Hull JSNA: Our Healthy Weight - National Child Measurement Programme 2023/24 Detailed Report

Introduction

- The National Child Measurement Programme (NCMP) is an important part of the Government's work programme to help children to be a healthy weight, and is operated by the Office of Health Improvement and Disparities (OHID) and the Department of Health and Social Care (DHSC)

- Every year, as part of the NCMP, children in Reception (aged 4-5 years) and Year 6 (aged 10-11 years) have their height and weight measured during the school year to inform local planning and delivery of services for children; and gather population data to allow analysis of trends in growth patterns and overweight

- The NCMP also helps to increase public and professional understanding of weight issues in children and is useful for engaging with children and families about healthy lifestyles and weight issues. Before the NCMP takes place, parents receive a letter informing them about the programme and allows them to opt out if they don't want their child to take part.

- More information can be found at National Child Measurement Programme: operational guidance - GOV.UK (www.gov.uk)

Notes on the data

- This report presents findings from the 2023/24 National Child Measurement Programme (NCMP)
- This report follows on from the initial briefing when local authority level NCMP data was published, available via publichealthintelligence@hullcc.gov.uk
- Local authorities receive more detailed data following publication of the national reports.
- The report contains analyses of body mass index (BMI) classification rates by age, sex, deprivation, ethnicity as well as geographic and trend analyses.
- Note that due to COVID19, a full representative data collection was not achievable for local authorities during the 2020/21 academic year. As a result, this data has been removed from the trend charts for Hull. The data collected was representative at a national level so it is possible to include the trend charts for England.
- The analyses are based on population surveillance of BMI classifications from Cole's 1990 reference curves.

Headlines

In Year R, excess weight prevalence has increased from 25.4% (2022-23) to 26.4% (2023-24)

In Year R, obesity prevalence has increased from 11.5% (2022-23) to 12.0% (2023-24)

In Year R, Hull's excess weight and obesity prevalence remain higher than the national rate and the inequalities gap has increased
Excess weight: 26.4% (Hull); 22.1% (England)
Obesity: 12.0% (Hull); 9.6% (England)

In Year R, excess weight differs across the city from 21% (Holderness ward) to 32% (University ward) obesity varies between 9% (Kingswood ward) and 19% (University ward)

In Year 6, excess weight prevalence has increased from 40.4% (2022-23) to 42.2% (2023-24)

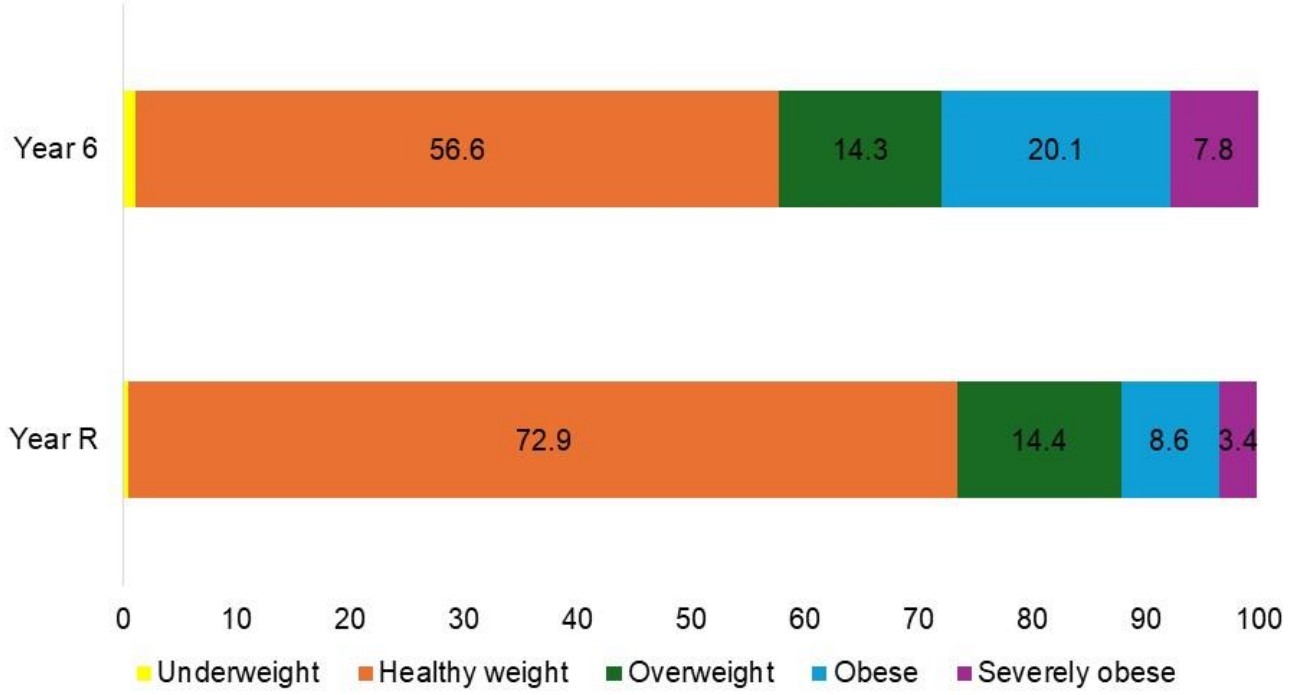
In Year 6, obesity prevalence has increased from 26.8% (2022-23) to 27.9% (2023-24)

In Year 6, Hull's excess weight and obesity prevalence remain higher than the national rate and the inequalities gap has increased
Excess weight: 42.2% (Hull); 35.8% (England)
Obesity: 27.9% (Hull); 22.1% (England)

In Year 6, excess weight differs across the city, from 32% (Kingswood ward) to 51% (Central ward) and obesity varies between 19% (Kingswood ward) and 40% (Central ward)

What are the overall results for Hull for 2023/24?

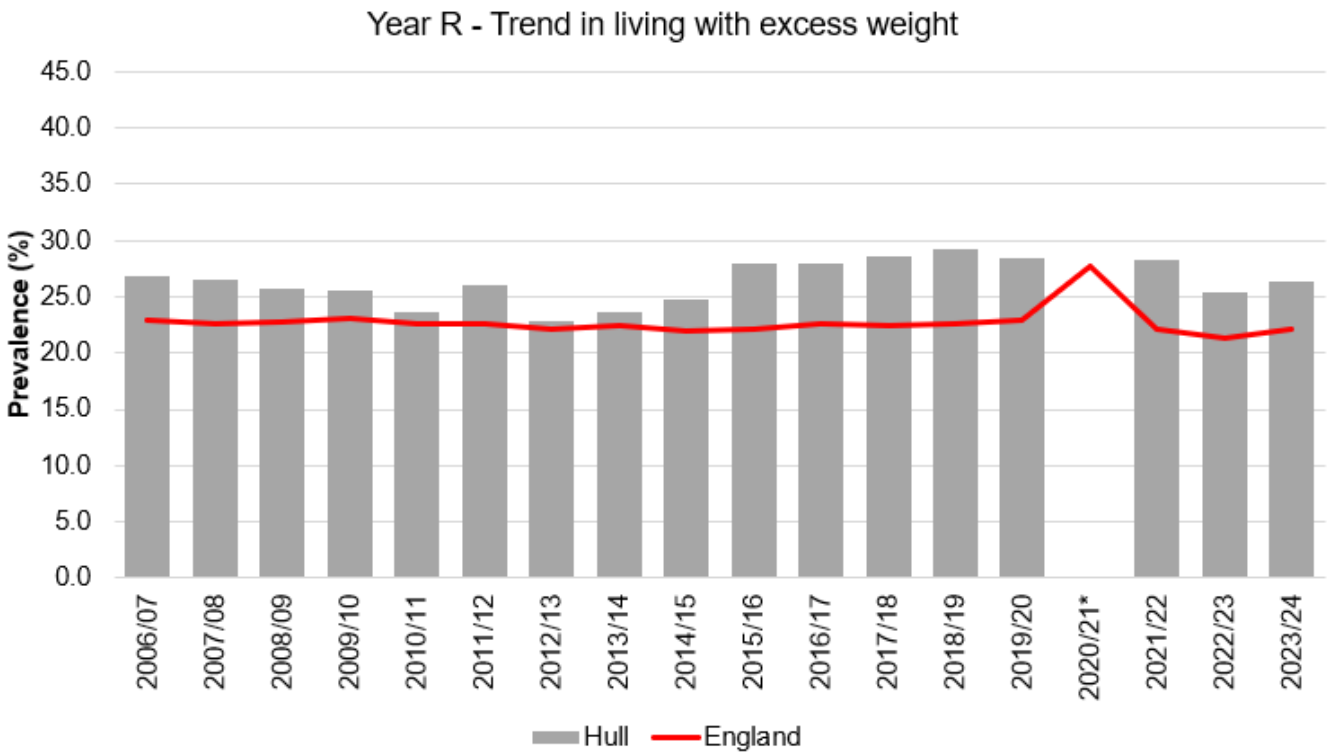
	Year R	Year R	Year 6	Year 6
	Number	Percentage	Number	Percentage
Underweight	15	0.5	35	1.1
Healthy weight	2,150	72.9	1,875	56.6
Overweight	425	14.4	475	14.3
Obese	255	8.6	665	20.1
Severely obese	100	3.4	260	7.8
Excess weight	780	26.4	1,400	42.2
Total	**2,950**	**100**	**3,315**	**100**



What does the excess weight trend look like in Hull? - Year R

NCMP year R

Period	Hull	England	Gap
2006/07	26.8	22.9	3.9
2007/08	26.5	22.6	3.9
2008/09	25.8	22.8	3.0
2009/10	25.5	23.1	2.4
2010/11	23.7	22.6	1.1
2011/12	26.0	22.6	3.4
2012/13	22.9	22.2	0.7
2013/14	23.6	22.5	1.1
2014/15	24.8	21.9	2.9
2015/16	27.9	22.1	5.8
2016/17	27.9	22.6	5.3
2017/18	28.6	22.4	6.2
2018/19	29.2	22.6	6.6
2019/20	28.4	23.0	5.4
2020/21*		27.7	
2021/22	28.2	22.2	6.0
2022/23	25.4	21.4	4.0
2023/24	26.4	22.1	4.3



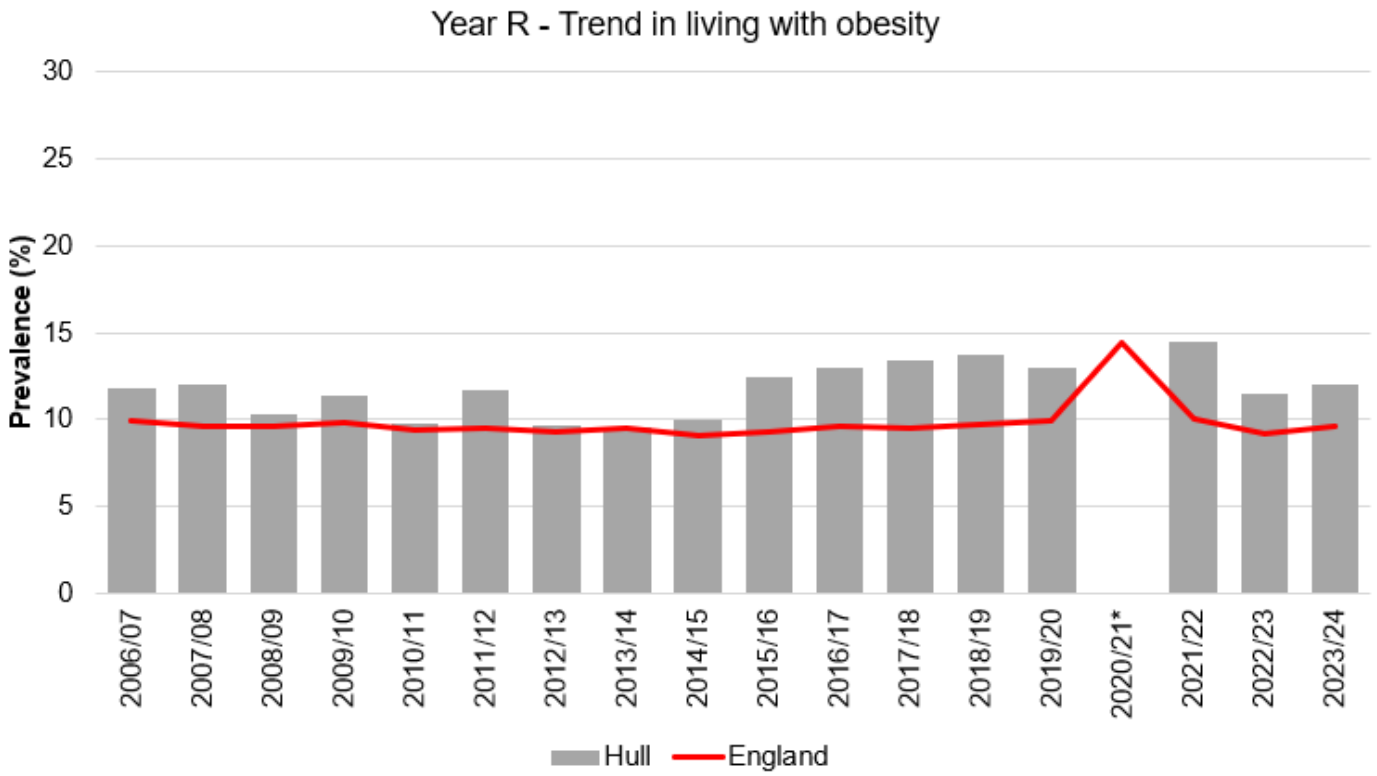
* Hull data was not complete enough for 2020/21 to be used due to COVID19 pandemic (sample size around 1/5th of normal NCMP cohorts)

The prevalence of excess weight in Year R for Hull has shown a reduction from 28.2% in 2021/22 to 25.4% in 2022/23 although has increased to 26.4% for 2023/24. The latest rate is lower than pre-pandemic rates between 2015/16 to 2019/20. The inequality gap to England has increased in the last year, but is still - at 4.3 percentage points – among the narrowest it has been since 2014/15.

What does the obesity trend look like in Hull? - Year R

NCMP year R

Period	Hull	England	Gap
2006/07	11.8	9.9	1.9
2007/08	12.0	9.6	2.4
2008/09	10.3	9.6	0.7
2009/10	11.4	9.8	1.6
2010/11	9.8	9.4	0.4
2011/12	11.7	9.5	2.2
2012/13	9.7	9.3	0.4
2013/14	9.6	9.5	0.1
2014/15	10.0	9.1	0.9
2015/16	12.5	9.3	3.2
2016/17	13.0	9.6	3.4
2017/18	13.4	9.5	3.9
2018/19	13.7	9.7	4.0
2019/20	13.0	9.9	3.1
2020/21*		14.4	
2021/22	14.5	10.1	4.4
2022/23	11.5	9.2	2.3
2023/24	12.0	9.6	2.4



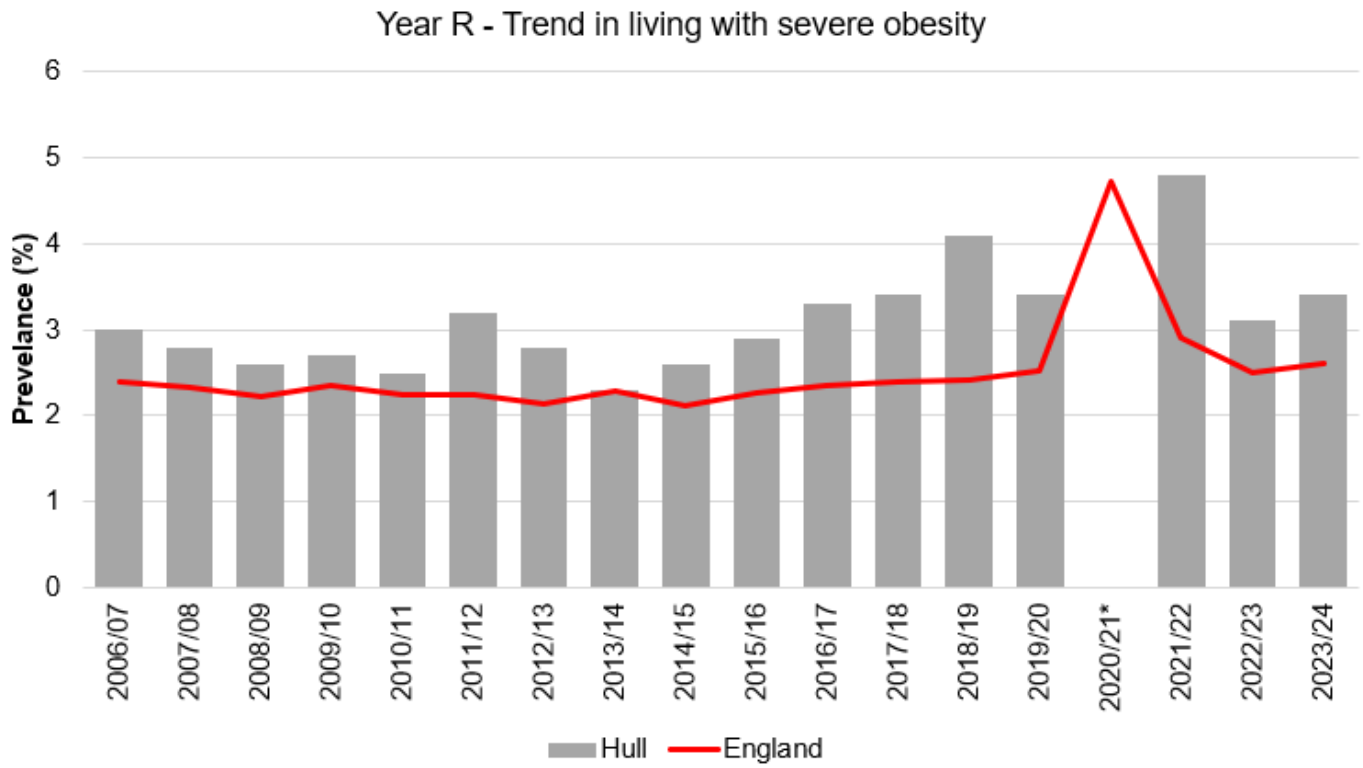
* Hull data was not complete enough for 2020/21 to be used due to COVID19 pandemic (sample size around 1/5th of normal NCMP cohorts)

The prevalence of children living with obesity in Year R for Hull has shown a reduction from 14.5% in 2021/22 to 11.5% in 2022/23 although has increased in the last year to 12.0%. Despite this increase, the rate is lower than pre-pandemic rates observed 2015/16 to 2019/20. The inequalities gap has increased by 0.1 percentage points with the prevalence 2.4 percentage points higher in Hull compared to England, although the inequalities gap is among the lowest it has been since 2014/15.

