

Millennium Cohort Study

CHILDHOOD OBESITY



Taken from Chapter 6 of *Millennium Cohort Study Second Survey: A User's Guide to Initial Findings*

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The Survey

The Millennium Cohort Study (MCS) offers groundbreaking large-scale information about children born into the new century and the families who are bringing them up in all four countries of the United Kingdom. It lays the foundation for a major new research resource.

For the first survey, conducted in 2001-2002, we interviewed the families of nearly 19,000 children aged nine months. A disproportionate number of these children came from families living in areas of high child poverty, and, in England, from areas with relatively high minority-ethnic populations¹. This survey looked at the circumstances of pregnancy and birth, as well as the social and economic background of the families into which these children were born.

The second survey marks the beginning of a series of follow-up surveys. Conducted in 2003-2005, it records how nearly 16,000 cohort children are developing at the age of three. For the first time, researchers have been able to chart the changing circumstances of families and relate children's outcomes at age three to earlier circumstances and experiences. This summary reveals some of the results from the second survey relating to childhood obesity.

Introduction

The proportion of overweight and obese children in the UK has been increasing in recent decades, even amongst the pre-school population. The Health Survey for England showed a marked rise in the proportion of overweight (including obese) two to five-year-olds between 1995 and 2002, with an increase in boys from 17 to 22 per cent and in girls from 20 to 25 per cent.

Obese children are at increased risk of health problems, such as type 2 diabetes and high blood pressure, as well as psychosocial problems, such as low self-esteem. They are also more likely to be obese in adolescence and adulthood.

It is estimated that obesity costs the National Health Service more than £1 billion a year. Tackling childhood obesity is a cross-Government priority. In 2004, the Departments of Health; Education and Skills; and Culture, Media and Sport created a joint public service agreement target to halt the year-on-year rise in obesity among children under the age of 11 by 2010.

Trained interviewers weighed and measured the MCS children during the second survey, which took place when they were three years old (median age: 37 months). More than 14,000 children co-operated with the interviewers, who brought scales and stadiometers (to measure weight and height respectively) into their homes. This provided an

opportunity to examine the prevalence of overweight and obesity within this cohort of children. Body mass index (BMI or weight/height squared) is the most common measurement of body size at the population level. Childhood overweight and obesity are defined by the International Obesity Task Force cut-offs for BMI. These cut-offs are based on data from six countries, including the UK.

Data are presented on 13,771 singleton children for whom valid information on height, weight and BMI was available. This sample consists of 13,195 children from the first survey and 576 from the new families who joined the study at the second survey².

The results

Eighteen per cent (2,504) of the children were found to be overweight and 5 per cent (724) were obese.

Country differences

Children in Northern Ireland and Wales were more likely to be overweight or obese than those living in England and Scotland, as the graph (over) shows.

Ward-level variation

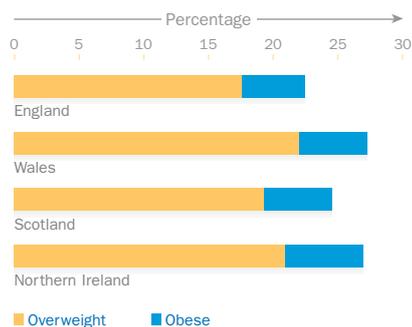
- Children were least likely to be overweight or obese in English wards classified as 'minority ethnic' (those where, according to the 1991 census, at least 30 per cent of residents were from a minority-ethnic group).
- There was a slightly higher

¹ Percentages reported here have been re-weighted to be representative of the population as whole.

² Two-way analyses are presented, unadjusted for possible multiple influences or non-response, so the findings are considered preliminary, and do not adjust for non-response.

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Childhood overweight and obesity by UK country at sweep 2



prevalence of overweight or obese children in 'disadvantaged' wards in England and Scotland (the upper quartile of the Child Poverty Index) than 'advantaged' wards (all remaining wards).

Individual and family characteristics

- There were no statistically significant differences in the prevalence of

overweight or obesity between boys and girls.

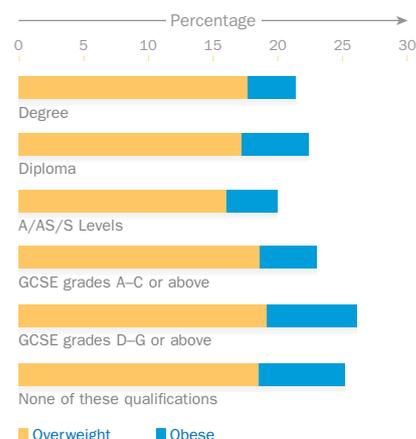
- Indian children had the lowest prevalence of overweight or obesity (9 per cent), while Black Caribbean children had the highest (33 per cent), as the table below shows.
- Children from families with income below the poverty line (60 per cent of national median adjusted for family size) were more likely to be overweight or obese than children from families on or above this line.

The children of mothers with the equivalent of at least five GCSE grades A-C were less likely to be overweight or obese than those whose mother had lower qualifications or none.

Acknowledgements

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Childhood overweight and obesity by mother's highest academic qualification



Childhood overweight and obesity (per cent) by income poverty

	Above or at 60% median	Below 60% median
Normal weight	77.6	76.8
Overweight excluding obesity	18.2	17.4
Obesity	4.2	5.8
N	8033	3652

Childhood overweight and obesity (per cent) at age three*

	England Minority Ethnic	England Advantaged	England Dis-advantaged	Wales Advantaged	Wales Dis-advantaged	Scotland Advantaged	Scotland Dis-advantaged	N. Ireland Advantaged	N. Ireland Dis-advantaged
Normal weight	80.8	78.4	75.8	71.3	74.9	76.3	74.6	73.3	73.1
Overweight excluding obesity	13.3	17.4	18.4	23.9	19.5	19.5	18.9	20.6	21.2
Obesity	6.0	4.2	5.7	4.8	5.6	4.3	6.5	6.2	5.7
N	1,661	3,785	3,409	606	1,402	838	780	520	770

* By area of residence at nine months

Childhood overweight and obesity (per cent) at age three

	White	Mixed	Indian	Pakistani	Bangladeshi	Black Caribbean	Black African	Other
Normal weight	76.8	78.4	90.8	82.5	80.6	67.6	72.7	80.6
Overweight excluding obesity	18.6	16.7	5.4	12.1	8.2	15.0	16.6	13.5
Obesity	4.6	4.8	3.8	5.4	11.2	17.5	10.7	6.0
N	11,502	393	364	630	220	154	236	228

Conclusion

Training non-specialist interviewers to weigh and measure nearly 14,000 children in the home has produced one of the largest datasets of young children in the UK that can be linked to a wealth of information about the child, their family and the place where

they live. These preliminary findings suggest that just under a quarter of three-year-olds from the MCS were overweight or obese, with evidence of social and ethnic patterning. Further analyses will adjust for the interplay of other factors. These findings can

assist government in tackling childhood obesity by helping to inform public health policy.

Millennium Cohort Study Second Survey: A User's Guide to Initial Findings is available at www.cls.ioe.ac.uk

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