An upstream approach to addressing the childhood obesity epidemic in New Zealand—a call to action

Velia Men

ABSTRACT

Childhood obesity is a critical issue in New Zealand that we can no longer afford to ignore. Currently, one in three children is overweight or obese, putting the health of an entire generation at risk if we continue to delay taking action. This issue highlights a significant matter of equity. Māori and Pacific children and those from socio-economically deprived backgrounds are disproportionately affected, reminding us of the systemic barriers rooted in historical factors that exist within our society. Efforts focussed on changing individual behaviour have achieved limited success in reducing childhood obesity rates. Therefore, it is necessary to shift our focus upstream and address the root causes of this issue. This viewpoint piece underscores the role of the obesogenic environment as the primary driver of childhood obesity, advocating for an upstream approach to enact broader changes in the food environment.

Within this framework, this piece puts forward three policy measures that could be essential in addressing the childhood obesity epidemic: implementing a tax on sugary beverages, restricting unhealthy food marketing and ensuring access to healthy food in schools. These policies are backed by substantial evidence of their efficacy, cost-effectiveness and potential to improve health equity, including contextual evidence from successful international models. However, despite ample evidence and support, New Zealand has fallen behind international standards in adopting these measures, partly due to resistance from the food industry and the need for stronger political leadership. Thus, a "call to action" is needed to overcome these challenges, mobilise against the current policy inertia and make addressing childhood obesity a priority.

We are currently in the midst of a serious epidemic. In the past four decades, obesity rates have tripled globally, leading to a surge in chronic diseases like heart disease, stroke and diabetes.[1] Meanwhile, children in New Zealand are constantly exposed to energy-dense, nutrient-poor foods that are widely available and heavily promoted.[2] Consequently, one in three children is now overweight or obese, making our country the second-worst in the OECD for childhood obesity rates.[1] Urgent action is needed to implement stronger policy interventions targeting the root causes of this issue. While ample research exists, the challenge lies in political will rather than a lack of evidence-based policy interventions. This viewpoint article is a call to action urging decisive policy action and collective efforts across sectors of society to prioritise addressing the childhood obesity epidemic in New Zealand.

The burden of childhood obesity in New Zealand

Childhood obesity is a significant public health concern due to its long-term impact on adult weight status and morbidity. Studies show that around 80% of obese children carry obesity into adulthood, increasing the risk of developing numerous non-communicable diseases.[3] Early intervention is crucial as treating adult obesity is challenging, and weight patterns established early in life tend to be persistent.[4] For instance, being overweight or obese in early adulthood has been shown to have the highest impact on the cumulative lifecourse risk of developing type 2 diabetes compared to in later life.[5]

In New Zealand, excess weight contributes directly to around NZ$2 billion in annual healthcare expenses, constituting 8% of the total healthcare budget.[6] In a 2018 systematic review, the lifecourse economic impact of childhood obesity, including direct healthcare costs and productivity loss, was estimated to be around €149,000 per child compared to those of normal weight.[7] Paradoxically, funding for population nutrition initiatives has decreased in New Zealand over the past decade and is relatively insufficient compared to the preventable healthcare costs associated with childhood obesity.[8]

Figure 1 illustrates the trend in childhood

Figure 1: Prevalence of obesity or overweight status in children aged 2–14 in New Zealand (statistics from the Ministry of Health Obesity Statistics 2022/2023).[9]

