

JSNA Health and Wellbeing Profile 2023/24

Healthy Weight (Children)

Summary points

Data collected during 2022/23 shows that around 1 in 5 (21.5%) of Bristol resident children in reception year (4-5 years old) and more than 1 in 3 (35.2%) of year 6 pupils (10-11 year olds) have excess weight (are overweight or very overweight). These estimates indicate that the prevalence of excess weight for reception year pupils in Bristol was similar to the national average in 2022/23 (21.3%), but lower to a statistically significant extent than the national average (36.6%) for year 6 pupils.

Overview

Reducing childhood obesity is both a local¹ and national priority². The World Health Organisation, 2015, states 'obesity in childhood is associated with serious health complications and an increased risk of premature onset of illnesses, including diabetes and heart disease'.

The Government's 'A Plan for Action' 2016³ stated 'nearly a third of children are overweight or obese and younger generations are becoming obese at earlier ages and staying obese for longer' and 'The burden is falling hardest on children from low-income backgrounds'.

The National Child Measurement Programme (NCMP) measures the height and weight of nearly all reception year children (4-5 year olds) and those in year 6 (10-11 year olds). Children are classified as either underweight, healthy weight, overweight or very overweight (obese) based on the measurements taken, their age and gender. This data is used to inform planning & delivery of services for children, and to generate feedback letters to parents and carers.

Impact of the Covid-19 pandemic on the local measurement of childhood weight and statistics presented in this section

The 2019/2020 National Child Measurement Programme in Bristol was curtailed in March 2020 due to the onset of the Covid-19 pandemic. By that stage, the measurement of year 6 pupils was largely complete (91.5% of eligible pupils measured), but the majority of eligible reception year pupils had not been measured (36.2% of eligible pupils measured). A full range of year 6 statistics at all levels of detail can be presented for 2019/20, but only Bristol average statistics are presented for reception year for 2019/20 and should be interpreted with caution due to the relatively low coverage and potential for these statistics to be less representative than they would normally be had the measurement programme been completed. This is especially true of statistics relating to smaller areas of the city or population sub-groups. Where necessary, data from 2018/19 has been used for reception year statistics in this update.

In 2020/21, due to the ongoing disruption of schools and health services related to the pandemic the measurement programme was significantly scaled down and designed only to obtain representative national estimates through the measurement of a carefully selected sample of just 10% of the pupil population. Data from 2020/21 is not suitable for the derivation of any local level statistics.

¹[Health and wellbeing strategy \(bristol.gov.uk\)](https://www.bristol.gov.uk/health-and-wellbeing-strategy)

²[Childhood obesity: a plan for action - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/childhood-obesity-a-plan-for-action)

³[Childhood obesity: a plan for action - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/childhood-obesity-a-plan-for-action)

2021/22 was the first year since the onset of the Covid-19 pandemic during which a full year of NCMP measurements were carried out in Bristol. In addition to presenting annual statistics derived from a single year of data we would typically use 3-years of continuous data to allow for the reporting of more robust statistics relating to smaller population groups and geographies (e.g. individual wards of residence within the city). As an interim measure until we have the necessary 3-years of continuous data available, pooled data from the latest 2-years of data collection (2021/22 and 2022/23) are presented in this section where necessary. For a small number of wards (5 / 34) with the smallest number of pupils in scope for measurement we have suppressed their 2-year pooled statistics as they are more likely to reflect random variation year-to-year than those reported for wards with larger pupil populations. We will report statistics for all 34 wards in the next update to this section when we have 3-years of pooled data available once more.

Excess weight in 4-5 year olds

The Bristol data for 2022/23 indicates that the prevalence of excess weight for 4-5 year olds in reception year (21.5%) was higher than that recorded for the previous year (2021/22 20.5%) but not to a statistically significant extent. The estimated prevalence of excess weight for this age group was lower than all pre-pandemic years of NCMP measurement going back to 2006/07 when the measurement commenced, but again not to a statistically significant extent except for 4 out of those 14 years. Figure 1 below suggests a generally declining trend overall for this measure over the last 16 years albeit with some considerable fluctuation year to year.