What does the severe obesity trend look like in Hull? - Year R

NCMP year R

Period	Hull	England	Gap
2006/07	3.0	2.4	0.6
2007/08	2.8	2.3	0.5
2008/09	2.6	2.2	0.4
2009/10	2.7	2.3	0.4
2010/11	2.5	2.3	0.2
2011/12	3.2	2.3	0.9
2012/13	2.8	2.1	0.7
2013/14	2.3	2.3	0.0
2014/15	2.6	2.1	0.5
2015/16	2.9	2.3	0.6
2016/17	3.3	2.3	1.0
2017/18	3.4	2.4	1.0
2018/19	4.1	2.4	1.7
2019/20	3.4	2.5	0.9
2020/21*		4.7	
2021/22	4.8	2.9	1.9
2022/23	3.1	2.5	0.6
2023/24	3.4	2.6	0.8



* Hull data was not complete enough for 2020/21 to be used due to COVID19 pandemic (sample size around 1/5th of normal NCMP cohorts)

The prevalence of children living with severe obesity in Year R for Hull is variable in Hull due to the relatively small numbers of children. However, there has been an increasing trend over time, and the latest prevalence at 3.4% is among the highest it has been since NCMP began. The inequalities gap between Hull and England – at 0.8 percentage points – is also relatively high.

What does the excess weight trend look like in Hull? – Year 6

NCMP year 6

Period	Hull	England	Gap
2006/07	34.0	31.7	2.3
2007/08	37.5	32.6	4.9
2008/09	35.8	32.6	3.2
2009/10	34.6	33.4	1.2
2010/11	37.9	33.4	4.5
2011/12	36.8	33.9	2.9
2012/13	36.4	33.3	3.1
2013/14	34.5	33.5	1.0
2014/15	35.8	33.2	2.6
2015/16	37.4	34.2	3.2
2016/17	36.1	34.2	1.9
2017/18	37.9	34.3	3.6
2018/19	36.0	34.3	1.7
2019/20	37.5	35.2	2.3
2020/21*		40.9	
2021/22	42.6	37.7	4.9
2022/23	40.4	36.6	3.8
2023/24	42.2	35.8	6.4

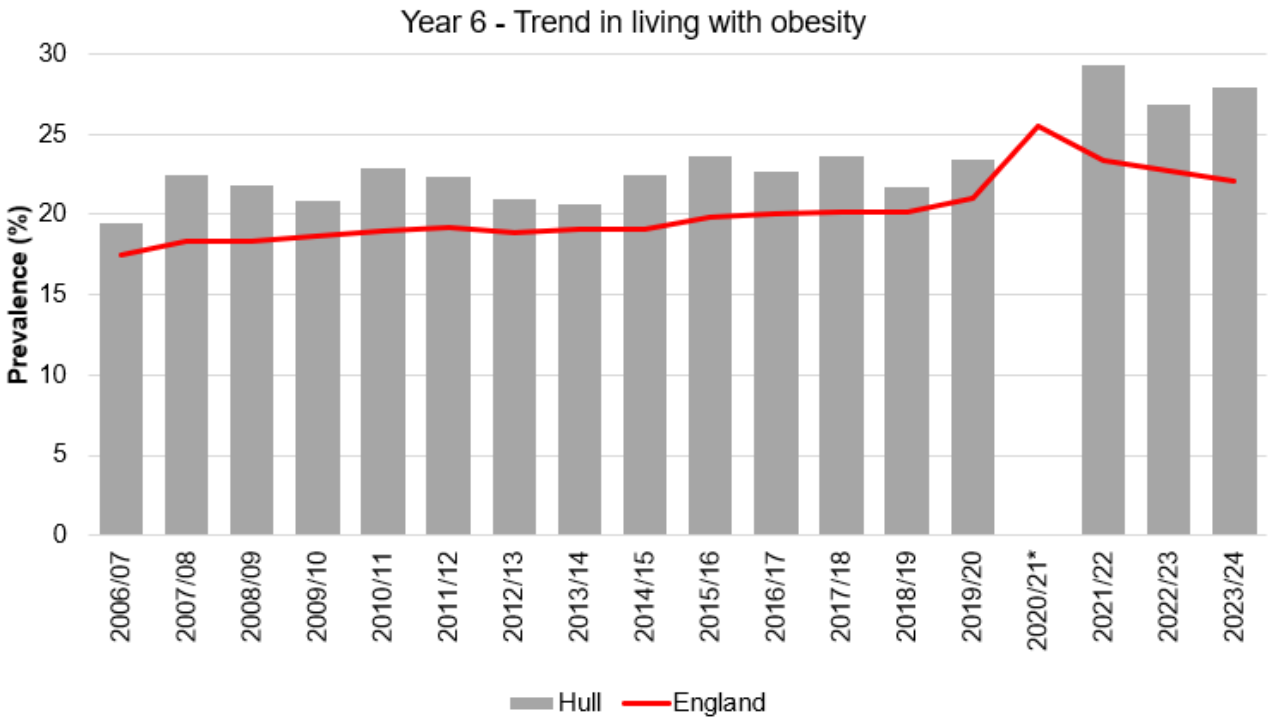
* Hull data was not complete enough for 2020/21 to be used due to COVID19 pandemic (sample size around 1/5th of normal NCMP cohorts)

The prevalence of excess weight in Year 6 for Hull reduced between 2021/22 to 2022/23 from 42.6% to 40.4%, but in the last year has increased to almost the same level observed in 2021/22. The latest prevalence at 42.2% is the second highest it has been since the NCMP began. Furthermore, the inequalities gap between Hull and England has increased sharply in the last year and is the highest it has been since NCMP began with the prevalence in Hull being 6.4 percentage points higher than England.

What does the obesity trend look like in Hull? – Year 6

NCMP year 6

Period	Hull	England	Gap
2006/07	19.4	17.5	1.9
2007/08	22.4	18.3	4.1
2008/09	21.8	18.3	3.5
2009/10	20.8	18.7	2.1
2010/11	22.9	19.0	3.9
2011/12	22.3	19.2	3.1
2012/13	21.0	18.9	2.1
2013/14	20.6	19.1	1.5
2014/15	22.4	19.1	3.3
2015/16	23.6	19.8	3.8
2016/17	22.7	20.0	2.7
2017/18	23.6	20.1	3.5
2018/19	21.7	20.2	1.5
2019/20	23.4	21.0	2.4
2020/21*		25.5	
2021/22	29.3	23.4	5.9
2022/23	26.8	22.7	4.1
2023/24	27.9	22.1	5.8



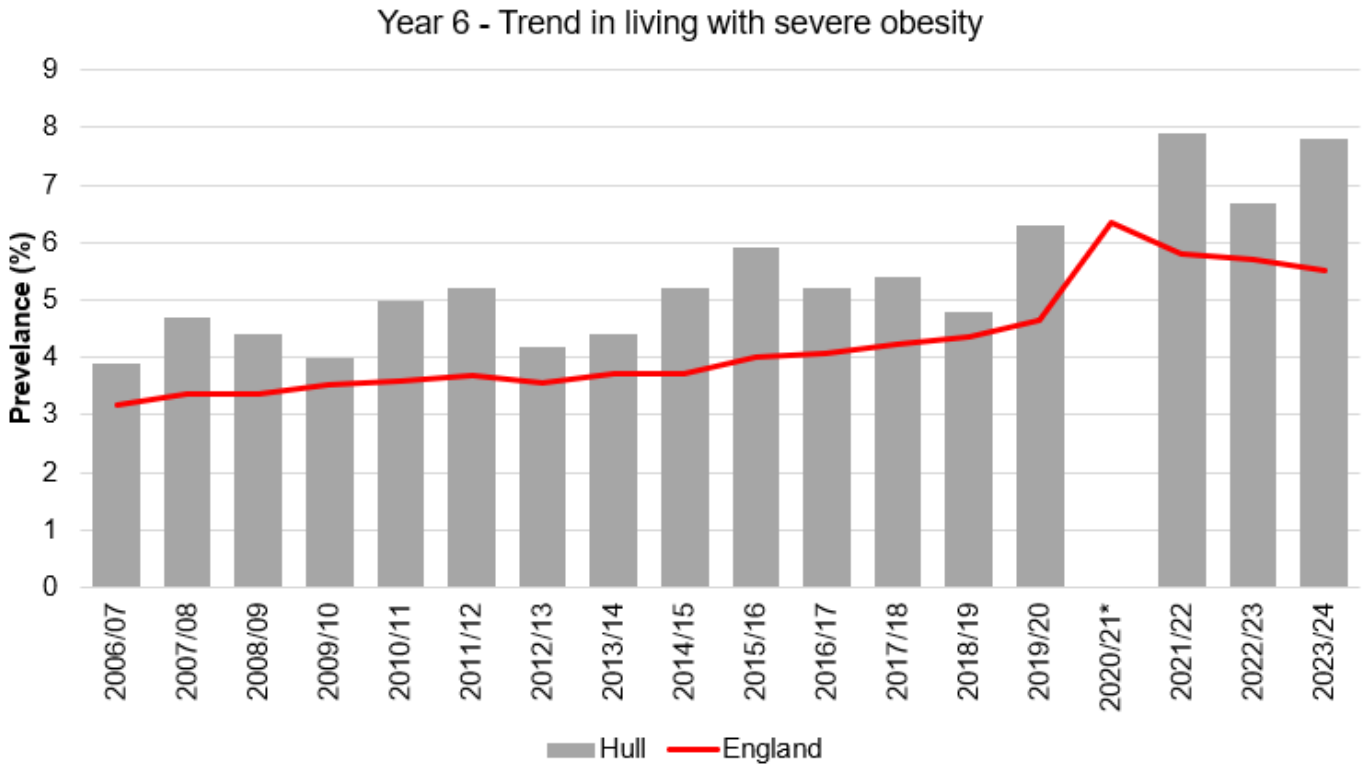
* Hull data was not complete enough for 2020/21 to be used due to COVID19 pandemic (sample size around 1/5th of normal NCMP cohorts)

The prevalence of children living with obesity in Year 6 for Hull reduced between 2021/22 to 2022/23 from 29.3% to 26.8%, but in the last year has increased. The latest prevalence at 27.9% is the second highest it has been since the NCMP began. Furthermore, the inequalities gap between Hull and England has increased sharply in the last year and is also the second highest since NCMP began with the prevalence in Hull being 5.8 percentage points higher than England.

What does the severe obesity trend look like in Hull? – Year 6

NCMP year 6

Period	Hull	England	Gap
2006/07	3.9	3.2	0.7
2007/08	4.7	3.4	1.3
2008/09	4.4	3.4	1.0
2009/10	4.0	3.5	0.5
2010/11	5.0	3.6	1.4
2011/12	5.2	3.7	1.5
2012/13	4.2	3.6	0.6
2013/14	4.4	3.7	0.7
2014/15	5.2	3.7	1.5
2015/16	5.9	4.0	1.9
2016/17	5.2	4.1	1.1
2017/18	5.4	4.2	1.2
2018/19	4.8	4.4	0.4
2019/20	6.3	4.7	1.6
2020/21*		6.3	
2021/22	7.9	5.8	2.1
2022/23	6.7	5.7	1.0
2023/24	7.8	5.5	2.3



