

Research Briefing N° 39

Childhood obesity and educational attainment

This systematic review addresses the question of the relationship between childhood obesity and educational attainment.

Key words: childhood obesity; educational attainment

Key findings

This review will inform policy-makers, commissioners, practitioners, and researchers who have a remit to explore policy issues or to promote or conduct research on children and obesity; also teachers, head-teachers, local authority officers and others involved in the education system.

- While often conflicting, an overall pattern emerges from the research evidence suggesting that there is a weak negative association between obesity and educational attainment in children and young people; i.e. that higher weight is associated with lower educational attainment. Obesity is also associated with other variables, such as socio-economic status (SES), and when these other variables are taken into consideration, the association between obesity and attainment becomes still weaker, and often loses statistical significance.
- Differences between the average attainment of overweight and non-overweight children were marginal, with potentially negligible real-world implications for test scores and grade point averages.
- Place of residence, ethnicity, occupation, gender, religion, education, SES and social capital were all explored as potential moderating variables in the included research. Twenty-three of 29 studies used a measure of SES as a moderating variable. Various factors appear to contribute to low educational attainment to some extent, although given the variation in definitions, analyses and quality of data, it is impossible to point to any causative or definite risk factors.
- Most studies explored the influence of obesity upon attainment. Only two studies examined the influence of attainment upon obesity. Many authors suggested multiple causal pathways, many of which remained untested in their studies. The moderating variables used in statistical analyses of the relationship between obesity and attainment were not consistent with the causal pathways proposed, which is probably a reflection of the constraints imposed upon authors conducting secondary analyses of pre-existing datasets (i.e. they made use of existing variables, rather than collecting their own, tailored data).



What we did

There is great concern about levels of obesity in the UK, and its negative physical, psychological and social impacts. Current research suggests that there may be a relationship between obesity and poor educational

attainment. It is likely that obesity and poor school performance are elements of a broader picture of inequalities in health and education, whereby disadvantaged socio-economic groups tend to have poorer health and lower levels of education. However, it is possible that other factors influence obesity and attainment, such as gender, discrimination and poor mental and emotional well-being.

This systematic review, an exhaustive overview and summary of existing high quality research evidence relevant to a research question, was therefore commissioned to address the questions:

- What do we know about the relationship between childhood obesity and educational attainment, from the research literature?
- Is there a statistical association between obesity and educational attainment?
- To what extent does the research literature explore the influence of the broader determinants of health, and in particular socio-economic position, in explaining any link between obesity and attainment?
- To what extent did the included studies posit theories explaining the link between obesity and educational attainment as being mediated by individual and societal factors? Are these theories supported or refuted by the research evidence?

The review was carried out by the **Institute of Education's Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI- Centre)** in 2011 with funding from the Department for Health.

How we did it

We located studies through sensitive searches of a large number of databases, as well as specialist websites and contact with experts. Included studies were coded and quality-assessed by two reviewers independently. In order to ensure that our analysis was informed by the perspectives of teachers and young people, we held consultations in April and May 2009.

Implications

First, that obesity should not be understood solely as a health issue. This review, and other research, suggests that one of the most noticeable ways in which obesity affects the lives of children and young people is in their social relationships. Given the paucity of evidence suggesting a causative physiological link between obesity and attainment, any association is likely to be mediated by social factors. We find that stigmatisation, bullying, low self-esteem and young people's exclusion from opportunities for social interaction are suggested as underlying any relationship between obesity and lower educational attainment.

Second, that the variables used in statistical analyses failed to capture many of the potential causative factors identified by the teachers and young people (and, often, also of the researchers undertaking those analyses). If large-scale longitudinal datasets are to deliver on their potential to help us understand people's lives, they need to engage with the social lives of their participants and amass not simply data that are straightforward to collect, but information that reflects determining characteristics of people's social experiences, because these are often the key to understanding health and other behaviours.

Finally, we find this body of literature to be one of the least cumulative that we have reviewed. Data from the same datasets are analysed in different ways, using different variables, coming to different conclusions with minimal attempts to explain differences in findings. Different statistical models are sometimes employed with little justification for their selection and little acknowledgement that a different method might yield an entirely different result. We should note that these criticisms do not apply to all studies in this review, but it would be true to say that they do apply to many of them.

For the full report see ['Childhood obesity and educational attainment'](#)

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