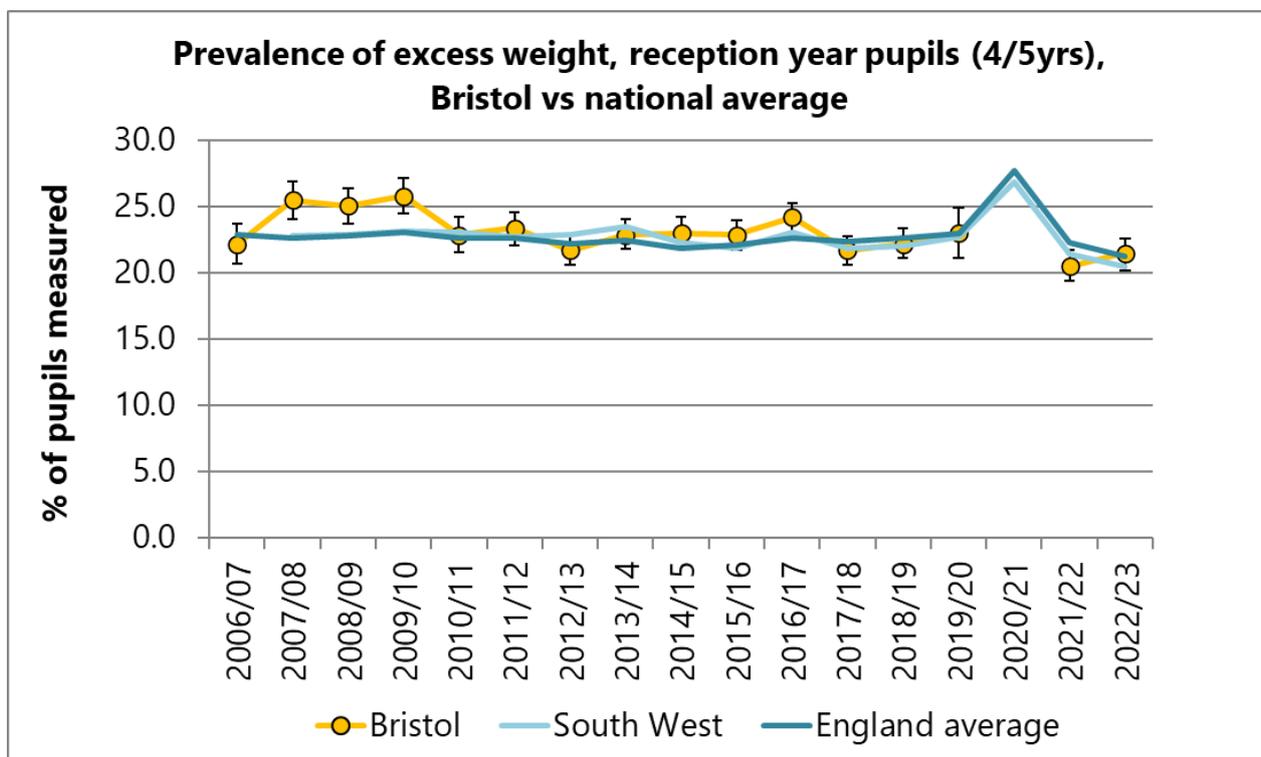


Figure 1: Prevalence of excess weight, reception year pupils (4/5yrs), Bristol vs regional & national averages, 2006/07 to 2022/23. Source – Office for Health Improvement & Disparities, collated by Public Health, Bristol City Council.

The prevalence of obesity in reception year (referred to as being ‘very overweight’ in NCMP documentation) in reception year in 2022/23 was 8.9%, lower but statistically similar to the previous year of measurement 2021/22 (9.4%), and the England average for 2022/23 (9.2%).

In 2022/23, Bristol had a reception year prevalence of excess weight at the lower end of the range observed for the eight Core Cities comparator group and was lower to a statistically significant extent than 4 of them. Bristol’s prevalence of obesity (‘very overweight’) in 2022/23 was the lowest of the group, but again only lower to a statistically significant extent than the 4 local authorities with the highest prevalence statistics and so effectively typical of the lower end of the range for this group. See figure 2 below.

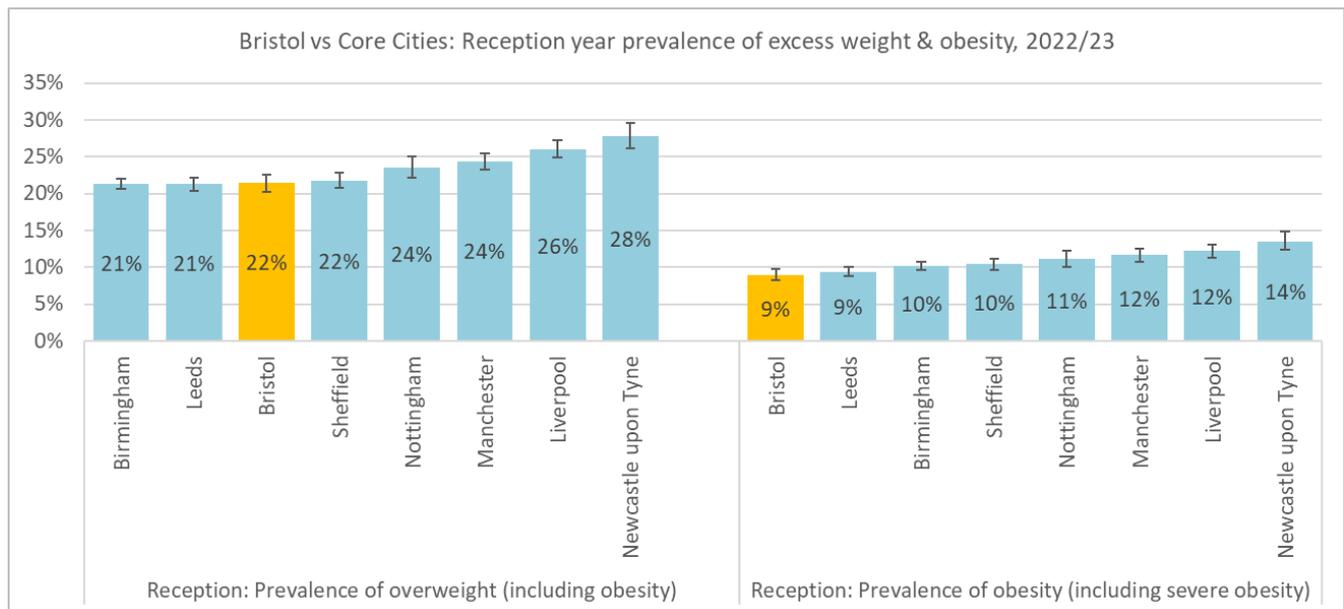


Figure 2: Prevalence of excess weight and prevalence of obesity, reception year pupils (4/5yrs), Bristol vs Core City local authorities, 2022/23. Source – Office for Health Improvement & Disparities, collated by Public Health, Bristol City Council.

Equalities data – Gender: In Bristol schools in reception year 2022/23, 21.4%⁴ of girls had excess weight compared to the national⁵ figure of 21.2%, and 21.4% of boys in Bristol had excess weight compared to 21.5% nationally. There are no statistically significant differences between the prevalence for female and male pupils in Bristol or between Bristol and the appropriate national averages.

ICS sub-localities: Within Bristol, a local collation of the NCMP data for 2022/23 shows the proportion of 4–5-year-olds who are overweight or very overweight is lowest in North & West (inner) (15%) and highest in North & West (outer) sub-localities (26%) - figure 3 overleaf. The prevalence is lower in North & West (inner) sub-locality, by a statistically significant margin compared to the South and North & West (outer) sub-locality areas in the city.

