



Scottish Health Equity
Research Unit

Insights, analysis and action on the socio-economic factors
that shape health

Reactive Stats Summary

Primary 1 Body Mass
Index statistics
Scotland, 2023/24

David Jack
Fiona McHardy
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Tackling Childhood Obesity in Scotland: Addressing Socioeconomic and Commercial Determinants

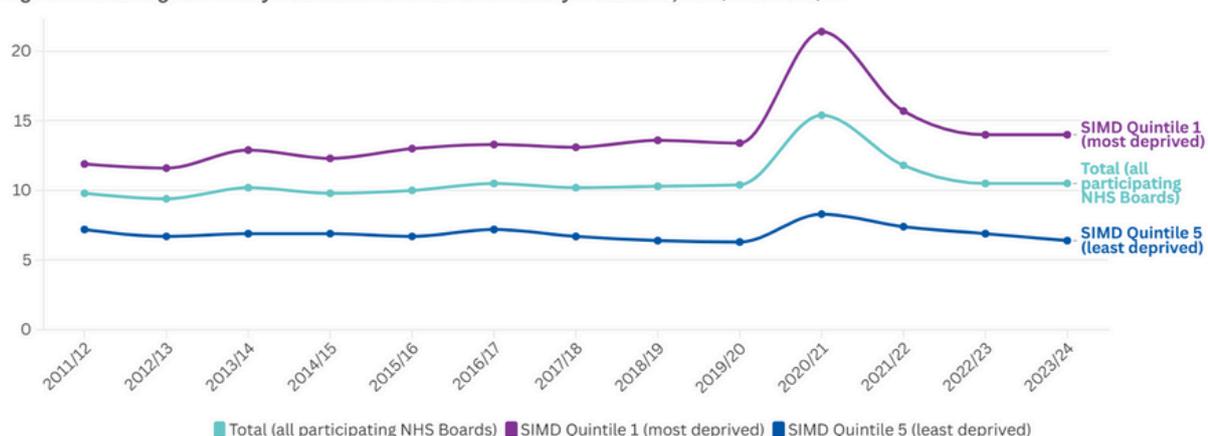
Public Health Scotland's (PHS) annual report on the weight status of Primary 1 children (aged around 5) demonstrates the profound impact of socioeconomic determinants on childhood health outcomes. The data, derived from Body Mass Index (BMI) measurements collected during health reviews, provides insights into how deprivation shapes inequalities in healthy weight among children.

In 2023/24, valid height and weight data were recorded for 46,889 children, representing 88.6% of Scotland's estimated population of 5-year-olds. Children are classified into healthy or unhealthy weight categories by comparing their BMI to reference data for children of the same age and sex.

Summary of Key Insights

- **Healthy Weight Trends:** In 2023/24, 76.5% of Primary 1 children were categorised as having a healthy weight, consistent with pre-pandemic levels (76–77%). However, this overall stability masks significant socioeconomic inequalities, with only 72.0% of children in the most deprived (quintile) areas maintaining a healthy weight compared to 82.0% in the least deprived areas.
- **Socioeconomic Inequalities:** Obesity risk was markedly higher in the most deprived areas, where 14.0% of children were at risk—more than double the rate seen in the least deprived areas (6.4%).

Figure 1. Percentage of Primary 1 School Children at risk of obesity in Scotland, 2011/12 to 2023/24



Source: Public Health Scotland [1]

- **Long-term Trends:** Obesity rates in the least deprived areas have generally remained stable compared to 2011/12. However, rates in the most deprived areas were on the rise before the pandemic and surged to 21.4% in 2020/21. Although these rates have since declined, they remain higher than pre-pandemic levels, illustrating the exacerbation of health inequities during times of economic and social crisis.
- **Ethnicity-Based BMI Variations:** Children of Black, Caribbean, or African ethnicity are most at risk of obesity (13.6%) and White Other British children the least (8.0%). Among White Scottish children, 10.9% were at risk of obesity. Meanwhile, underweight risk was most pronounced among children of Asian ethnicity (4.5%), compared to just 0.9% for White Scottish children.

Discussion

Childhood obesity continues to be a persistent public health challenge in Scotland and beyond. Evidence has indicated obesity has increased across many countries due to societies becoming more ‘obesogenic’ from interactions between economic factors, policy approaches and design, changing physical environments amongst other factors resulting in growing levels of obesity at population level [2].

