the estimated Body Mass Index (BMI, kg/m^2) in two categories (not overweight, or overweight+obese). BMI measured by the school nurse at 11 years, school-based education on nutrition/physical activity, smoking, alcohol consumption, physical activity and indicators of healthy/unhealthy eating were examined as potential predictors or correlates of overweight misperception in multivariate logistic regression models. Adjusted odds ratios (OR) and 95% confidence intervals (CI) were used as measures of association.

Results: At 15 years, 32% of girls and 10% of boys misclassified themselves as overweight. In both genders, misperception of overweight was predicted by overweight at 11 years (OR = 2.3 CI:1.4–3.6 in boys, OR = 1.9, CI:1.3–2.8 in girls). Among girls, smoking was associated with a higher risk of misperception (OR = 1.6, CI:1.2–2.2). Among boys, frequent physical activity (>6 hours/week) was associated with a lower risk of misperception (OR = 0.4, CI: 0.2–0.7). No association with misperception was observed with school-based education on nutrition/physical activity.

Conclusion: This study reveals that being overweight at 11 years is a strong predictor for misperception of overweight during teenage years. Preventing overweight in pre-adolescence and/or promoting physical activity may be efficient ways to avoid later unjustified weight concerns.

Conflict of interest: None.