⁴ <https://digital.nhs.uk/data-and-information/publications/statistical/national-child-measurement-programme/2022-23-school-year>

⁵ <https://fingertips.phe.org.uk/profile/national-child-measurement-programme>

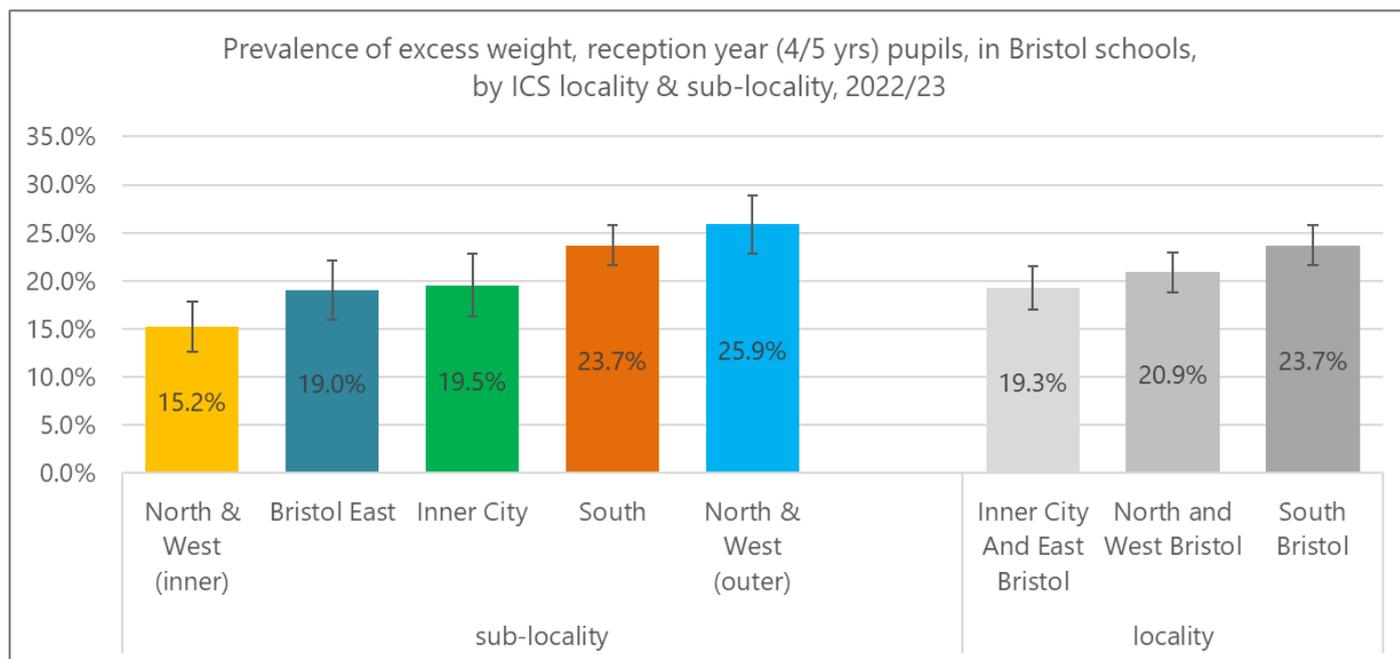


Figure 3: Local collation of NCMP data, Bristol City Council (Public Health)

Equalities data – Deprivation: Figure 4 shows the strength of the association in Bristol between deprivation of area of residence, and prevalence of excess weight in reception year pupils living there. Data for 2022/23 indicated a prevalence of around 15% for pupils living in the least deprived 20% of the city, compared to 26% for those living in the most deprived 20% of the city. The association between deprivation and childhood excess weight will help explain much of the variation reported between ICS sub-localities and wards on this and the subsequent page.

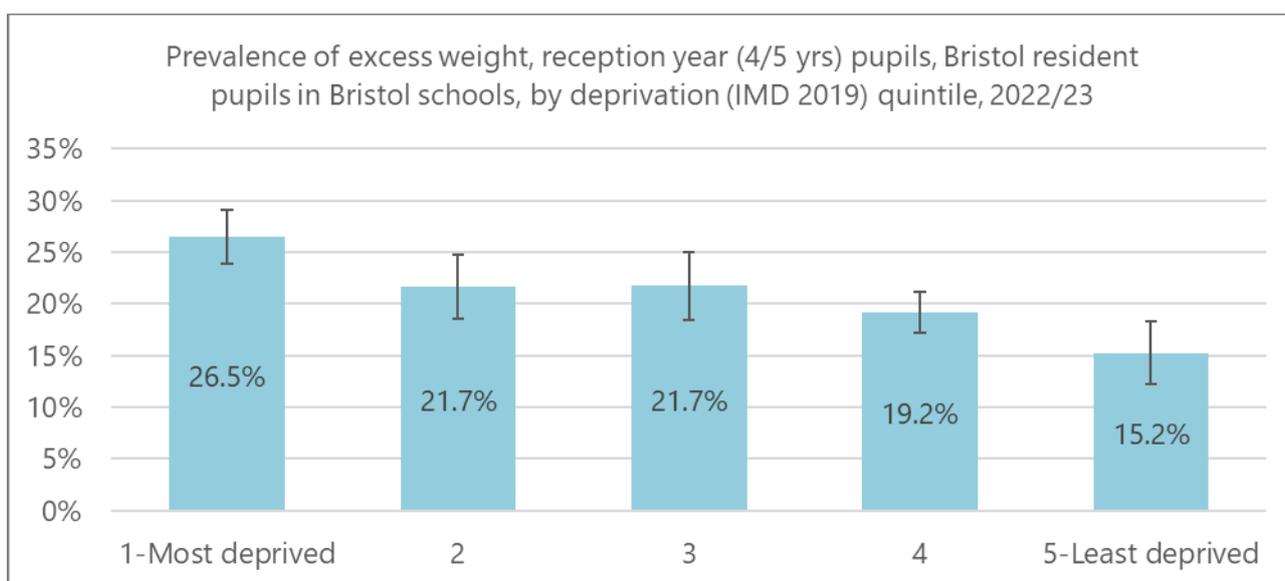


Figure 4: Local collation of NCMP data, Bristol City Council (Public Health)

Ward data: Based on 2-year pooled data for 2021/22 to 2022/23 for 29 of Bristol’s 34 wards there is a wide range in the prevalence of excess weight in reception year pupils across Bristol; from 11.6% in Redland to 29.8% in Hartcliffe & Witherwood. Rates are highest in the south-west and northern extremities of the city, lowest closer to the city centre with the exception of the Lawrence Hill ward (see figure 5 below).