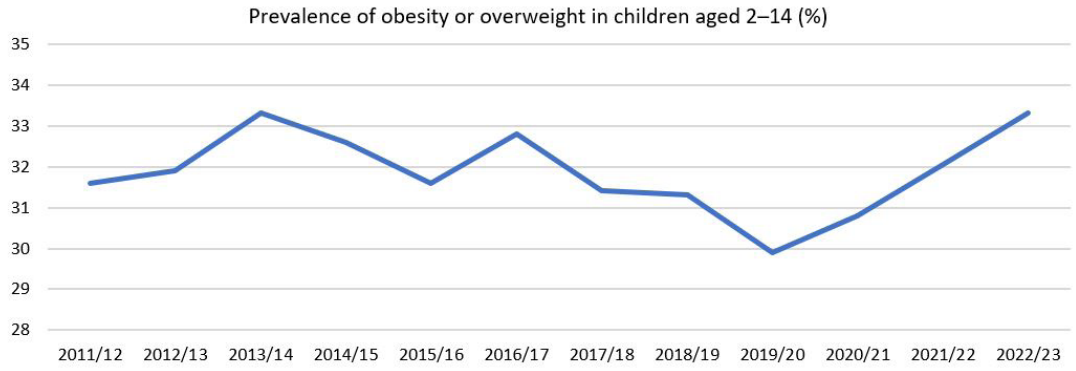
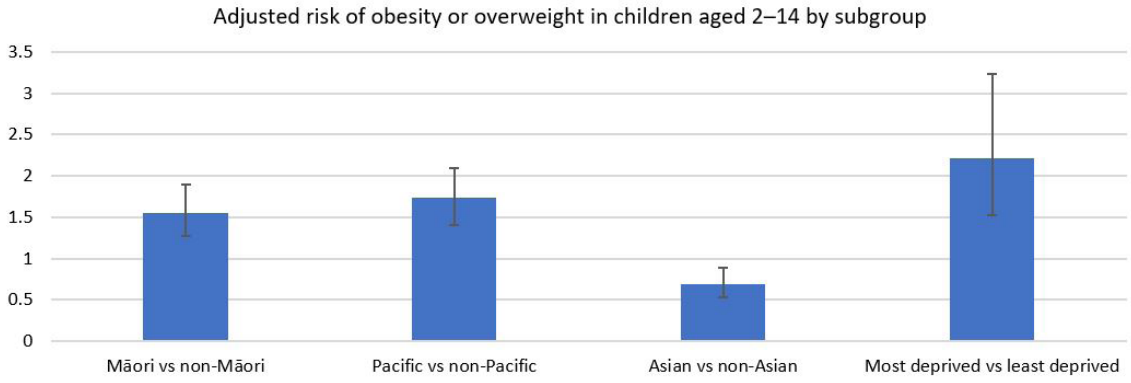


Figure 2: Adjusted risk ratio of obesity or overweight status in children aged 2–14 in New Zealand (statistics from the Ministry of Health Obesity Statistics 2022/2023).[9]