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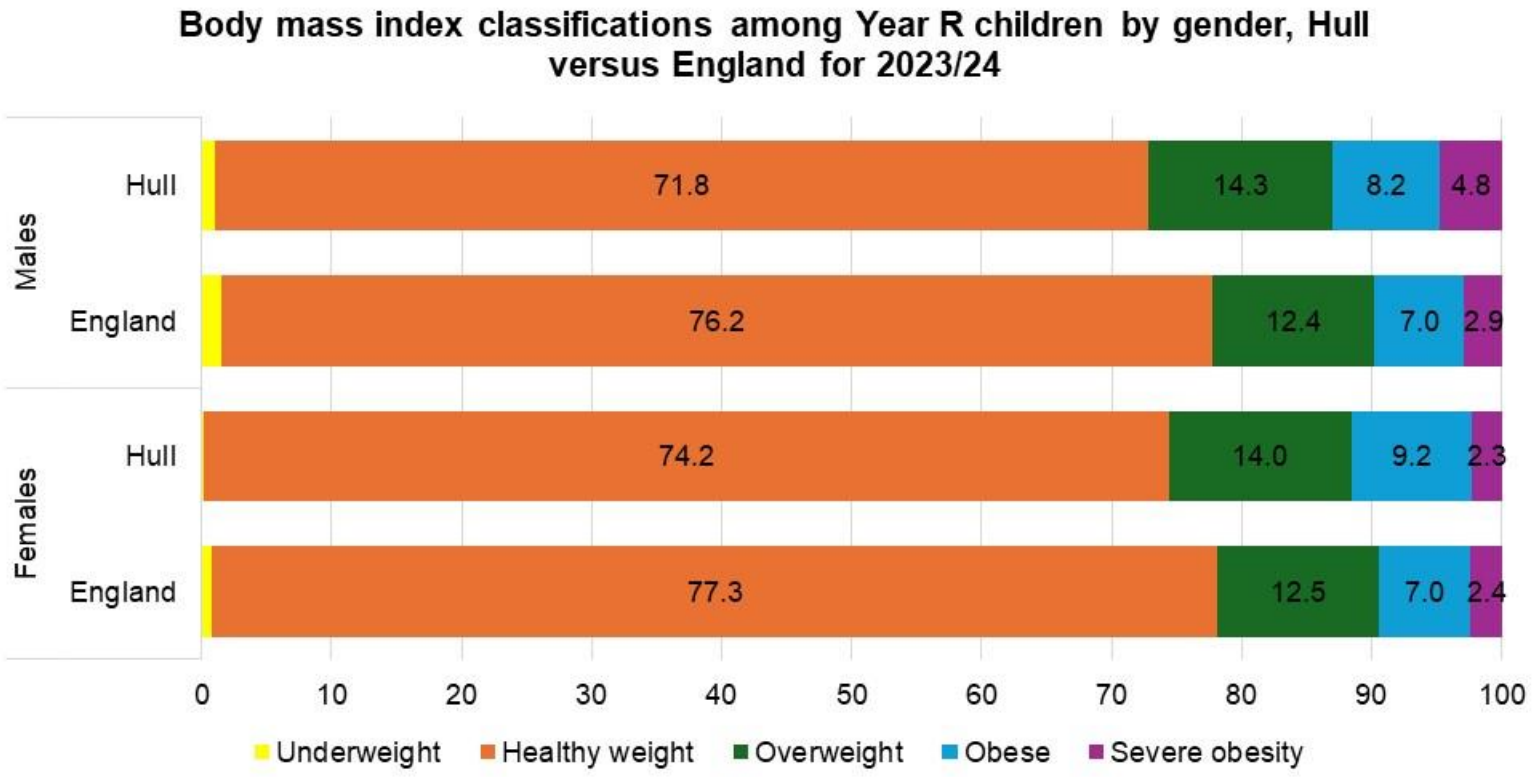
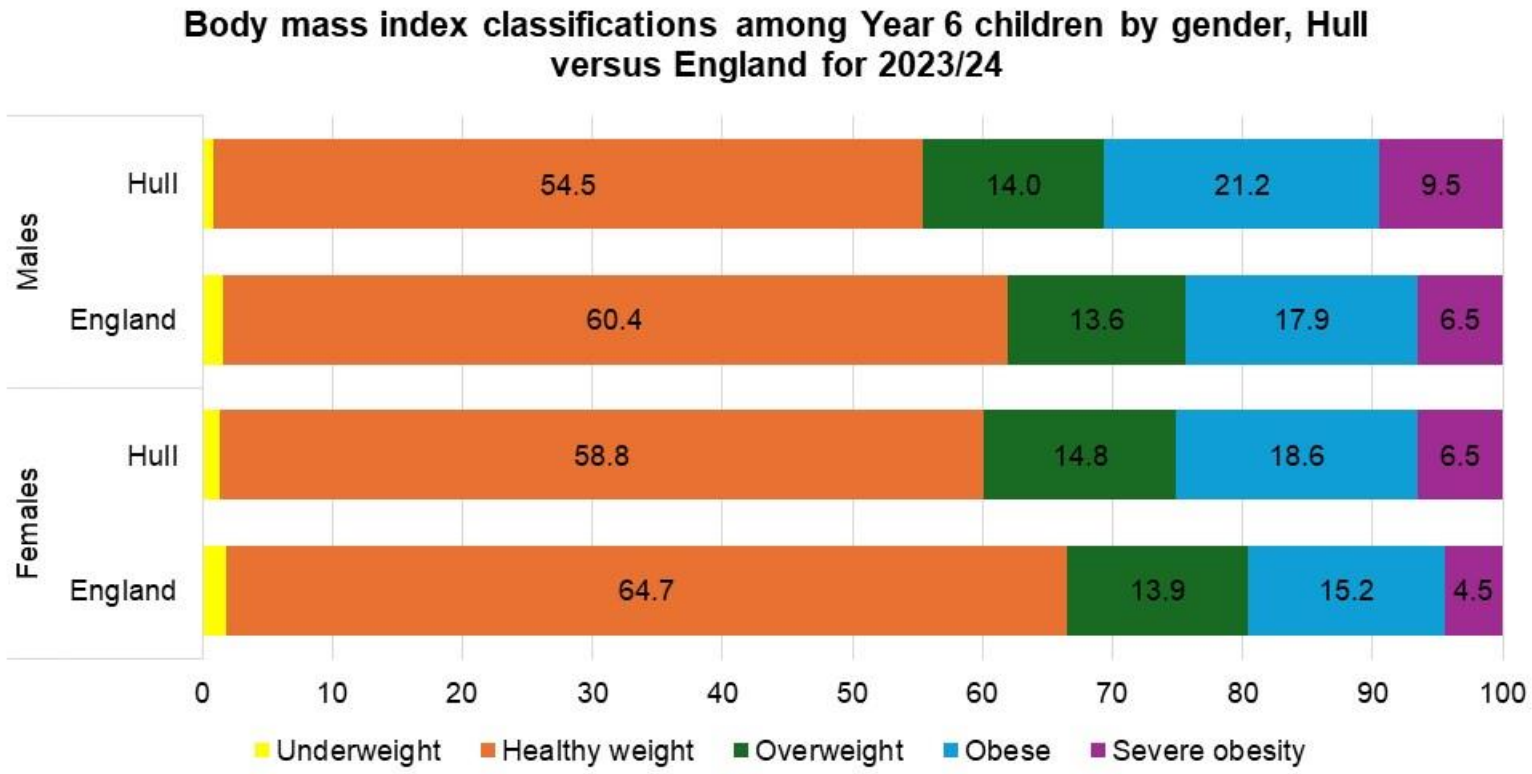
The prevalence of children living with severe obesity in Year 6 for Hull is variable in Hull due to the relatively small numbers of children. However, there has been an increasing trend over time, and the latest prevalence at 7.8% is among the highest it has been since NCMP began. The inequalities gap between Hull and England – at 2.3 percentage points – is the highest it has been.

What are the differences between males and females? – Year R



For 2023/24, the prevalence of excess weight for Year R children is higher among males compared to females in Hull (27.2% versus 25.6%) as it is in England (22.2% versus 21.9%) although the gap between males and females is greater in Hull. This is also the case for children living with obesity for Hull (13.0% versus 11.6%) and England (9.9% versus 9.4%) and for severe obesity for Hull (4.8% versus 2.3%) and England (2.9% versus 2.4%).

What are the differences between males and females? – Year 6



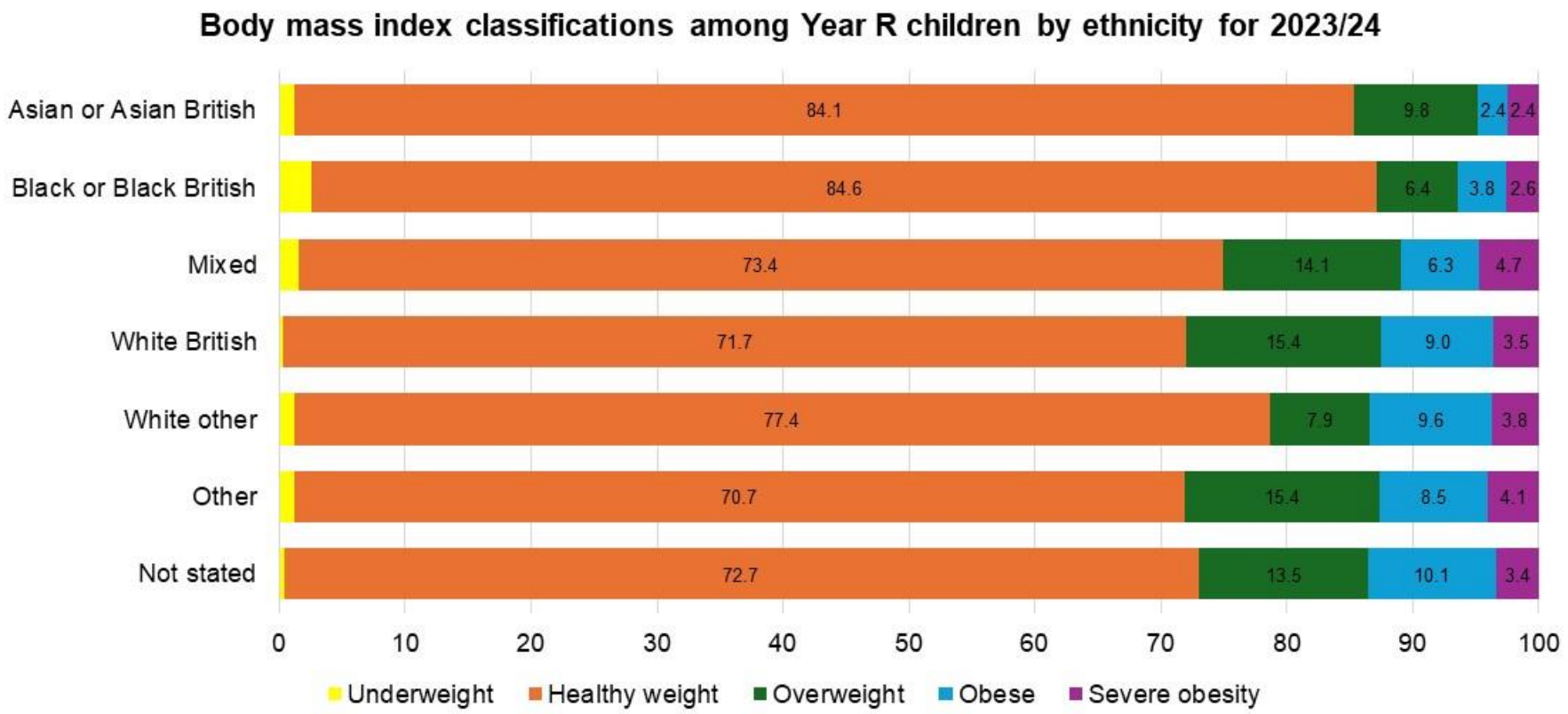
For 2023/24, the prevalence of excess weight for Year 6 children is higher among males compared to females in Hull (44.6% versus 39.9%) as it is in England (38.1% versus 33.5%) although the gap between males and females is greater in Hull. This is also the case for children living with obesity for Hull (30.6% versus 25.1%) and England (24.5% versus 19.6%) and for severe obesity for Hull (9.5% versus 6.5%) and England (6.5% versus 4.5%).

How well does ethnicity appear to be recorded?

Ethnicity	NCMP Year R	Census aged 4-5	% difference	NCMP Year 6	Census aged 10-11	% difference
Asian or Asian British or Chinese	3.2	3.9	–18	3.7	3.1	+20
Black or Black British	3.3	3.1	+5	2.3	3.1	–26
Mixed	2.5	3.4	–27	2.0	3.4	–40
White British	71.5	78.2	–8	77.6	80.0	–3
White other	9.8	8.3	+18	8.0	8.1	2
Other	9.7	3.1	+210	6.5	2.4	+174
Total	100.0	100.0		100.0	100.0	
Not stated	9.8			6.4		

Results are presented on the next few slides in relation to differences in the prevalence of children living with excess weight and obesity. Whilst the prevalence of ethnicity may have changed a little since the 2021 Census, it does appear that ethnicity is not particularly well recorded on NCMP. Fewer children on NCMP are recorded as having mixed or multiple ethnicities and many more children are recorded as having ‘other’ ethnic groups. Furthermore, almost one in ten Year R children and one in 16 Year 6 children do not have ethnicity recorded on NCMP.

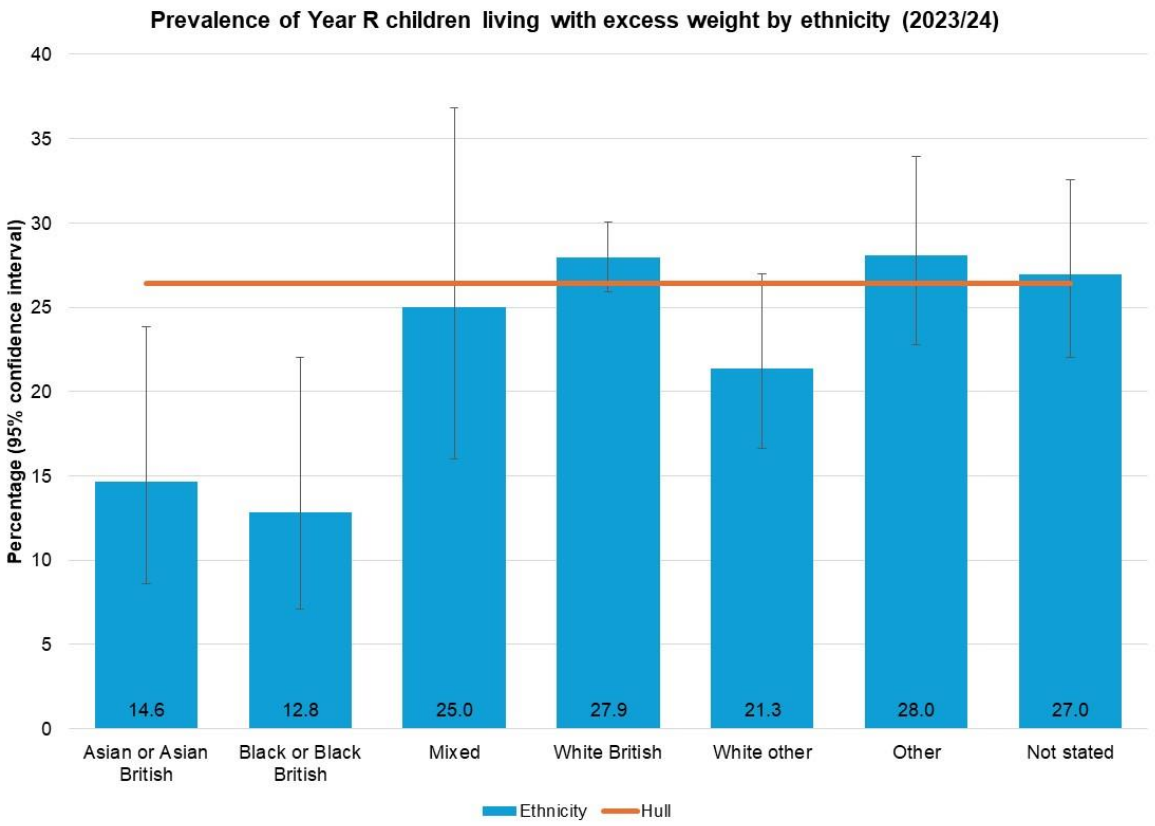
What are the differences among minority ethnic groups? – Year R

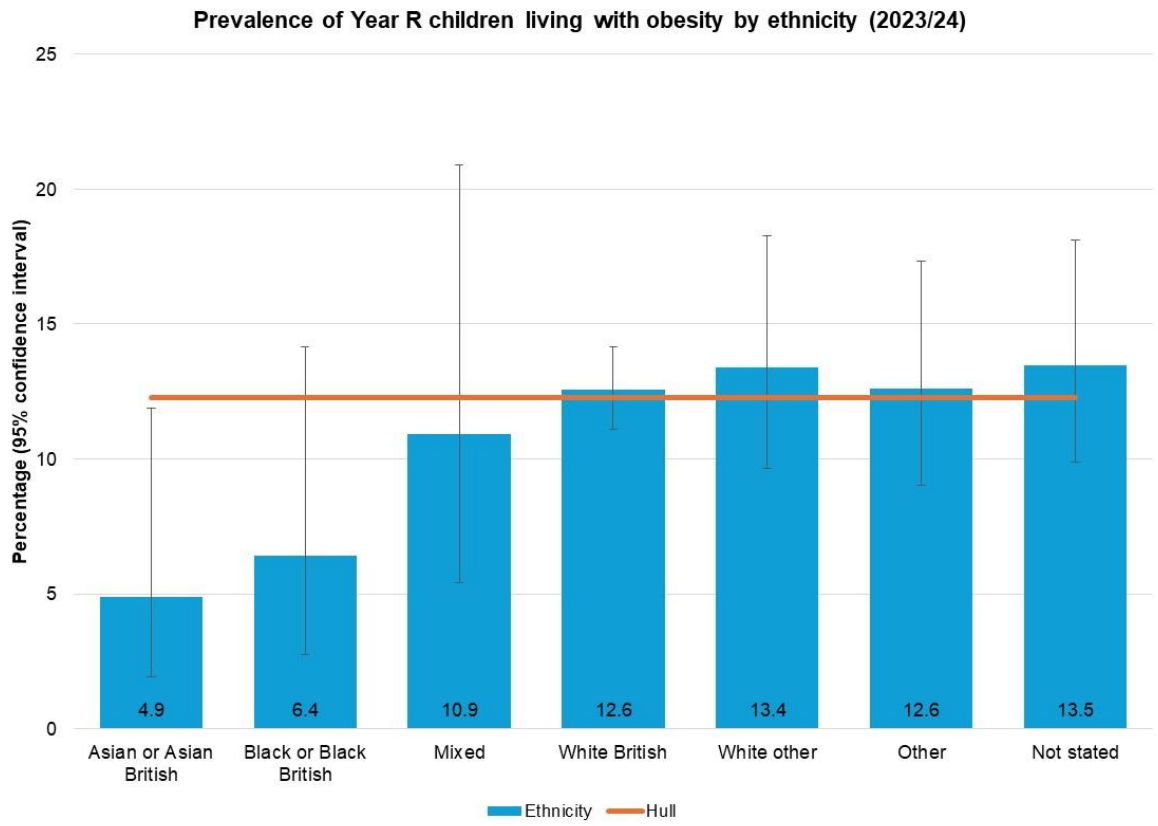


In England, Asian and British Asian and Chinese Year R children were less likely to be living with excess weight or obesity, but Black and Black British children were **more** likely to be living with excess weight or obesity.