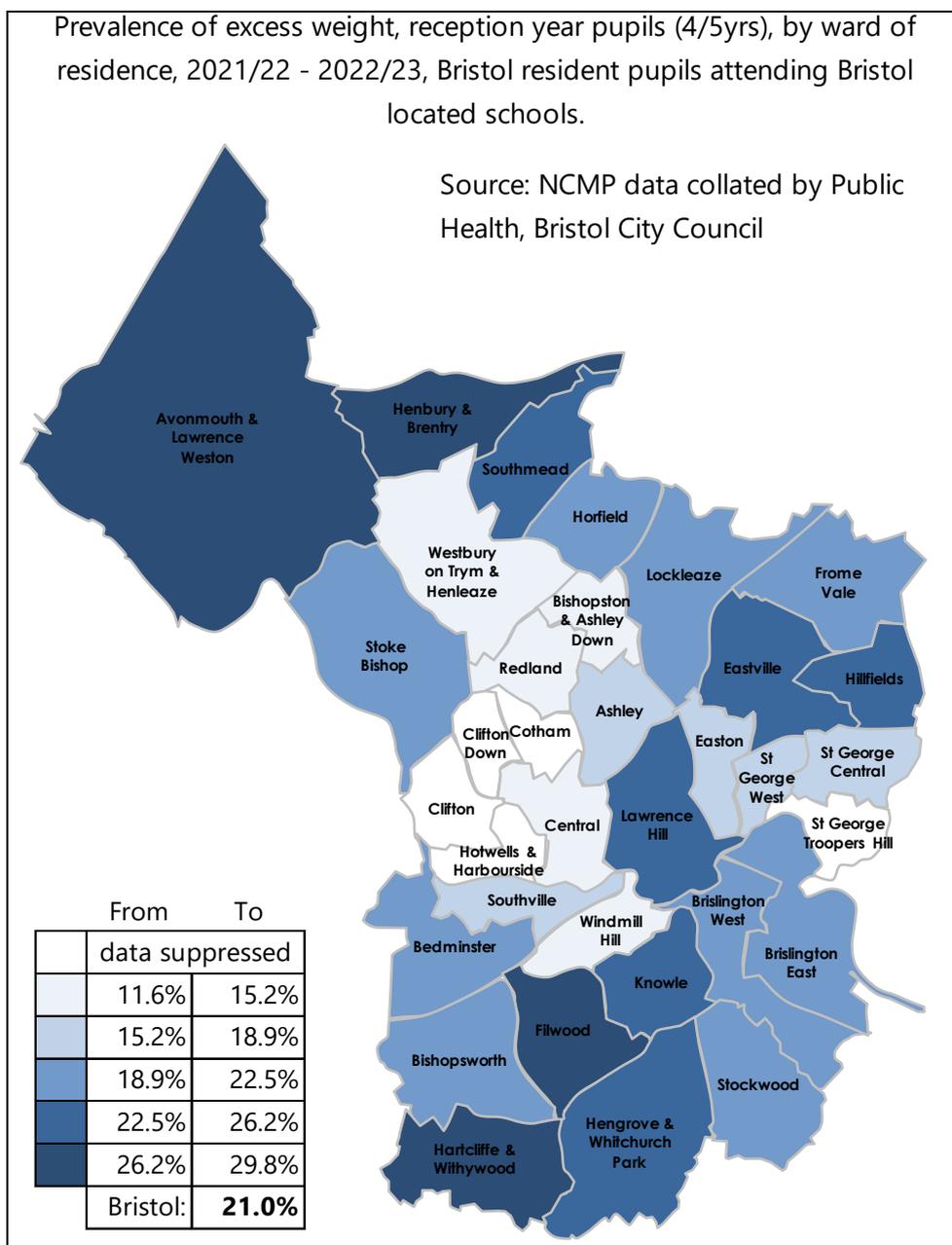


Figure 5: Prevalence of excess weight in reception year pupils by ward of residence, 2021/22-2022/23
 Source: NCMP data collated by Bristol City Council (Public Health). – NB: Excludes wards with less than 100 pupils measured during the 2-years pooled.

Equalities data – Ethnicity: Pupil ethnicity data can be challenging to collect for reception year as it can take some time after entering school for the records shared with the local authority to be completed in all respects. Ethnicity data for measured reception pupils was partially complete during 2022/23 (37%), but not sufficiently so to allow for meaningful analysis of the variation by ethnicity.

Excess weight in 10–11-year-olds

The proportion of Bristol resident Year 6 pupils (10 to 11yr olds) with excess weight (overweight and very overweight) in 2022/23 was 35.2%, lower to a statistically significant than the England average (36.6%). 21.6% of 10 to 11-year-olds were classed as very overweight (aka obese), a statistically similar rate to the England average (22.7%).

After rising for the six years to 2015/16, the prevalence of excess weight in year 6 pupils in Bristol fluctuated but tended to be lower subsequently until 2019/20. The impacts of the Covid-19 pandemic lockdowns on diet and physical activity were likely cause of a dramatic increase in the prevalence of excess weight in year 6 pupils that was estimated nationally and regionally in 2020/21 in the absence of a full local data collection, and the first full subsequent NCMP results in 2021/22 indicated that this increase had subsided a little but not entirely and the Bristol prevalence of excess weight for year 6 pupils was the highest recorded since 2006/07 when the NCMP data collection commenced. The 2022/23 statistics show a further decline in the prevalence of excess weight in this age-group but not to a statistically significant extent since the previous year and the prevalence remains among the highest recorded since 2006/07.