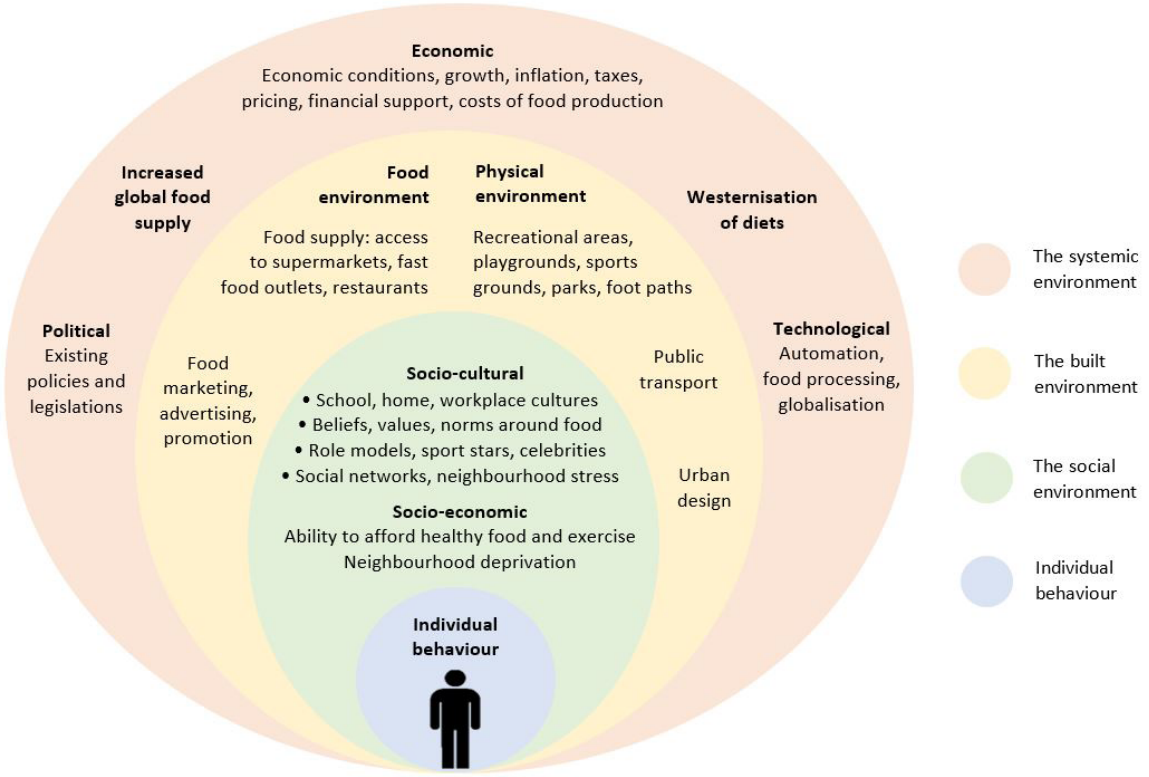


overweight or obesity rates over time, highlighting a notable increase in the prevalence since 2019/2020 after a decade of stabilisation. Disparities are evident in overweight and obesity rates based on ethnicity and socio-economic status (SES), with higher rates observed in Māori and Pacific children and those living in more socio-economically deprived areas (Figure 2).[9] Moreover, disparities in the prevalence of obesity exist across different geographical communities.[10] While ethnicity, urbanicity and socio-economic deprivation account for nearly half of this variability, the remaining 50% is likely influenced by factors relating to the local environment, such as the availability of energy-dense foods, recreational spaces and transportation options.

The upstream causes of childhood obesity

Obesity is a highly stigmatised condition, often blamed on individual genetics and lifestyle choices. However, growing evidence suggests the "obesogenic environment" is a major driving force behind the global rise of obesity rates.[11] Furthermore, there is evidence that upstream interventions aimed at addressing the obesogenic environment are a promising approach for addressing the global obesity epidemic.[12] Figure 3 illustrates a simplified model of the obesogenic environment, highlighting how individual behaviours are shaped within this broader context. Arguably, the primary driver of this trend is the global change in food energy supply and the Westernisation of diets.[13] These systemic changes have led to the current state of New Zealand's food environment, characterised by the widespread availability of packaged foods and beverages, fast food outlets and processed foods.[8] Simultaneously, changes in the physical environment, such as urban planning, transportation and community infrastructure, have reduced

Figure 3: The obesogenic environment and the upstream causes of obesity. The obesogenic environment, a term coined by Swinburn et al., refers to the collective physical, economic, political and socio-cultural factors that promote obesity in individuals and populations.[11] Broader systemic conditions have resulted in changes in the built (food and physical) environment that promote high energy intake and sedentary behaviour. This is further modulated by the social (cultural and economic) environment, which exacerbates or mitigates the effects of the upstream obesogenic drivers on individual behaviour.