> Food Insecurity

Within Scotland and the UK, there has been a complex context for low-income families in achieving a balanced and nutritional diet. Research suggests that unhealthy food is often easier to access than healthier options, and that this is especially so in Scotland’s more deprived urban areas [3]. Wider economic pressures such as the cost-of-living impacts on food prices and other household necessities have resulted in deepening levels of food insecurity for many families. Figures from the Trussell Trust, a major foodbank operator, indicate that, between 1 April 2023 and 31 March 2024, they distributed 156,200 parcels for families with children in Scotland [4]. This figure alone, doesn’t fully indicate the scale of food insecurity in Scotland, with a shifting and fragmented landscape of food-based provision and support, including distribution of food through a proliferation of community food providers [5].

Food insecurity is atypically understood with a bias and lens of the assumption of weight loss, which is in contradiction to a relationship that exists in practice, whereby obesity co-exists with hunger and/or low-quality diet [6]. This relationship is illustrated in longitudinal qualitative research that tracked households experiencing food insecurity in Scotland in three local authority areas. This study found people were experiencing weight loss or weight gain due to food insecurity and, in some cases, moving both between gain and loss, dependent on their financial circumstances [7]. Participants in this study highlighted how low incomes restricted

their food choices, increased their reliance on cheap, unhealthy food and reduced their ability to afford the energy to cook proper meals.

“It was literally just the cheapest food, and it was all just crap.” Jenny, Dundee

This study also indicated other complexities arising, including psychological impacts, such as isolation for families due to experiencing food insecurity [8].

“When you’ve not got any money, staying in your house all day, every day, makes the day drag in, which doesn’t help your mental health... Me and the children have been very, very isolated over the last year because we’ve not had money to go out.” Alison, Dundee

Wider analysis of Growing up in Scotland data found that children who experienced food insecurity at a young age were four times more likely to experience persistent obesity from the start of Primary school up to age 14 than children who did not experience food insecurity, after adjusting for other socio-economic factors [9]. Food insecurity for families often also has hidden and gendered impacts, with mothers regularly bearing the brunt of skipping meals to ensure their children can eat, as highlighted in a study examining the impacts of the cost of living crisis on women:

Idia (aged 35-44), a lone mother, reflected on the challenges of being able to afford food and going hungry in almost all her diary entries.

“I spoke to my friend who told me she has been starving and only eats at night. I have started doing that though it didn’t go well with me the first day, but I will get used to it.” [10].

In short, to understand obesity in Scotland, it is essential to consider the significant role socio-economic factors play in health inequalities. Addressing underlying drivers, such as food insecurity, must be a central focus in policy responses to effectively combat obesity.

> Commercial Determinants of Health

Alongside recognising the socio-economic determinants, attention must be played to the influence and impact of the commercial determinants of health (i.e. ‘private sector activities that affect people’s health, directly or indirectly, positively or negatively’ [11]). This can include marketing and preference shaping of food and drink consumption [12].

Research on High Fat Salt and Sugar (HFSS) product marketing found children and young people in Scotland were being targeted via multiple routes, including in online spaces used by children and young people, such as YouTube and other social media channels [13].

“I mean [son’s name] for one, at one point in his life, because of these YouTube channels, at one point thought that it was fine to eat a whole packet of cookies as long as you’ve got milk with it because milk and cookies are good for you together. I’m like, “Who told you that?” “Such and such” [YouTube influencer]” (Parent Focus Group 7 participant 25, child aged seven)

Conclusion

In conclusion, tackling childhood obesity in Scotland demands a comprehensive approach that takes account of both socio-economic and commercial determinants. The data from Public Health Scotland underlines the deep-rooted inequalities in obesity rates, particularly in the most deprived areas, where children face higher risks of poor health outcomes.

Socio-economic factors such as food insecurity, compounded by economic pressures, play a critical role in shaping these inequalities. Equally, the influence of marketing unhealthy food to children, and a relative over-supply of unhealthy food (especially in deprived areas), must not be overlooked. Addressing the underlying causes of inequality, improving access to nutritious food, and regulating food marketing are crucial steps in creating a healthier future for Scotland’s children.

Sources

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Contact us at sheru@strath.ac.uk