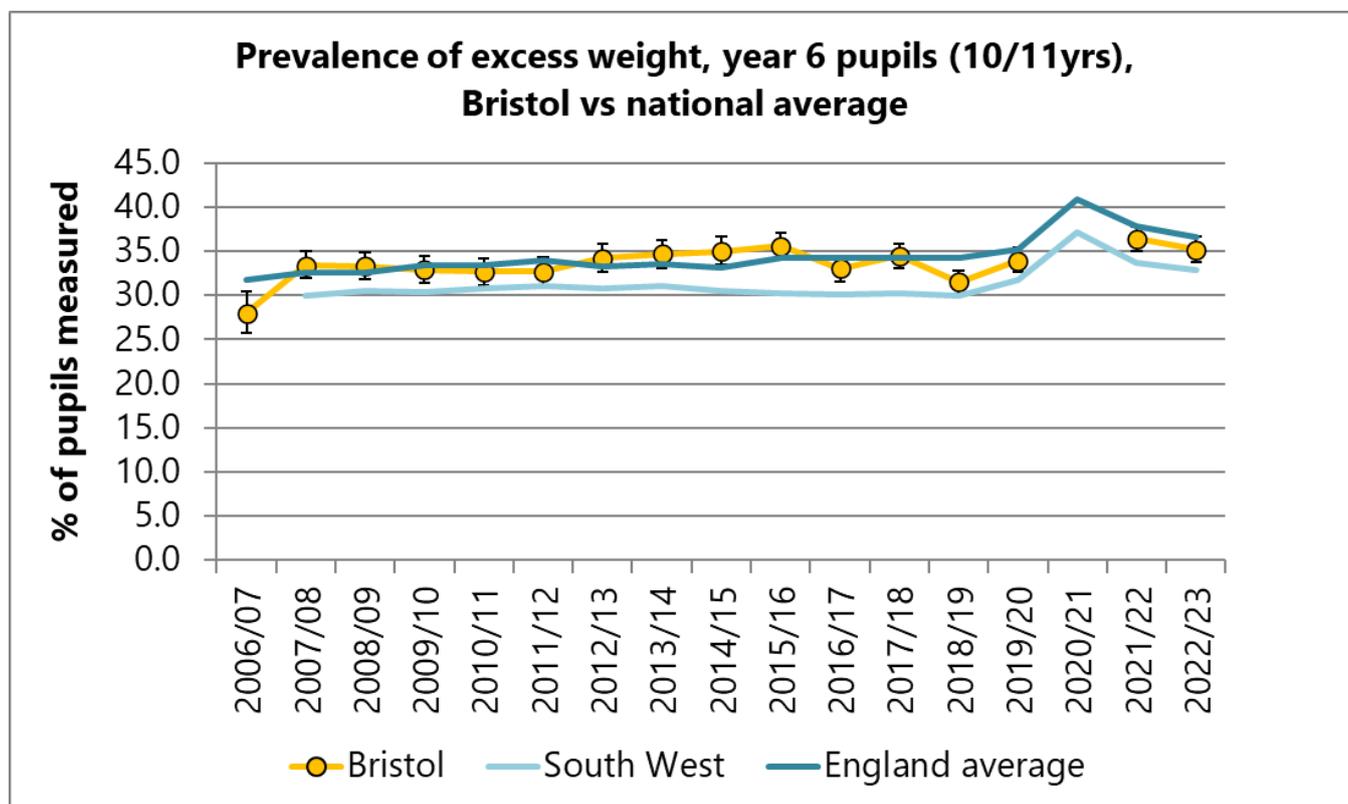


Figure 6: Prevalence of excess weight, year 6 pupils (10/11yrs), Bristol vs regional & national averages, 2006/07 to 2022/23. Source – Office for Health Improvement & Disparities, collated by Public Health, Bristol City Council.

In 2022/23, Bristol had the lowest year 6 prevalence of excess weight (overweight and very overweight) or obesity (very overweight) than of any of the eight Core Cities comparator group, by a statistically significant margin compared to the majority of them. See figure 7 overleaf.

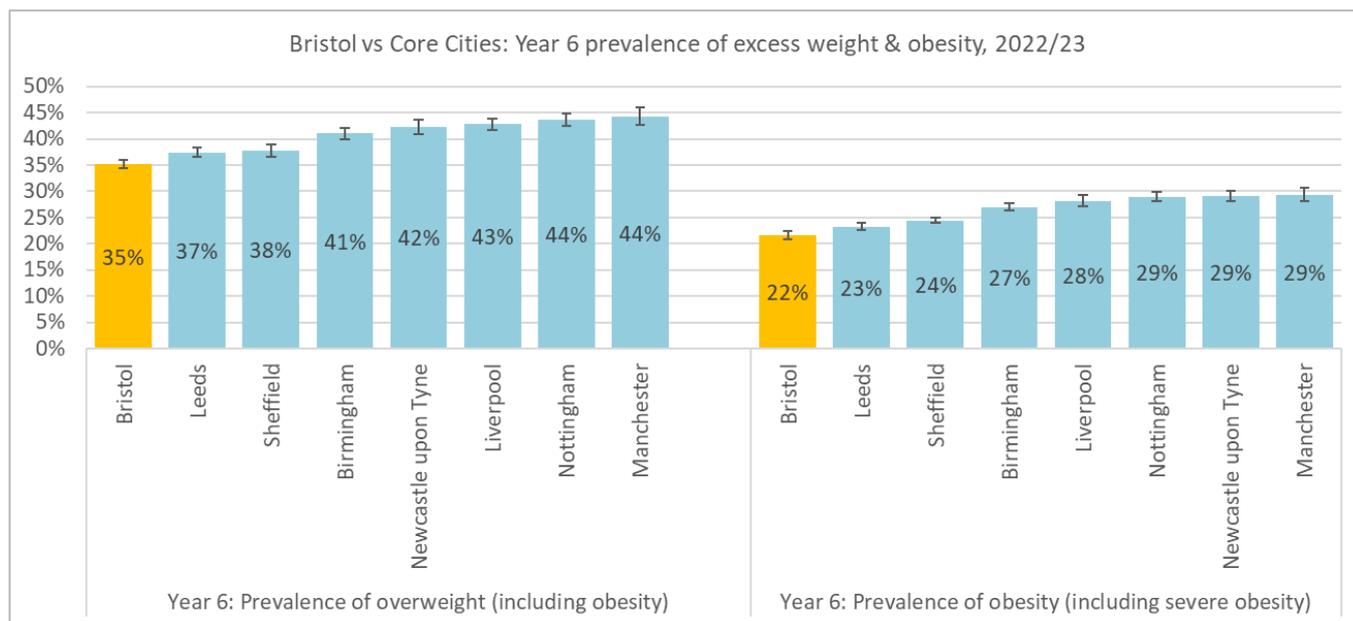


Figure 7: Prevalence of excess weight and prevalence of obesity, year 6 pupils (10/11yrs), Bristol vs Core City local authorities, 2022/23. Source – Office for Health Improvement & Disparities, collated by Public Health, Bristol City Council.