For 2023/24, combining underweight with healthy weight and severe obesity with obesity due to small numbers, there is a statistically significant differences in the body mass weight classifications among Year R children. Children who are Black or Black British or who are Asian or British Asian are less likely to be living with excess weight or obesity. However, some caution should be used as ethnicity may not be recorded very well on NCMP particularly among Year R children.

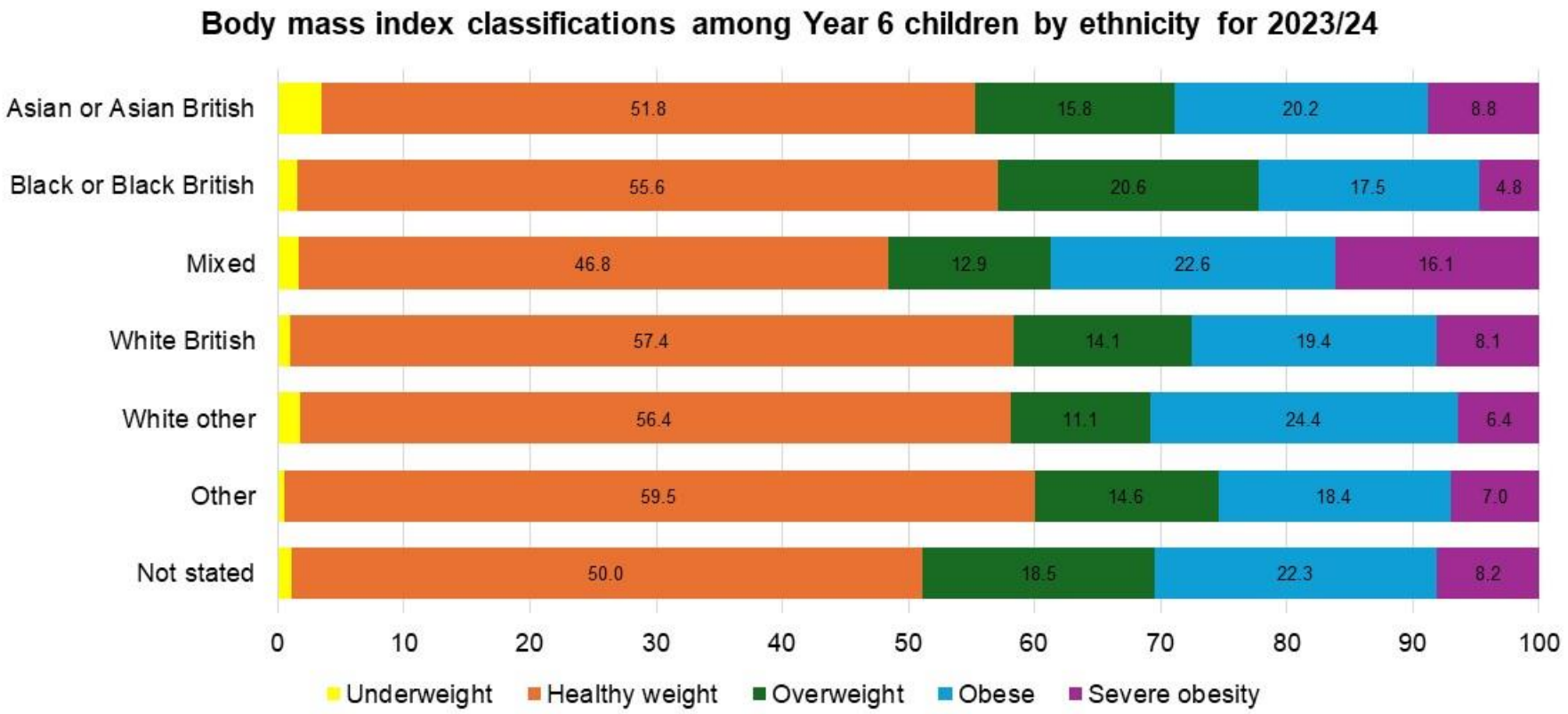
What are the differences among minority ethnic groups? – Year R





For 2023/24, the 95% confidence intervals are relatively wide suggesting uncertainty around the prevalence estimates, although the differences for Year R children who are Black or Black British or who are Asian or Asian British can be seen in relation to the percentage who are living with excess weight or obesity compared to other ethnic groups. Due to the small number of children living with severe obesity, there is no statistically significant difference in the prevalence by ethnicity. However, some caution should be used as ethnicity may not be recorded very well on NCMP particularly among Year R children.

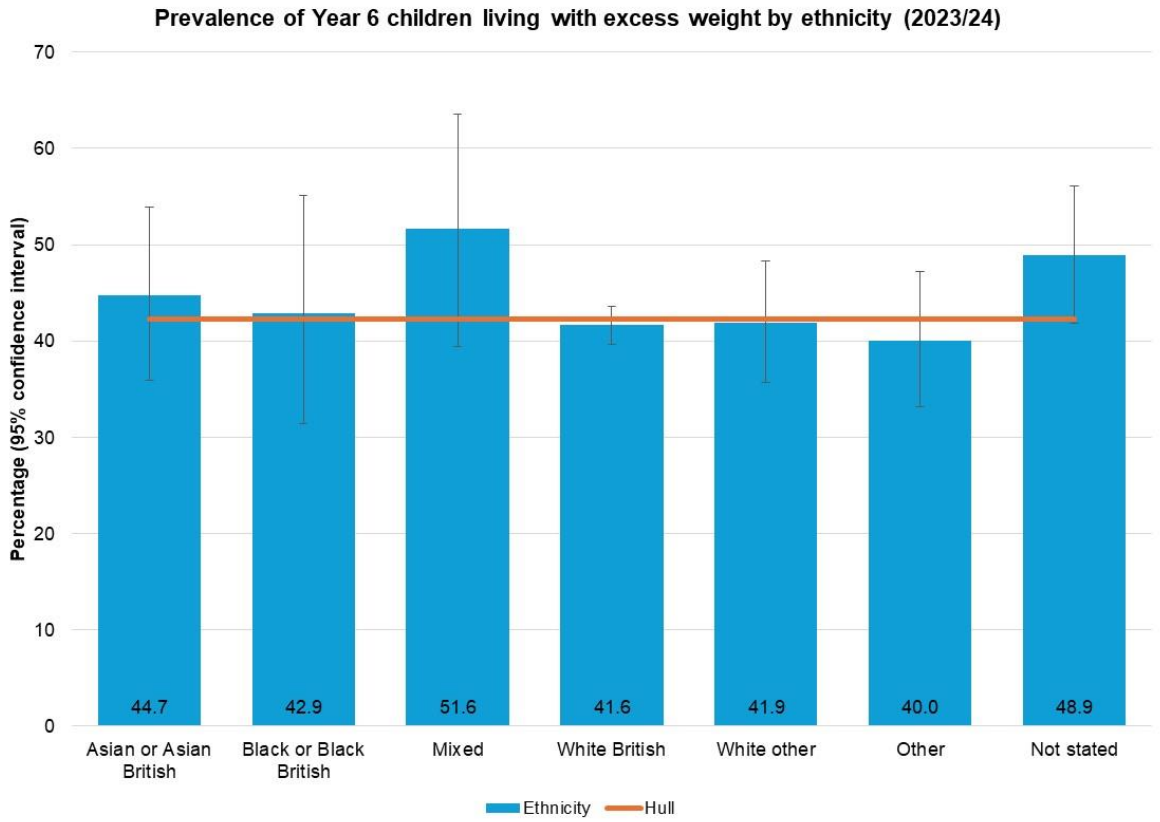
What are the differences among minority ethnic groups? – Year 6

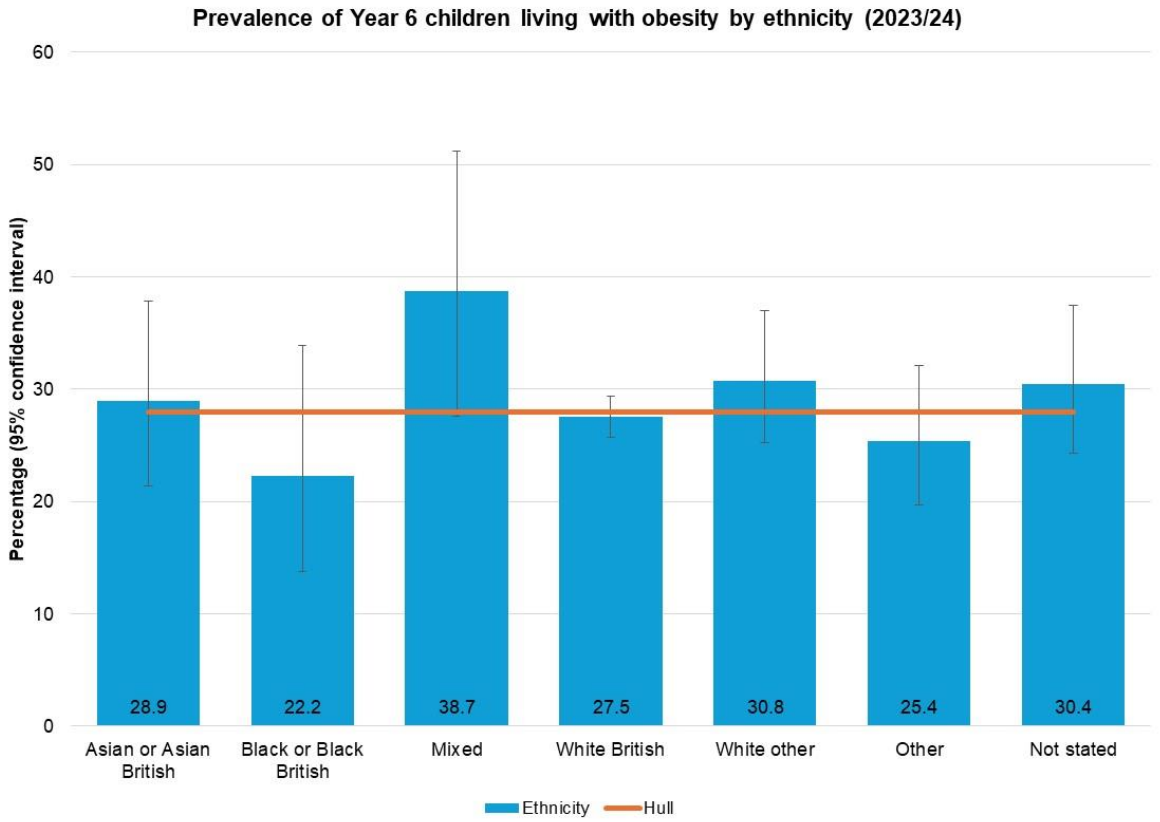


In England, Chinese Year 6 children were less likely to be living with excess weight or obesity, but Black and Black British and Asian and British Asian children were **more** likely to be living with excess weight or obesity.

For 2023/24, combining underweight with healthy weight due to small numbers, there is no statistically significant difference in the body mass weight classifications among Year 6 children. However, some caution should be used as ethnicity may not be recorded very well on NCMP. Furthermore, due to the small number of Chinese children in Hull, this ethnic group has been combined with Asian or Asian British children (and the prevalence estimates differ nationally for these minority ethnic groups).

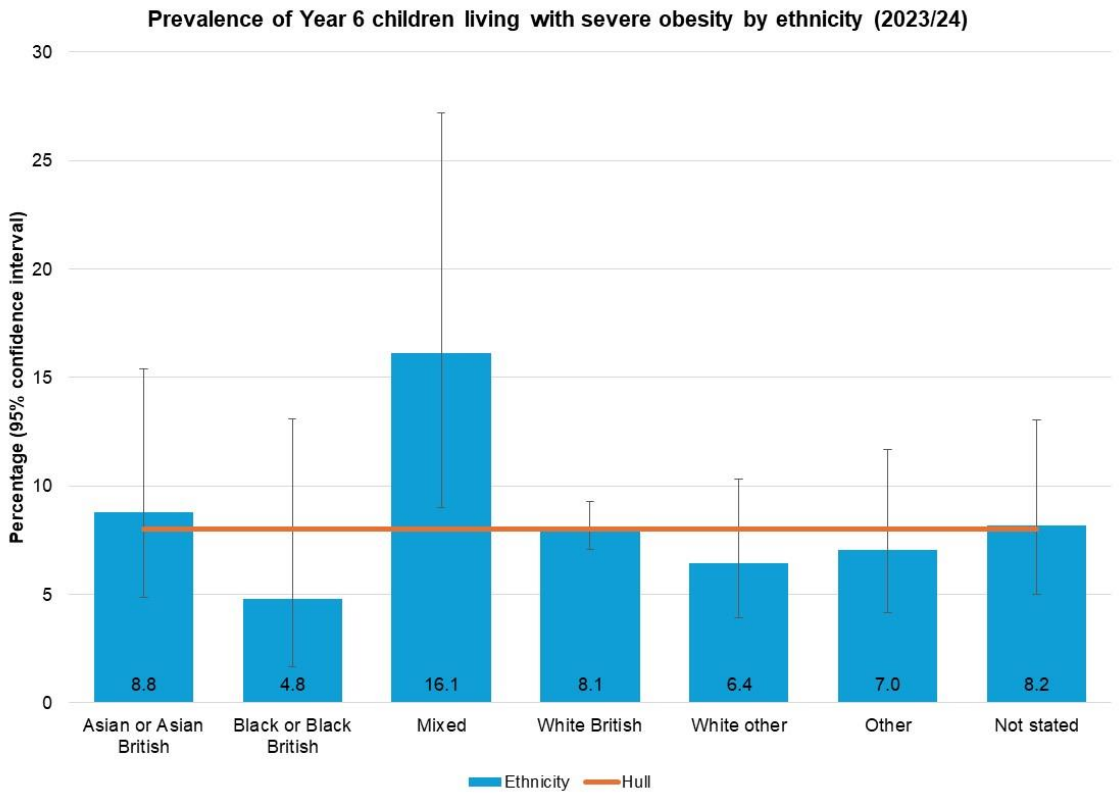
What are the differences among minority ethnic groups? – Year 6





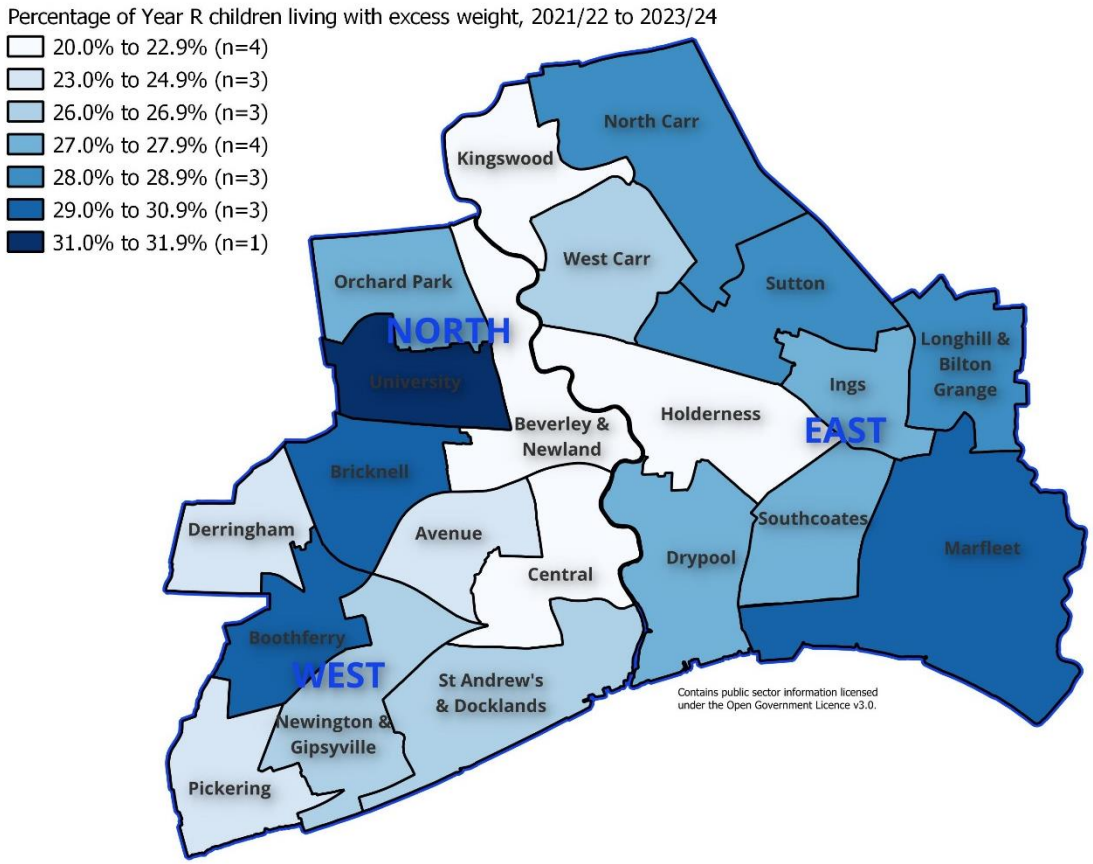
For 2023/24, the 95% confidence intervals are relatively wide suggesting uncertainty around the prevalence estimates, although there are fewer differences in the prevalence estimates in Year 6 for excess weight or obesity. However, some caution should be used as ethnicity may not be recorded very well on NCMP. Furthermore, due to the small number of Chinese children in Hull, this ethnic group has been combined with Asian or Asian British children (and the prevalence estimates differ nationally for these minority ethnic groups).