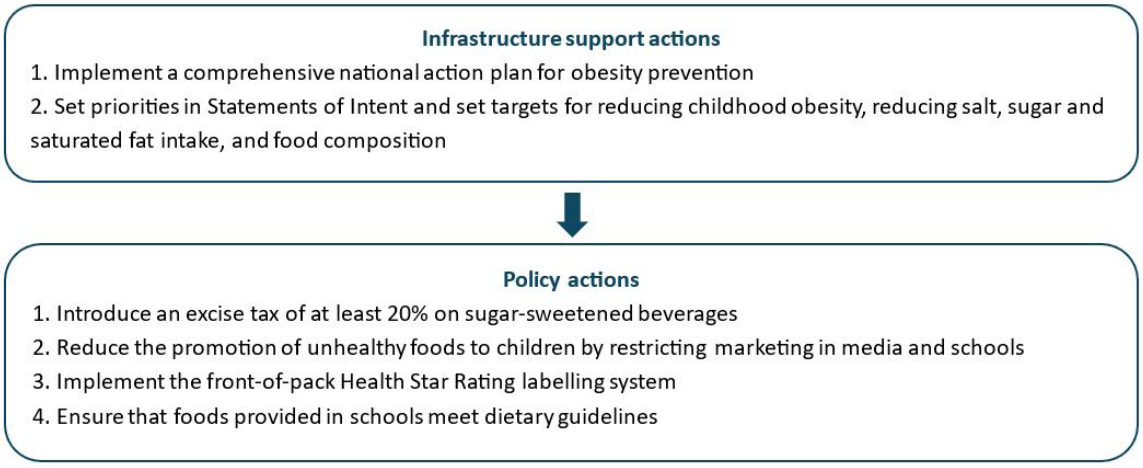


opportunities for physical activity, further exacerbating the imbalance between energy intake and expenditure.[14]

While systemic and built environments have been the primary drivers of childhood obesity, the social environment also plays a significant role in moderating these effects. In today's digital age, media and technology have a profound impact on children's socio-cultural environments. Online platforms, television ads and celebrity endorsements contribute to the extensive marketing efforts shaping children's food preferences and consumption patterns.[15] Social, cultural and spiritual norms also influence individual behaviours; for example, Māori and Pacific youth express greater acceptance of larger body sizes.[16] However, the social environment can also include protective factors. Social connections, positive role models and safe neighbourhoods are also factors that form part of the socio-cultural environment, and have been associated with decreased rates of childhood obesity.[17]

In New Zealand, disparities exist within the obesogenic environment, which are closely tied to SES and ethnicity. Within the built environment itself, disparities arise, as more socio-economically deprived areas have a higher concentration of fast food outlets, while access to healthy food options, such as supermarkets, is more limited.[18] Children living in these areas tend to be exposed to more unhealthy food advertising and have lower access to quality green spaces and recreational resources.[19,20] These disparities in the built environment are further exacerbated by inequities in the social environment. In New Zealand, approximately one in five children live with food insecurity.[21] Socio-economic deprivation increases vulnerability to unhealthy food environments as it becomes more difficult to afford a nutritious diet, making inexpensive, energy-dense options more appealing. Ultimately, these issues stem from systemic inequities that make affording healthy food and

Figure 4: Priority actions recommended by the 2023 Healthy Food Environment Policy Index (Food-EPI) expert panel for implementation by the New Zealand government.[8]



accessing physical exercise opportunities unattainable for many disadvantaged families.[22]

Shifting the spotlight to systemic solutions

Addressing the upstream environmental factors driving unhealthy behaviours has become a key focus of obesity research and interventions.[23] This has led to the establishment of international benchmarks for policy actions aimed at creating healthier food environments, outlined in action plans by the World Health Organization (WHO) and other international health bodies.[24,25,26] While many countries have adopted these policies, New Zealand has been slow to embrace such measures. Over the past decade, the government's implementation of healthy food policies has seen little progress, with over half of the infrastructure and policy indicators showing "low" or "very little" implementation compared to international standards.[8]

In 2023, a panel of over 50 public health experts put forward seven priority measures to improve the healthiness of New Zealand's food system, including four specific policy actions aimed directly at modifying the food environment (Figure 4).[8] These policies are backed by substantial research and have been prioritised based on factors such as the current implementation gap, the importance of each action considering its relative need, impact and effects on equity and its achievability within the New Zealand context. Emphasis is placed on the necessity of mandatory regulation, as existing voluntary and self-regulatory codes have not brought about significant change.[8]

The first priority action is sugary beverage taxation (SBT), a policy already adopted by over 50 countries and endorsed by WHO.[27] Research indicates that SBT effectively reduces sugar consumption, as well as raising public awareness and prompting the food industry's reformulation of sugary products.[28,29] Theoretical models suggest that SBT could lead to a 1–8% reduction in obesity prevalence and significant reductions in cardiovascular disease, diabetes and diet-related cancers.[30] Moreover, SBT has proven highly cost effective through direct healthcare savings and generating revenues to fund other public health initiatives.[31] In the United States, the US$13 billion annual revenue from SBT has been used for health-promoting projects, such as making healthy foods more affordable, physical activity programmes and improving health education.[32] From an equity standpoint, SBT has been argued to be progressive, meaning that those with the highest burden of obesity benefit the most.[33] For example, low-income families are particularly impacted by the financial disincentive due to their higher price sensitivity, resulting in a more significant reduction in sugary beverage consumption.