ICS sub-localities: Data for 2022/23 indicate that all of the city’s ICS sub-localities except for North West (inner) have a statistically similar prevalence of excess weight in year 6 pupils in a range between 36% and 41%. The prevalence in North West (inner) sub-locality was significantly lower at 19.5%.

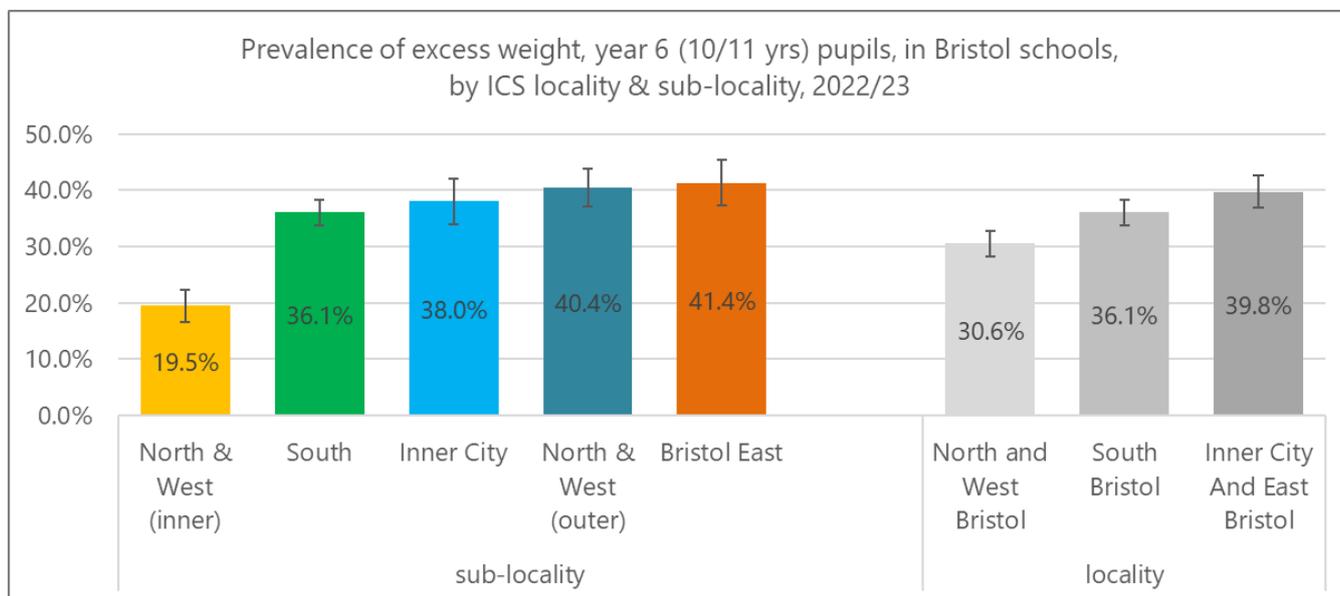


Figure 8: Local collation of NCMP data, Bristol City Council (Public Health)

Ward data: Based on 2-year pooled data for 2021/22 to 2022/23 (for 29 / 34 Bristol wards) there is a wide variation in the prevalence of excess weight in year 6 pupils, from 15.3% in Redland to 45.7% in Lawrence Hill. As has been the situation for many years, the prevalence of excess weight in year 6 pupils tends to be highest in a number of the most deprived wards in the north of the city, the south west of the city, wards close to the centre of the city and a number just to the east. The more affluent wards to the west of the city centre and to the north-west of the centre tend to have the lowest prevalence.