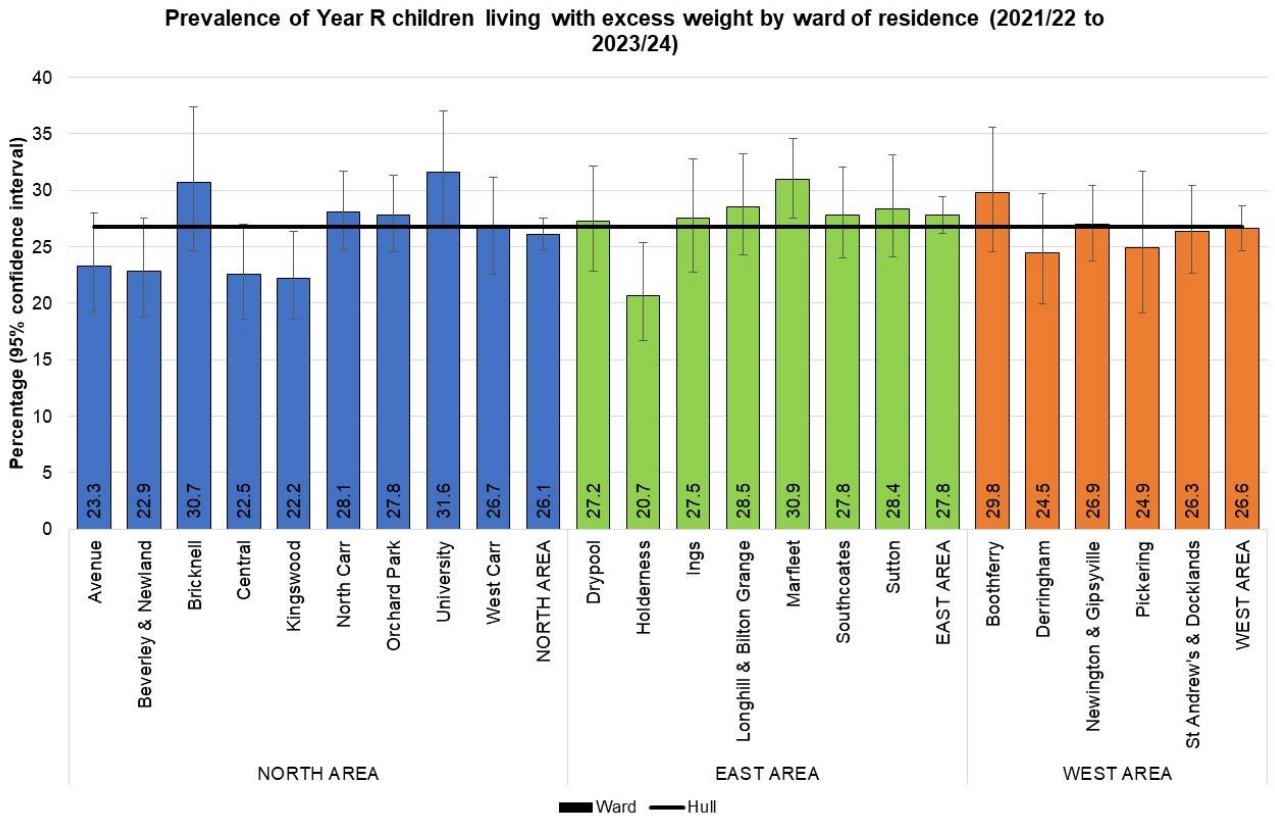
What are the differences among minority ethnic groups? – Year 6



For 2023/24, the 95% confidence intervals are relatively wide suggesting uncertainty around the prevalence estimate for children living with severe obesity. Year 6 children who have mixed or multiple ethnicities have a statistically significantly higher prevalence of living with severe obesity compared to the Hull average, although there is no statistically significant difference among the seven ethnic group categories. However, some caution should be used as ethnicity may not be recorded very well on NCMP. Furthermore, due to the small number of Chinese children in Hull, this ethnic group has been combined with Asian or Asian British children (and the prevalence estimates of obesity differ nationally for these minority ethnic groups).

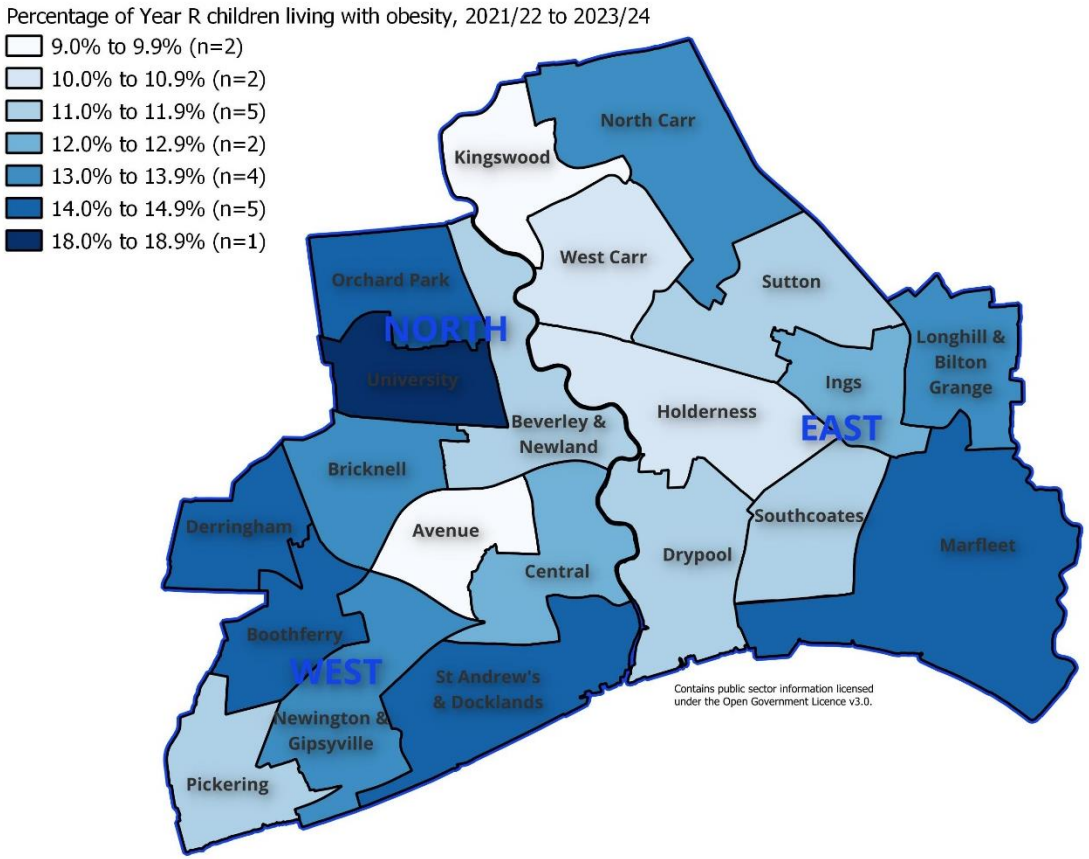
Excess weight by Ward (Combined data for 2021/22-2023/24) – Year R

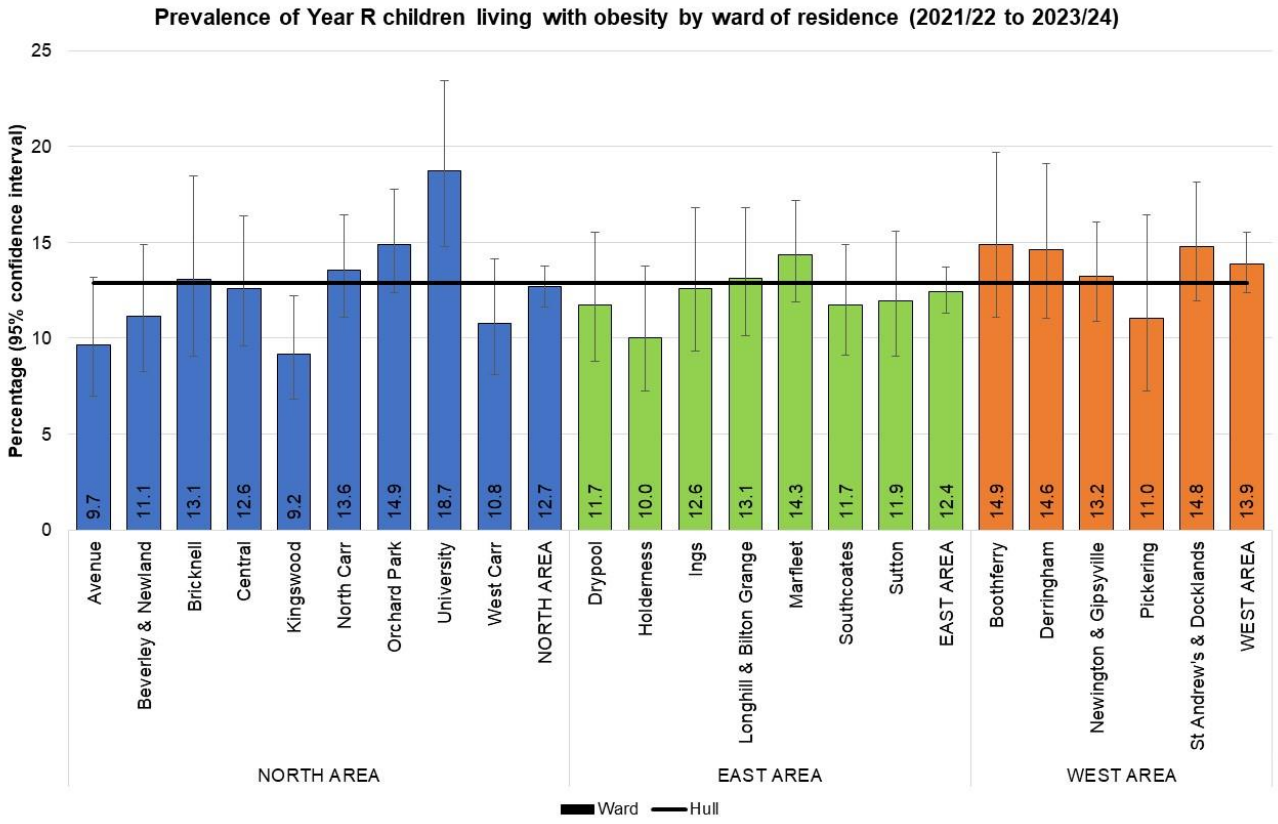




The prevalence of excess weight among Year R children varies across the electoral wards from 20.7% in Holderness to 31.6% in University, although Marfleet, Orchard Park, North Carr and Newington & Gipsyville have the highest number of Year R children who are living with excess weight (range 177 to 205). The prevalence in Marfleet is significantly higher than Hull, and the prevalence in Kingswood and Holderness are significantly lower than Hull.

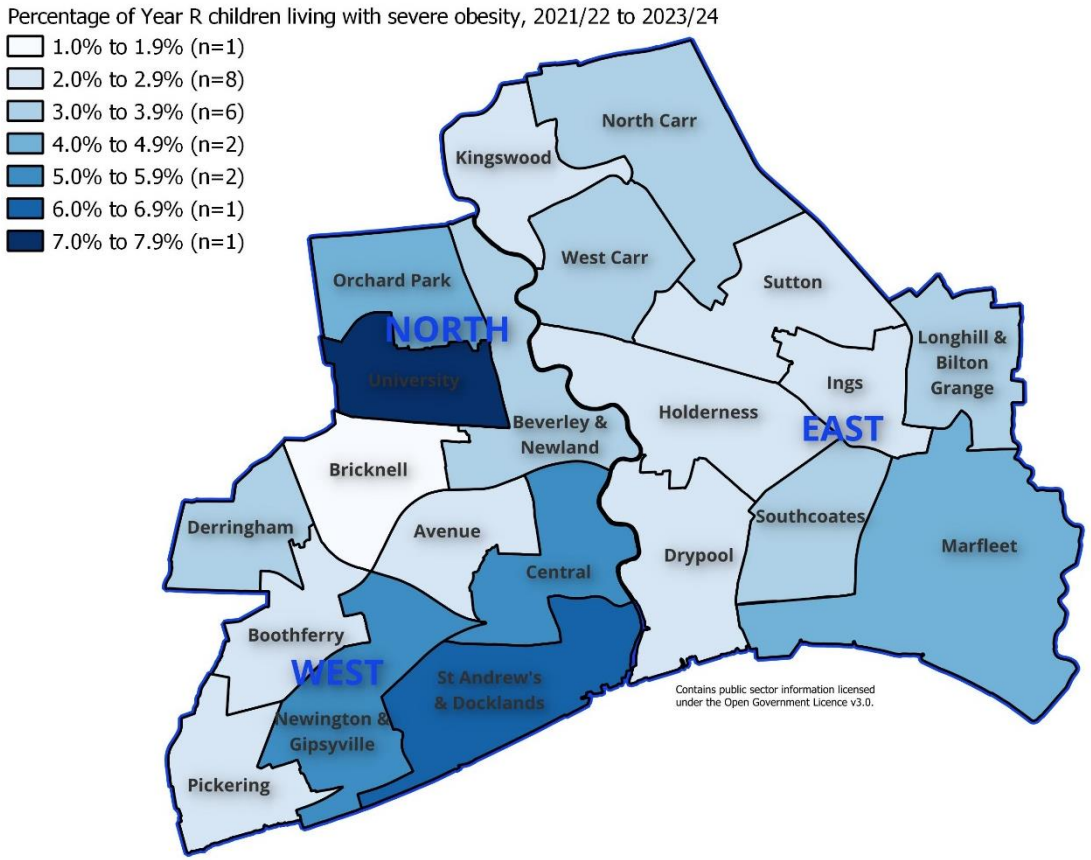
Obesity by Ward (Combined data for 2021/22-2023/24) – Year R

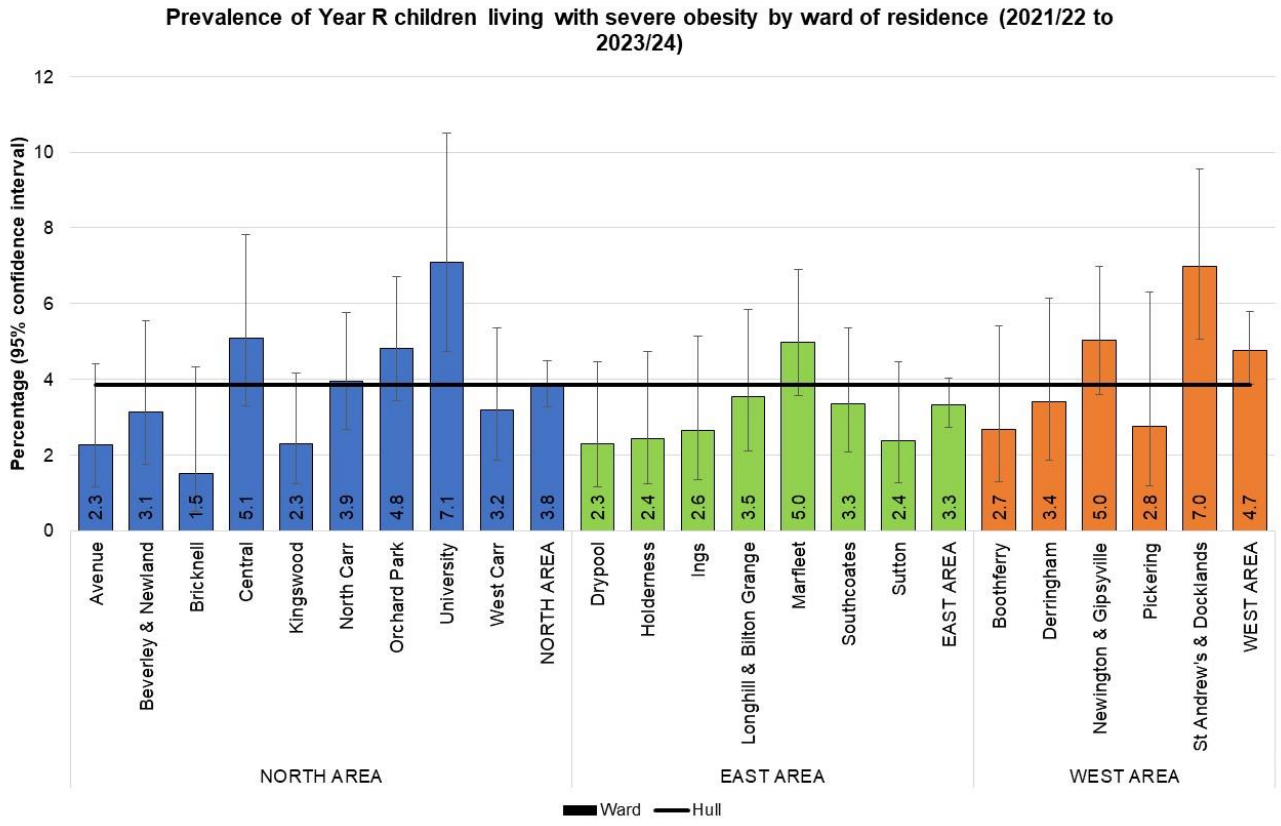




The prevalence of Year R children living with obesity varies across the electoral wards from 9.2% in Kingswood to 18.7% in University, although Orchard Park, Marfleet, Newington & Gipsyville, North Carr and St Andrew's & Docklands have the highest number of Year R children who are living with obesity (range 74 to 99). The prevalence in University is significantly higher than Hull, and the prevalence in Kingswood is significantly lower than Hull.