Restricting unhealthy food marketing (UFM) is another key step towards creating a healthier food environment. In 2023, WHO issued a consensus guideline emphasising the need for mandatory policies to control the promotion of unhealthy products to children.[34] This recommendation is based on recent systematic reviews that have

demonstrated the adverse effects of UFM on children's health, eating habits, and development of norms around food consumption.[35] Currently, UFM in New Zealand is self-regulated through voluntary codes, which contain inherent loopholes that allow companies to continue advertising unhealthy products to children. To align with WHO's guidance, New Zealand needs comprehensive mandatory regulations on UFM to ensure compliance, following successful models in countries such as the UK, South Korea and Spain.[34,36] A challenge to ensuring the effectiveness of such policies is minimising ambiguity so that they cover a comprehensive range of age groups, media platforms and products, and actually reduce children's exposure to UFM.[35]

The third policy action is ensuring healthy food options are provided or sold to children in schools. A successful initiative is the Ka Ora, Ka Ako Healthy School Lunches Programme, which reduces food insecurity by supplying nutritious lunches to children attending schools in socio-economically deprived areas. Initial evaluations of the programme have shown promising results, including delivering nutritious food, improving children's wellbeing and alleviating financial stress for families.[37] Beyond these outcomes, international evidence has shown that universal school food provision can improve the healthiness and sustainability of food environments and drive broader food system change.[38] A priority action for the future is expanding the programme's reach and increasing its funding, particularly as the initiative operates in a critical setting for children's development.

Policy stagnation in New Zealand has been influenced by several factors. One of the main issues is the lack of strong governmental leadership, exacerbated by significant lobbying by the food industry.[39,40,41] A critical gap is the absence of a comprehensive national action plan to address childhood obesity, highlighting insufficient intersectoral coordination and a need for greater prioritisation of the issue. Industry lobbyists have significantly influenced policy decisions and public opinion by contesting evidence and advocating for personal responsibility in addressing obesity.[42] The strong impact of industry lobbying in New Zealand may be due to the economy's relatively heavy reliance on agriculture and food production for export income, giving these industries more political and economic influence.[43] Furthermore, the smaller scale of New Zealand's political system makes it easier for lobbying groups to directly engage with policymakers, compounded by the absence of lobbying regulations.[44]

A key challenge moving forward is advocating for these policies to various stakeholders. Policymakers have compelling reasons to implement the necessary policy actions, including the evidence-based nature of these policies, the responsibility to promote population health and equity and the success of similar measures in other countries. Industry stakeholders may be willing to offer cooperation and partner with these health-promoting initiatives if they recognise the business case for innovation and market differentiation. By demonstrating social responsibility and a commitment to promoting health and sustainability, the industry can position itself positively and improve its brand reputation, aligning with consumer expectations and evolving global trends. In terms of community engagement, research has shown strong public support for policies aimed at improving the food environment. Despite industry claims that such policies impede consumer freedom, statistics reveal that 51% of New Zealanders endorse a tax on sugary drinks, and 92% of parents support a ban on unhealthy television advertisements.[45,46]

Conclusion

Childhood obesity in New Zealand is a critical issue, but the real issue lies in our obesogenic environment. This environment disproportionally burdens low-SES, Māori and Pacific children, perpetuated by systemic inequities ingrained in our society. Children are not to blame for their obesity; it is society that needs to protect them. Mandatory policies combining taxation, marketing regulation and school-based policies are needed to foster a healthier food environment conducive to healthy behaviours. These policies are backed by evidence-based arguments, economic rationale and community support. Nonetheless, achieving them requires collective action to build momentum, overcome industry opposition and drive the necessary policy agenda forward.

COMPETING INTERESTS
There are no competing interests to declare.

CORRESPONDING AUTHOR INFORMATION
Velia Men: Faculty of Medicine and Health Sciences, The University of Auckland, 85 Park Road, Grafton, Auckland 1023. Ph: +64 28 422 4849
E: qmen607@aucklanduni.ac.nz

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