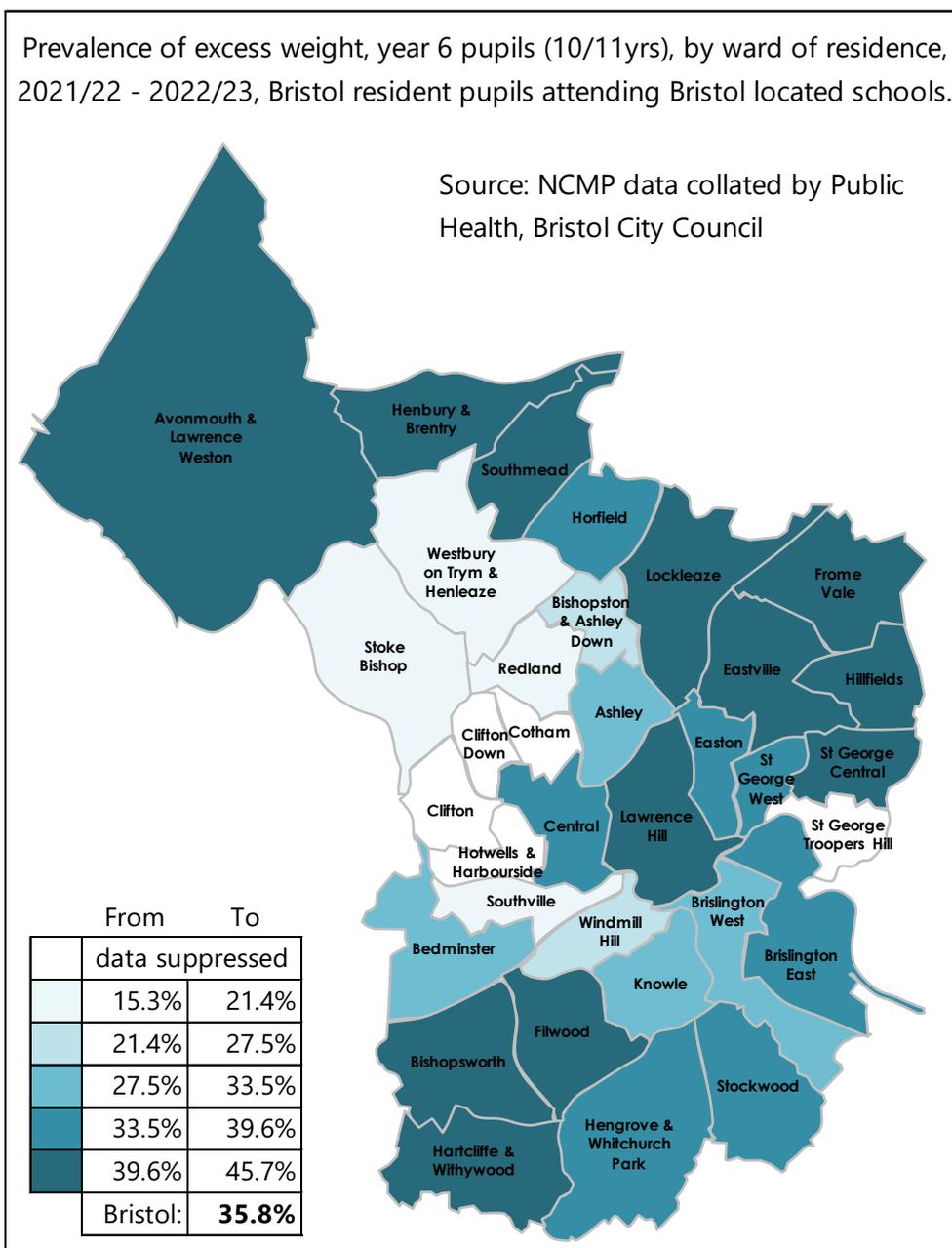


Figure 9: Prevalence of excess weight in year 6 pupils by ward of residence, 2021/22-2022/23
 Source: NCMP data collated by Bristol City Council (Public Health). – NB: Excludes wards with less than 100 pupils measured during the 2-years pooled.

Equalities data – Gender: In Bristol schools in year 6 in 2022/23, 32.0% of girls had excess weight compared to the national average of 34.1%, and 37.8% of boys in Bristol had excess weight compared to 39.0% nationally. Boys in Bristol are more likely to be overweight or obese than girls in year 6, to a statistically significant extent, while girls are less likely to be overweight or obese than either Bristol boys or the national average for girls, again to a statistically significant extent.

Equalities data – Deprivation: As observed for reception year pupils, there is also evidence of a strong association between deprivation of area of residence and the prevalence of excess weight in year 6 pupils. Data for 2022/23 indicated a prevalence of around 20% for pupils living in the least deprived 20% of the city, compared to well over double that for those living in the most deprived 20% of the city.

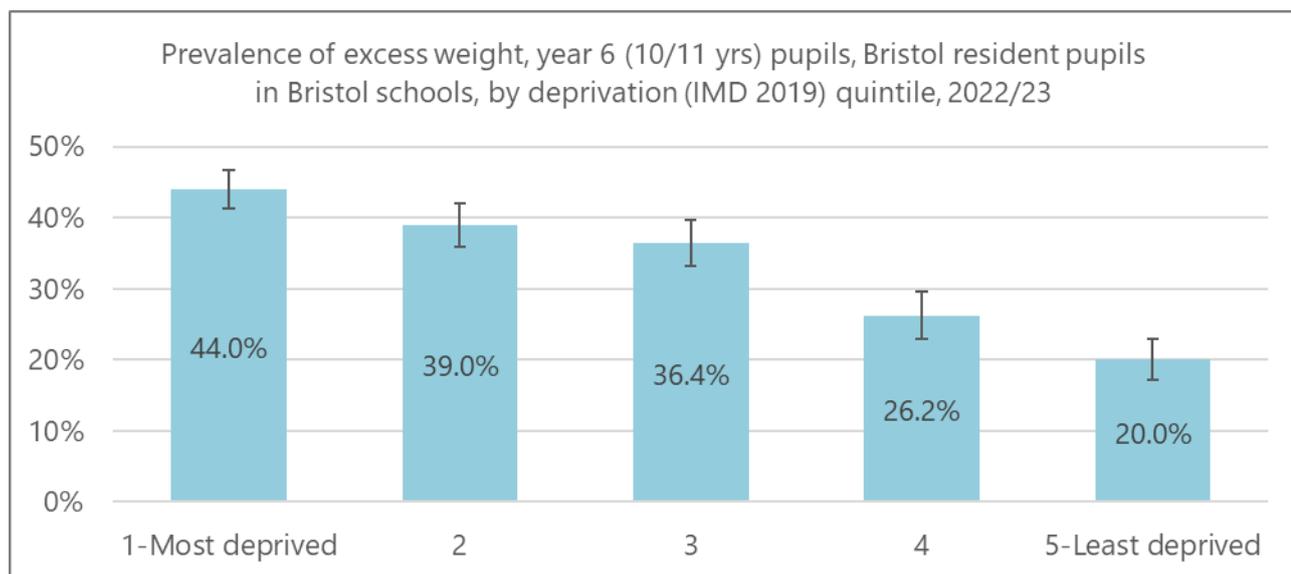


Figure 10: Local collation of NCMP data, Bristol City Council (Public Health)

Equalities data – Ethnicity: The ethnicity of year 6 pupils is typically more accurately and completely recorded than the data for reception pupils. Therefore, an analysis based on ethnicity is more feasible and robust for this year group, especially if a number of years of NCMP data are pooled to increase the pupil numbers sampled in each ethnic group. Combining data collected in 2021/22 and 2022/23 allows us to analyse the prevalence of excess weight in year 6 pupils in Bristol schools by gender and ethnicity for all broad ethnicity groups and a selection of the largest more detailed categories also, shown in figure 11 overleaf.

Figure 11 shows that the variation in the prevalence of excess weight amongst year 6 pupils by ethnicity is greater for male pupils than female pupils in Bristol. In all the ethnic groups included in the analysis, the prevalence of excess weight was greater for male pupils than female pupils, to a statistically significant extent for a proportion of them; White – other (typically Eastern European), White (broad category), White - British, Asian/Asian British (broad category) and those of Asian - Indian ethnicity.