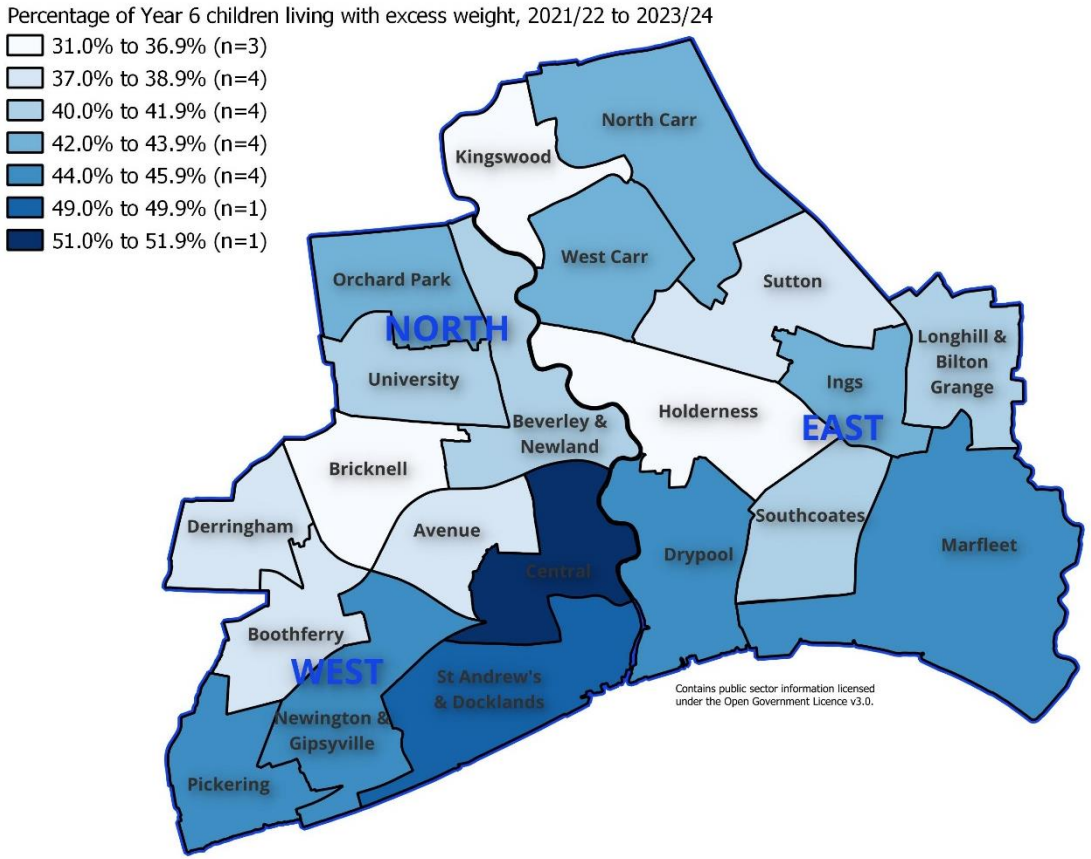
Severe obesity by Ward (Combined data for 2021/22-2023/24) – Year R

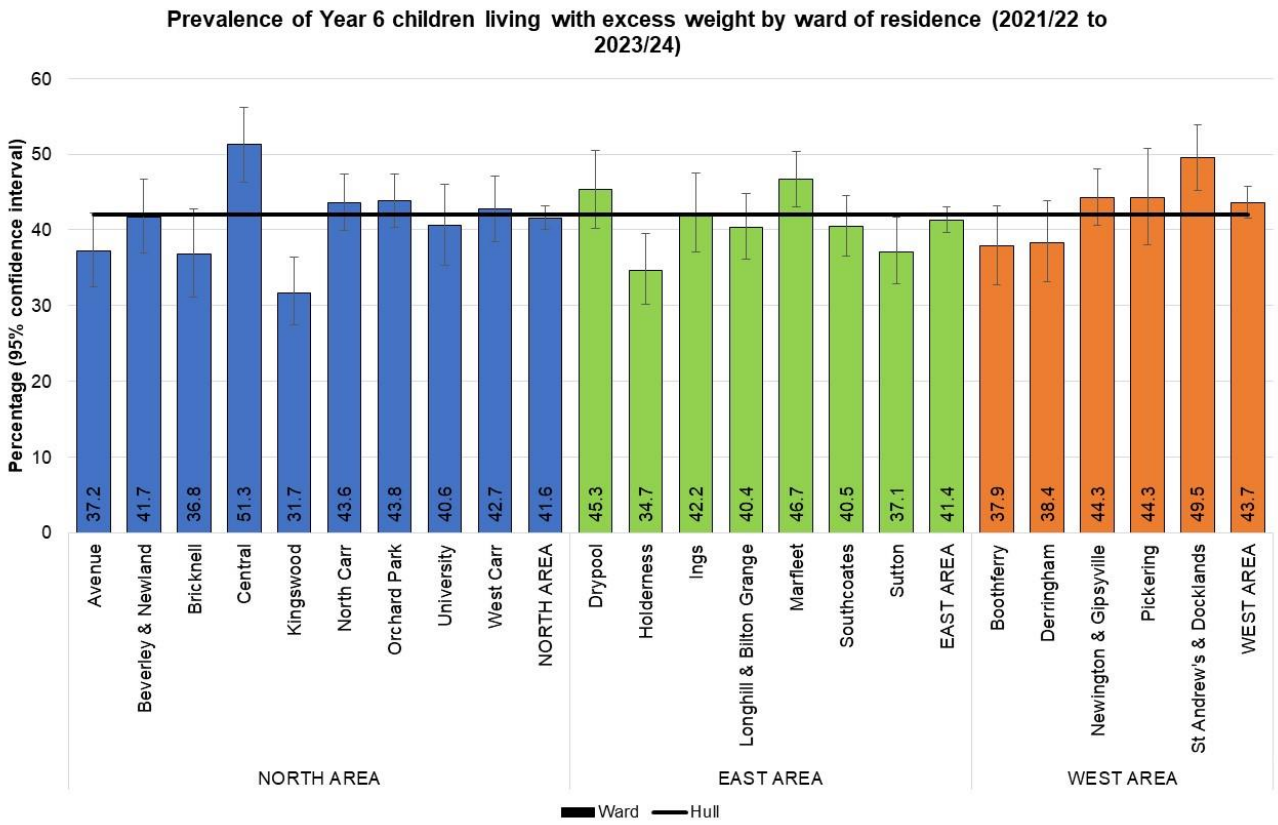




The prevalence of Year R children living with severe obesity varies across the electoral wards from 1.5% in Bricknell to 7.1% in University, although St Andrew's & Docklands, Marfleet, Newington & Gipsyville, and Orchard Park have the highest number of Year R children who are living with severe obesity (range 32 to 35). The prevalence in St Andrew's & Docklands and University are statistically significantly higher than Hull. Furthermore, the prevalence of year R children living with severe obesity is statistically significantly higher in West Area compared to the other areas.

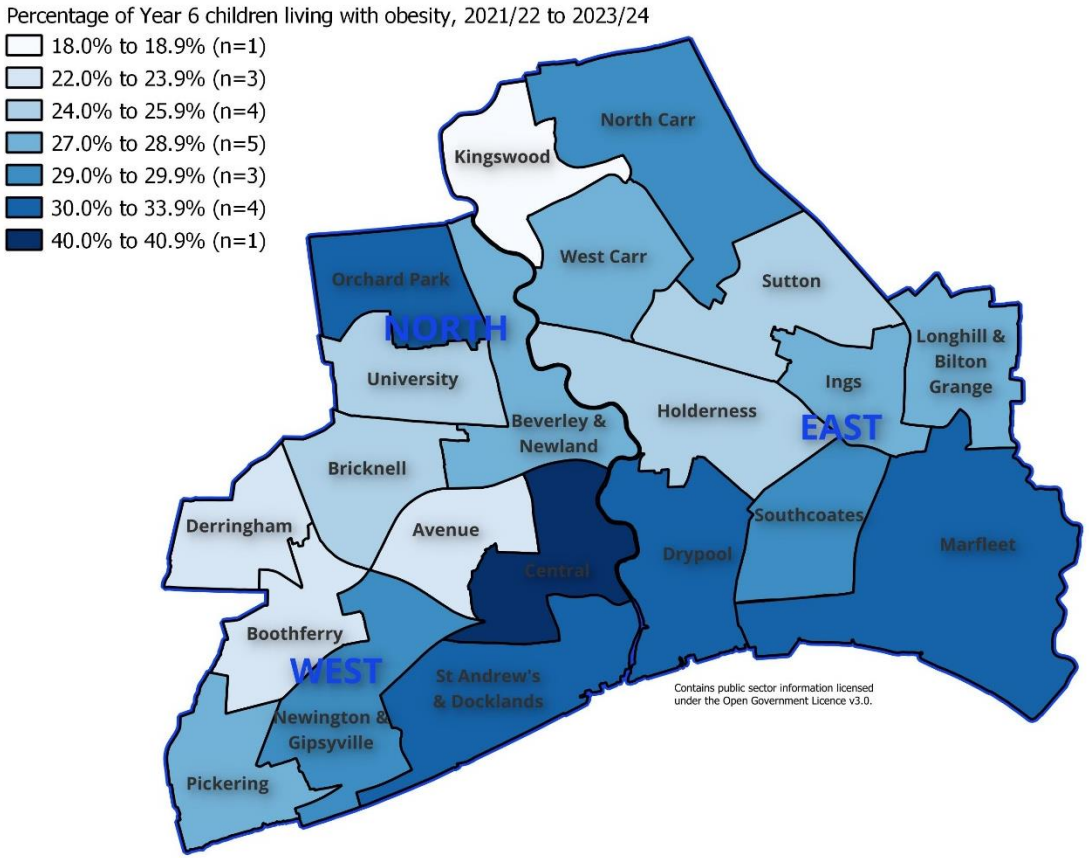
Excess weight by Ward (Combined data for 2021/22-2023/24) – Year 6

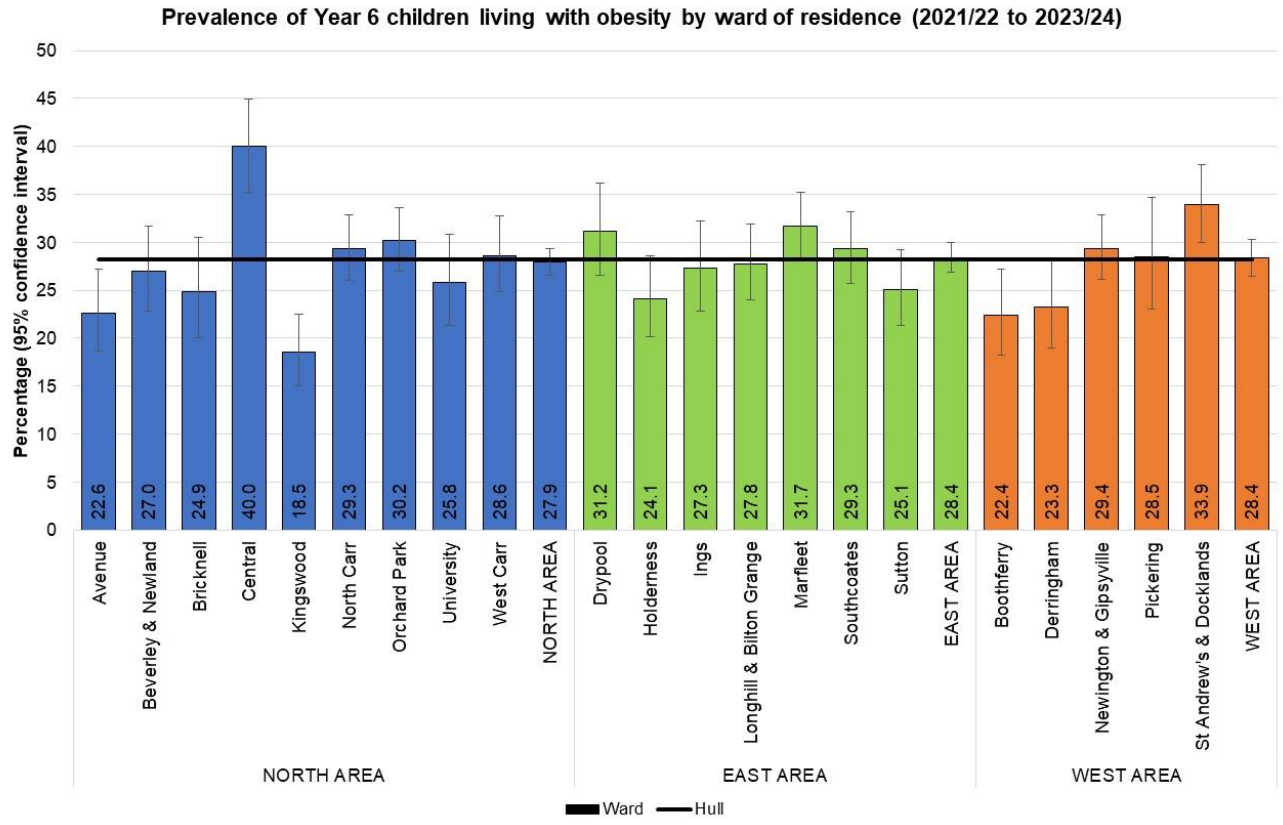




The prevalence of excess weight among Year 6 children varies across the electoral wards from 31.7% in Kingswood to 51.3% in Central, although Marfleet, Orchard Park, Newington & Gipsyville, and North Carr have the highest number of Year 6 children who are living with excess weight (range 296 to 337). The prevalence in Central, Marfleet and St Andrew's & Docklands are significantly higher than Hull, and the prevalence in Kingswood, Holderness and Sutton are significantly lower than Hull.

