Trends in overweight and obesity in Danish children and adolescents: 2000-2008 – exploring changes according to parental education

Aims: To examine the hypotheses that an overall levelling off in the prevalence of overweight and obesity during the period 2000-2008 has occurred, and that increasing social inequality in overweight and obesity exists in a nationally representative sample of Danish children and adolescents.

Methods: The population comprised a random sample of 1849 children aged 4-14 years who participated in the Danish National Survey of Diet and Physical Activity in 2000-2002, 2003-2004 and 2005-2008. Parental education was chosen as an indicator of children's socioeconomic status. Body mass index (BMI) was calculated from parent-reported weight and height. Subjects were classified as overweight and obese according to the International Obesity Task Force age- and gender-specific BMI cut-off values. Crude prevalence estimates and logistic regression models were used to analyse trends in overweight and obesity as the main outcome measures.

Results: An increase was found in the crude prevalence of overweight (including obesity) in boys (12.8-21.7%, p = 0.0006), but not in girls (17.6-15.9%, p = 0.56), between 2000-2002 and 2005-2008. The prevalence of overweight increased significantly in boys of parents with low educational level only. A strong inverse social gradient in overweight and obesity was documented for boys and girls during the whole survey period.

Conclusions: The present study showed an increase in the prevalence of overweight in Danish boys, but not in girls. This increase was due to increasing social inequality in overweight among boys. Public health initiatives aimed at preventing and reducing overweight and obesity should consider gender difference and especially target boys with parents of low educational level.

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