

Factors associated with obesity in children in Brighton & Hove: An analysis of cross-sectional data

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Background

Childhood obesity is a major public health issue in developed countries. The aim of this study was to identify factors associated with childhood obesity at the ward-level in the city of Brighton & Hove (population, 289 000), southeast England, by conducting an analysis of the local cross-sectional health and well-being and social data.

Methods

A dataset was constructed using childhood overweight and obesity prevalence (excess weight at ages 4-5 years and 10-11 years), from the National Childhood Measurement Programme, for each of the 21 wards in Brighton & Hove. Data on factors that could possibly be associated with childhood excess weight [Index of Multiple Deprivation (IMD), population density, crime, adult obesity, physical activity, fruit and vegetable consumption, per capita fast-food outlets, supermarkets and sports facilities] were collected from official sources.

Results

There was over 2-fold variation in the prevalence of excess weight in children at the ward-level (from 9.9% to 25.3% in children aged 4-5 years, and from 15.8% to 35.6% in children aged 10-11 years). Decreased physical activity was significantly associated with excess weight in both age groups ($p < 0.0001$). Children from ethnic minorities had the lowest level of physical activity. Increased IMD score (i.e. higher deprivation) and lower fruit and vegetable consumption were also significantly associated with excess weight in both age groups. There was a significant difference in physical activity and fruit and vegetable consumption amongst children living in different wards ($p < 0.0001$).

Conclusions

We identified a number of socio-demographic, behavioural and societal factors associated with the prevalence of childhood excess weight at the ward-level in Brighton & Hove. The analysis of small area data provides an insight into potential obesogenic environments and guides the commissioning and design of appropriate public health interventions to reduce the prevalence of childhood excess weight.

Key messages:

The wide variation in the prevalence of childhood obesity at the ward-level highlights the importance and benefits of reducing health inequalities.

Analysis of small area data can provide valuable information on potential micro-level obesogenic environment.