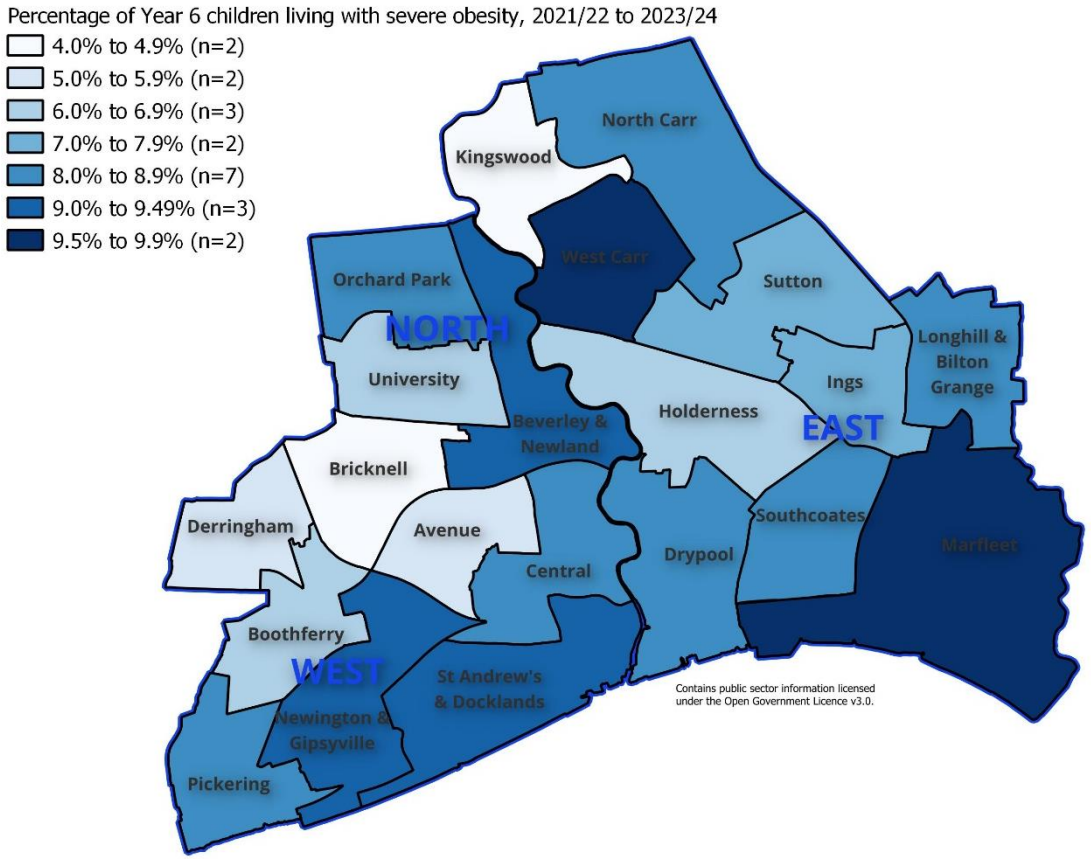
Obesity by Ward (Combined data for 2021/22-2023/24) – Year 6

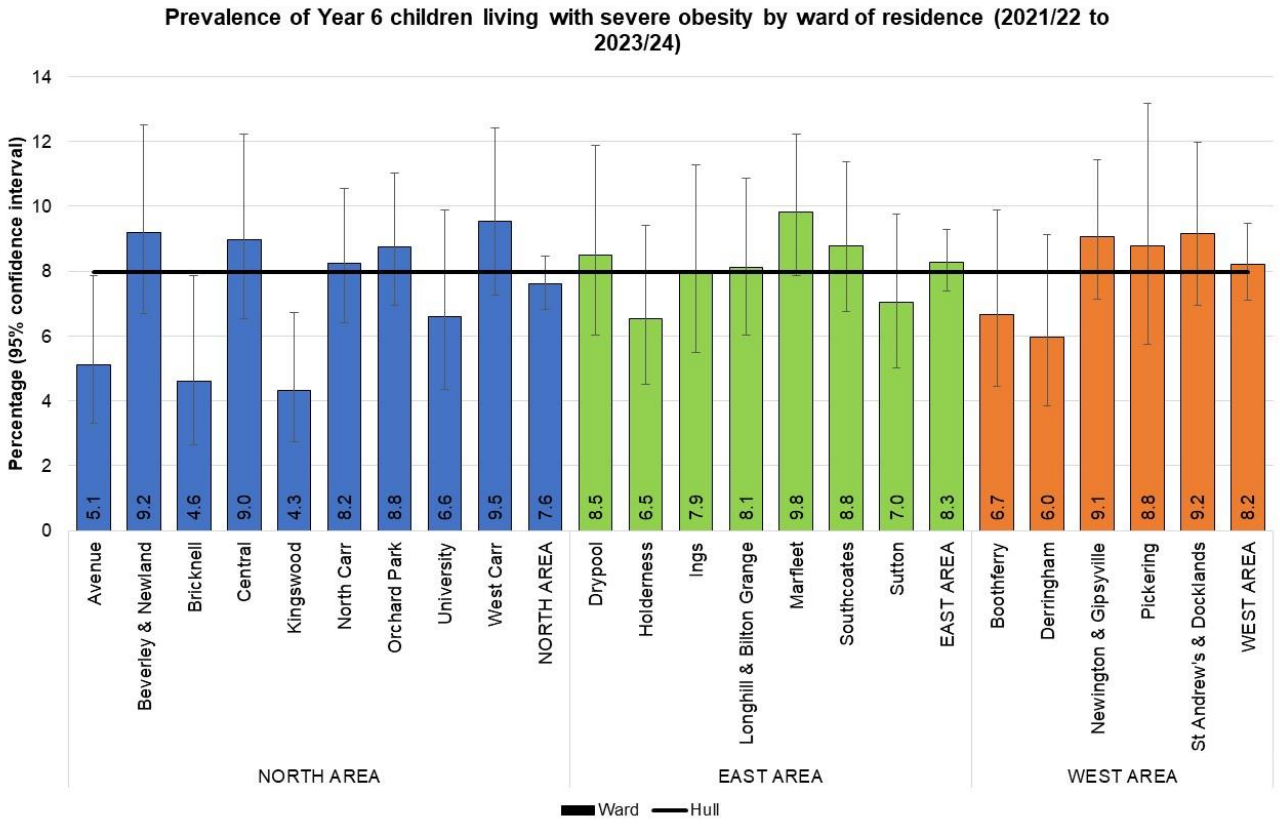




The prevalence of Year 6 children living with obesity varies across the electoral wards from 18.5% in Kingswood to 40.0% in Central, although Marfleet, Orchard Park, Newington & Gipsyville, and North Carr have the highest number of Year 6 children who are living with obesity (range 199 to 229). The prevalence in Central, Marfleet, and St Andrew's & Docklands are significantly higher than Hull, and the prevalence in Avenue, Kingswood and Boothferry are significantly lower than Hull.

Severe obesity by Ward (Combined data for 2021/22-2023/24) – Year 6





The prevalence of Year 6 children living with severe obesity varies across the electoral wards from 4.3% in Kingswood to 9.8% in Marfleet, and Marfleet, Orchard Park, Newington & Gipsyville, and North Carr have the highest number of Year 6 children who are living with severe obesity (range 56 to 71). The prevalence in Avenue, Kingswood and Bricknell are statistically significantly lower than Hull.

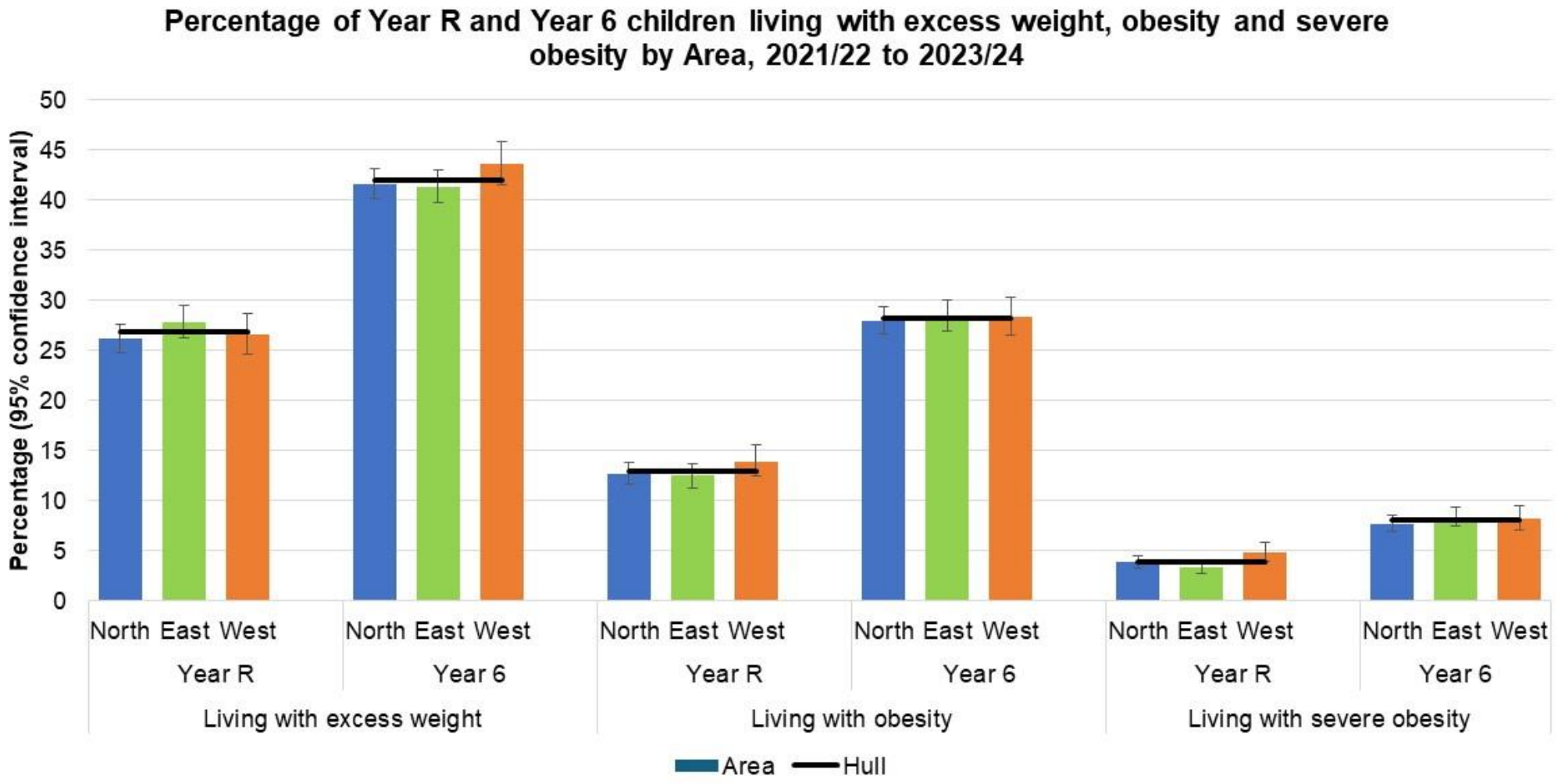
Prevalence by Area (Combined data for 2021/22-2023/24) – Year R & 6

Area Committee Area	Year R living with			Year 6 living with		
	Excess weight	Obesity	Severe obesity	Excess weight	Obesity	Severe obesity
North	26.1	12.7	3.8	41.6	27.9	7.6
East	27.8	12.4	3.3	41.4	28.4	8.3
West	26.6	13.9	4.7	43.7	28.4	8.2
Hull	**26.8**	**12.9**	**3.9**	**42.0**	**28.2**	**8.0**

Note that excess weight includes obesity, and obesity includes severe obesity.

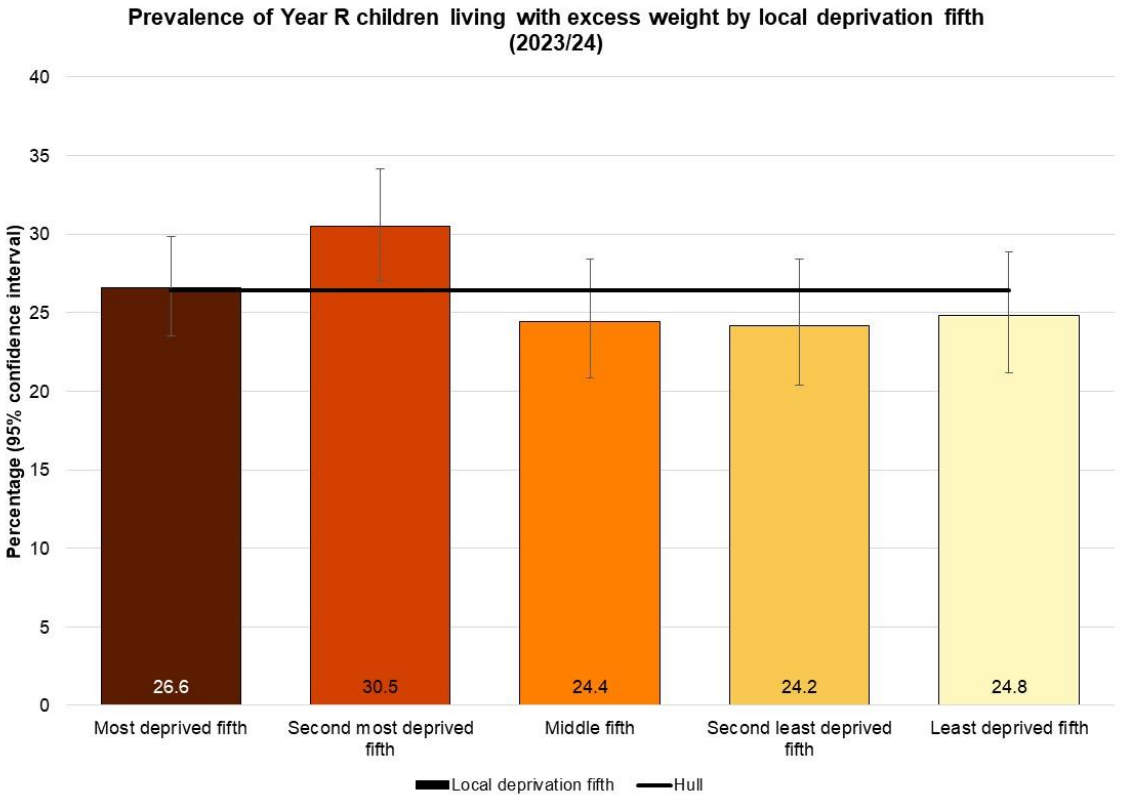
There are no statistically significant differences in the percentages of Year R and Year 6 children living with excess weight, obesity or severe obesity between any single area and the other two areas with the exception of severe obesity in Year R children where West Area is statistically significantly higher than North and East Areas combined (although none of the three areas were statistically significantly different from the Hull average).

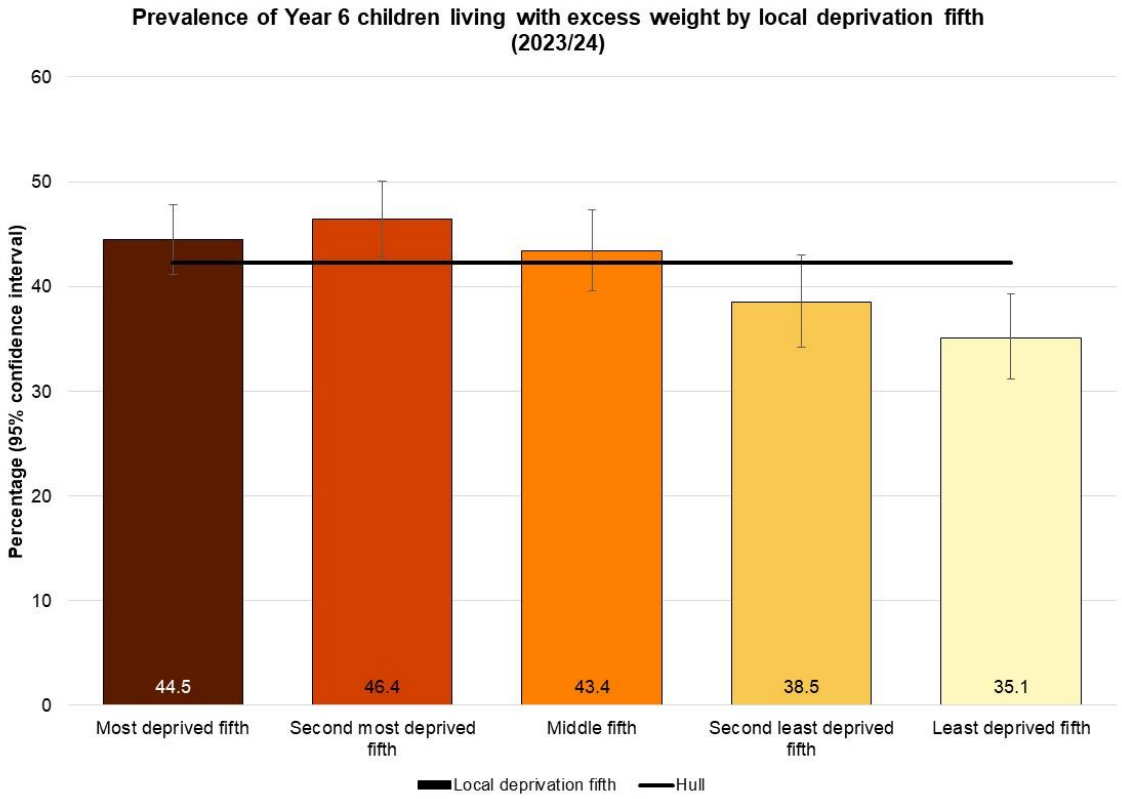
Prevalence by Area (Combined data for 2021/22-2023/24) – Year R & 6



Note that excess weight includes obesity, and obesity includes severe obesity.