Amongst the female year 6 pupils only, just the female pupils in the Black and Black British (broad ethnic category) and those of Black African ethnicity were on average more likely to a statistically significant extent to be overweight or obese than the Bristol schools average for female pupils in year 6.

More variation in the prevalence of excess weight amongst year 6 male pupils meant that more ethnic groups were significantly different to the Bristol schools average for male pupils in year 6. Male pupils of white ethnicity (broad category) and White British ethnicity were significantly less likely to be overweight or obese than the Bristol schools average for male pupils. A much larger selection of non-white ethnic groups were identified where the male pupils in year 6 were significantly more likely to be overweight or obese than the Bristol schools average for male pupils; Asian/Asian British (broad category), Black/Black British (broad category), plus those of Asian – Indian, Asian – Pakistani, Black – African and Mixed (white & black Caribbean) ethnicities.

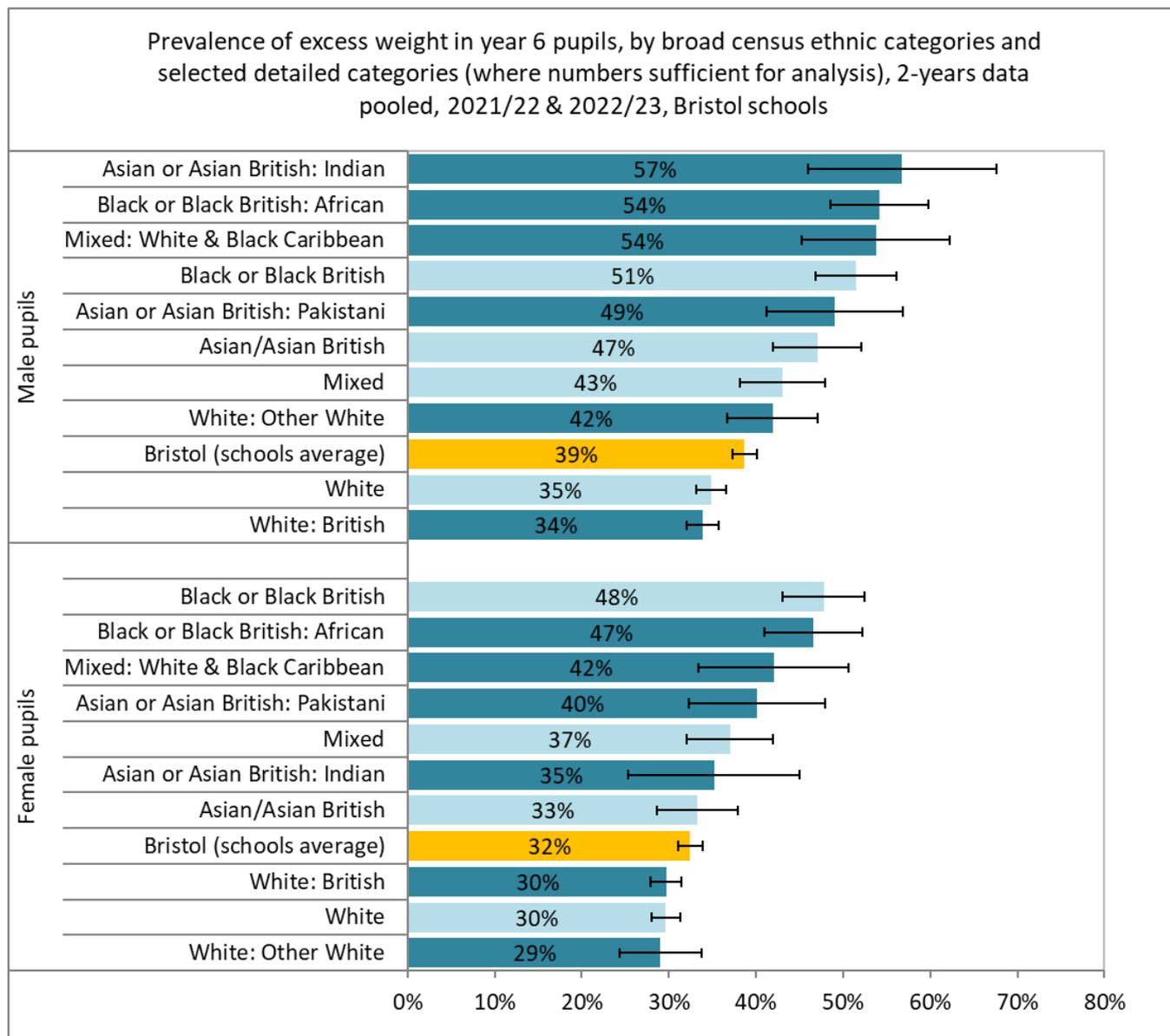


Figure 11: Local collation of NCMP data, Bristol City Council (Public Health)

Covid-19 impact: Please refer to the section entitled 'Impact of the Covid-19 pandemic on the local measurement of childhood weight and statistics presented in this section'.

The potential contribution of the pandemic to trends in the prevalence of excess weight in year 6 pupils is referred to also in the section entitled 'Excess weight in 10–11-year-olds'.

Further data / links:

- 1) Bristol Joint Local Health and Wellbeing Strategy 2020 – 2025. Available here: [Health and wellbeing strategy \(bristol.gov.uk\)](https://www.bristol.gov.uk/health-and-wellbeing-strategy)
- 2) Childhood obesity: a plan for action. Department of Health and Social Care, Prime Minister's Office, 10 Downing Street, HM Treasury, and Cabinet Office. Available here: <https://www.gov.uk/government/publications/childhood-obesity-a-plan-for-action>
- 3) National Child Measurement Programme (NHS England); England, 2022/23 school year. Data tables available here: <https://digital.nhs.uk/data-and-information/publications/statistical/national-child-measurement-programme/2022-23-school-year>
- 4) Obesity Profile (Office for Health Improvement & Disparities – Fingertips tool). Available here: [Obesity Profile - OHID \(phe.org.uk\)](https://www.phe.org.uk/obesity-profile)

Date updated: November 2023

Next update due: November 2024