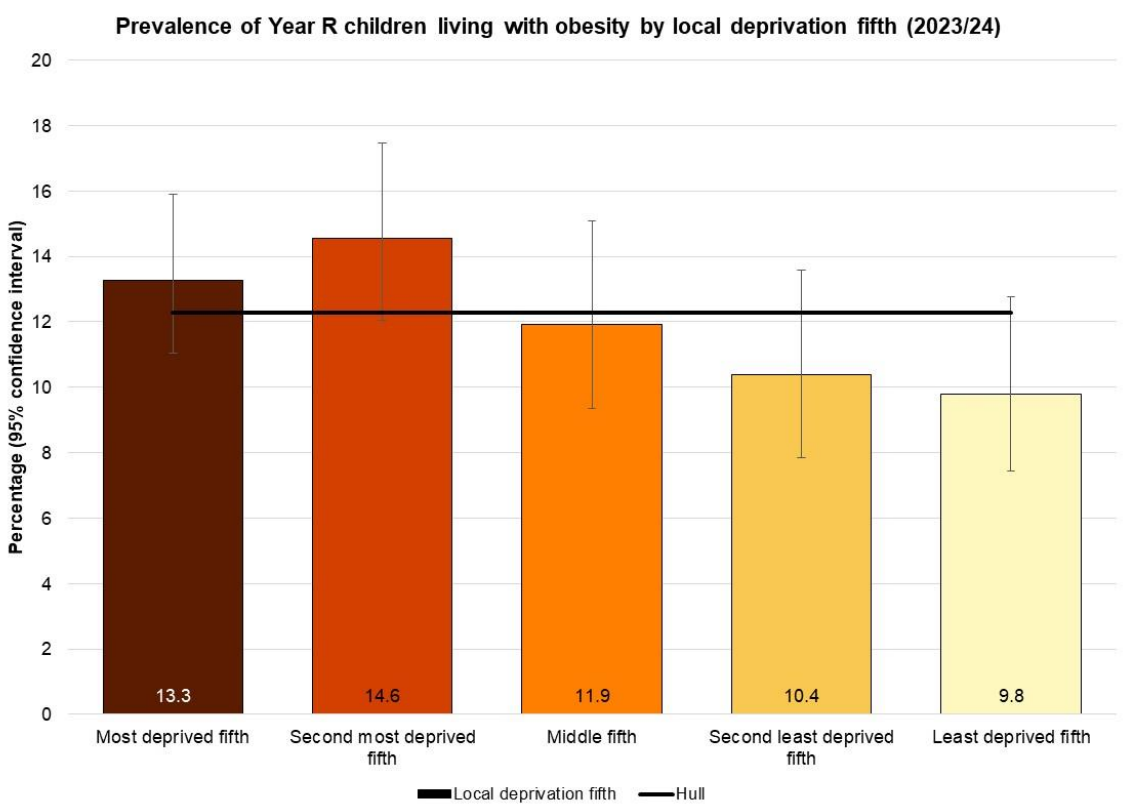
Deprivation and excess weight – Years R & 6, 2023/24

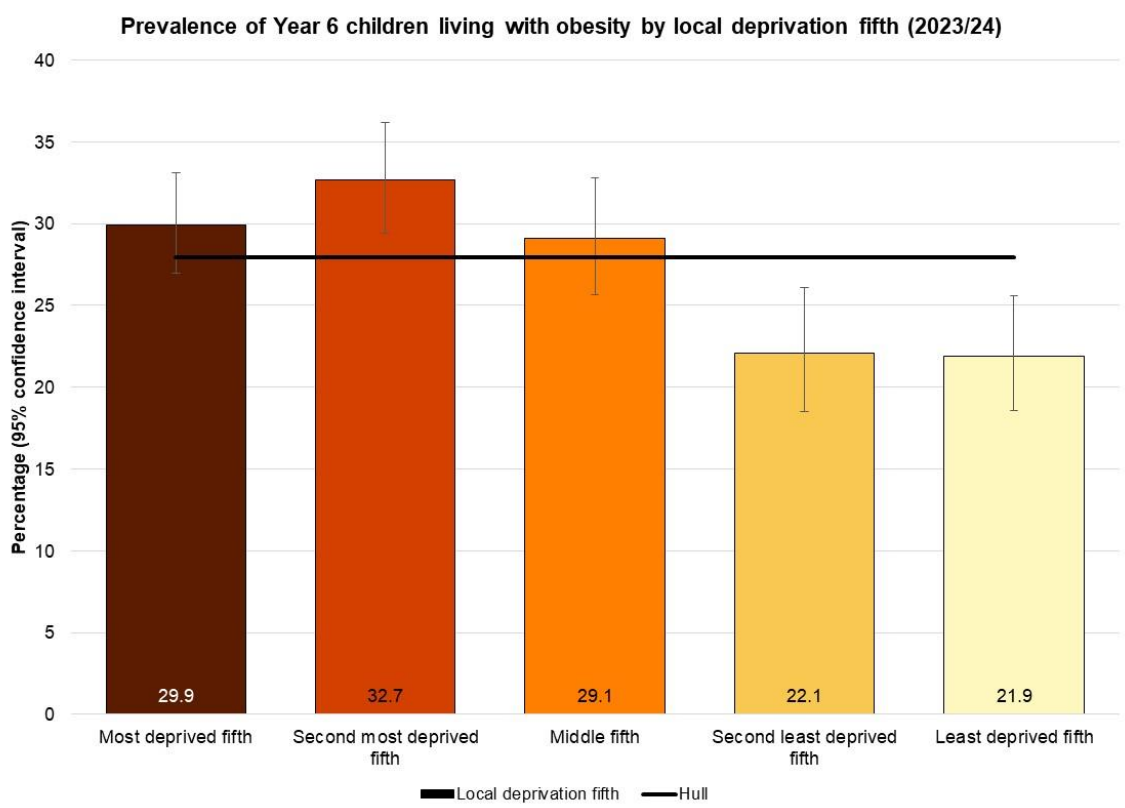




The prevalence of excess weight was statistically significantly higher among children living in the second most deprived fifth of areas of Hull for both Year R and Year 6 children, although overall there was no statistically significant difference among the fifths for Year R children. Among Year 6 children, there was a statistically significant trend over the five deprivation fifths with a 9.4 percentage point difference between the most and least deprived fifths (or a 27% difference in prevalence).

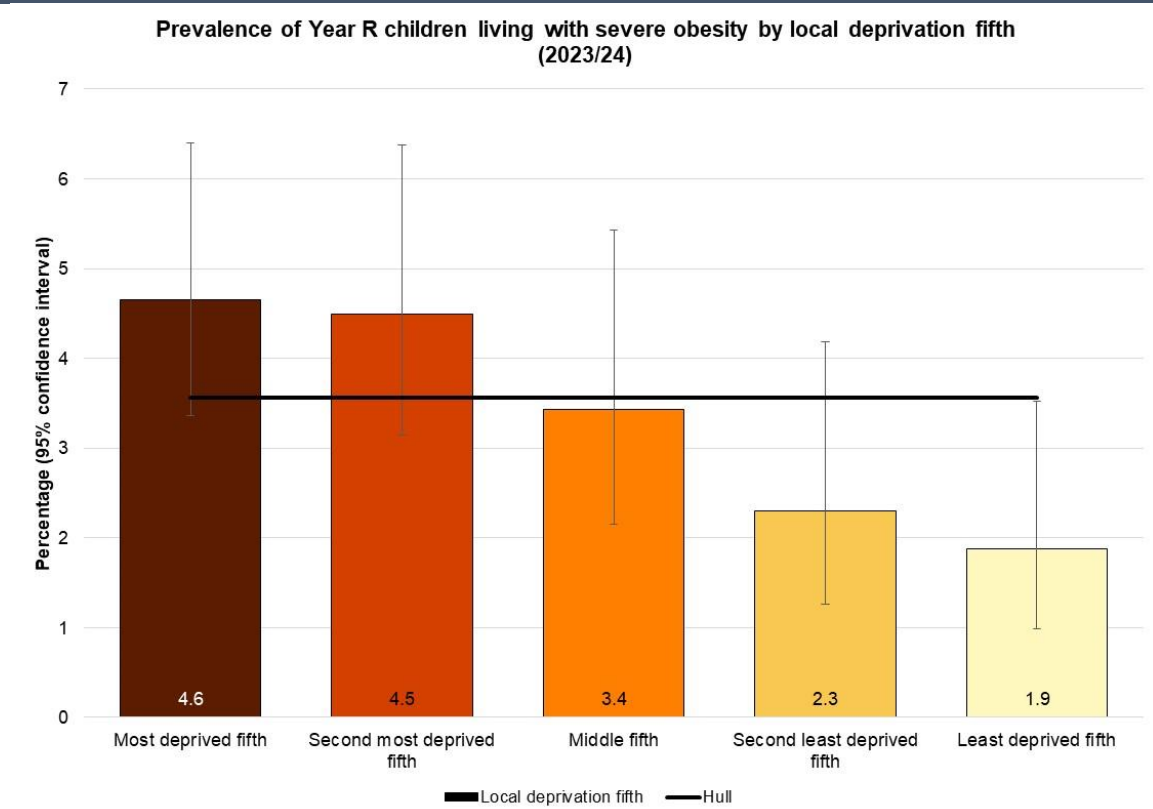
Deprivation and obesity – Years R & 6, 2023/24

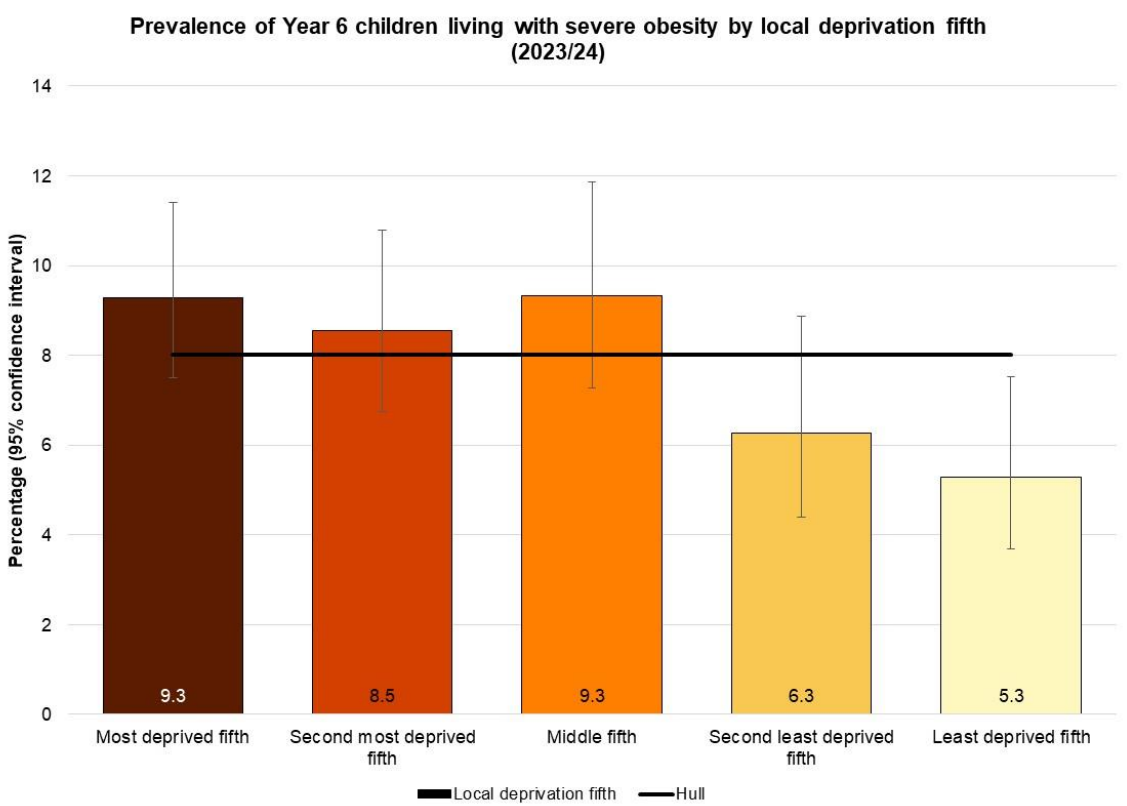




The percentage of children living with obesity was statistically significantly higher among Year 6 children living in the second most deprived fifth of areas of Hull and statistically significant lower among Year 6 children living in the least deprived two-fifths of areas of Hull. None of the fifths were statistically significantly different to the Hull average among Year R children, but for both Year R and Year 6 children there was a statistically significant trend over the five deprivation fifths. Among Year R children, there was a difference of 3.5 percentage points (or 36%) among the most and least deprived fifths, and among Year 6 children this was 8.0 percentage points (or 37%).

Deprivation and severe obesity – Years R & 6, 2023/24





The percentage of children living with severe obesity was statistically significantly lower among Year R and Year 6 children living in the least deprived fifth of areas of Hull compared to the Hull average, and there was a statistically significant trend over the five deprivation fifths. Between the most and least deprived fifths, there was a 2.8 percentage points difference among Year R children and a 4.0 percentage point difference among Year 6 children. The prevalence of severe obesity was more than twice as high for Year R children living in the most deprived fifth of areas of Hull compared to the least deprived fifth of areas and 76% higher among Year 6 children.

Further information

National NCMP reports: National Child Measurement Programme - NHS Digital

Information is also available on Hull's Joint Strategic Needs Assessment: www.hulljsna.com

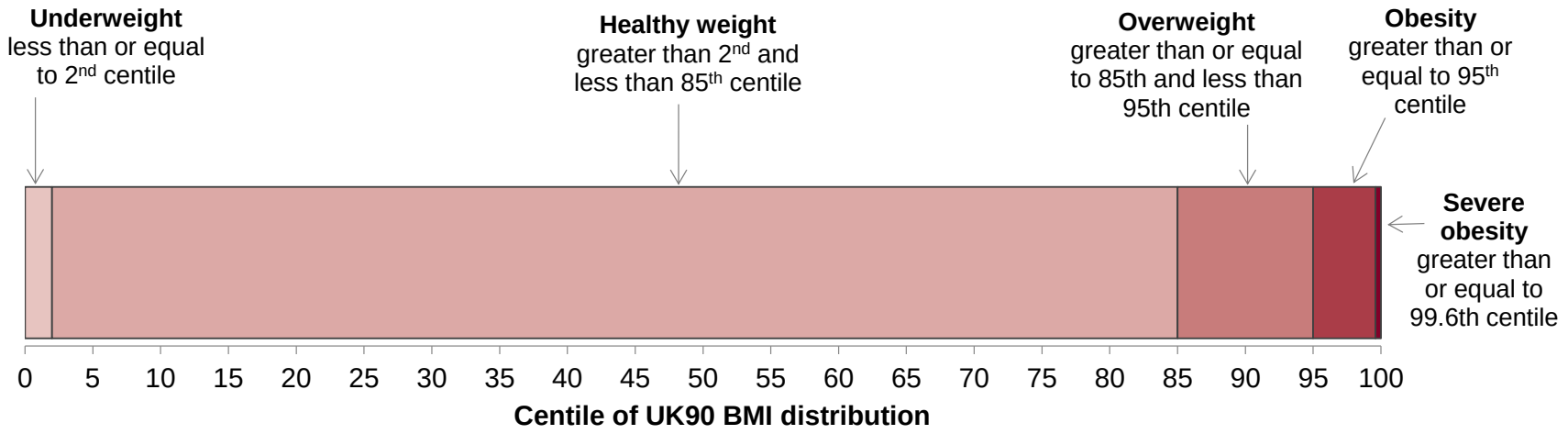
Information on confidence intervals is also given on Hull's JSNA: www.hulljsna.com/glossary/ci

Requests for further information on National Child Measurement Programme results via Public Health Intelligence Team: publichealthintelligence@hullcc.gov.uk

Icons supplied by Noun Project (Ted Graieda / Mohkamil)

Appendix: Child body mass index classification for population monitoring

For population monitoring purposes body mass index (BMI) is classified according to the following image using the British 1990 growth reference (UK90[1]). This is used to examine patterns in children's weight status across the country and over time. The population monitoring cut points for overweight, and obesity are slightly lower than the clinical cut points used to assess individual children, this is to capture those children with an unhealthy BMI for their age and those at risk of moving to an unhealthy BMI. This helps ensure that adequate services are planned and delivered for the whole population.



1 Cole TJ, Freeman JV, Preece MA. Body mass index reference curves for the UK, 1990. Archives of Disease in Childhood 1995 73:25-29.