

Why food deprivation in childhood is linked to obesity

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Credit: Andrea Piacquadio from Pexels

As energy prices rise and the cost of living goes up, it is estimated that there are 4 million children from poorer households who have limited or uncertain access to healthy food.

My current Ph.D. research is examining how this childhood food insecurity affects eating behavior. Research suggests that [food deprivation](#) in childhood leads to obesity.

A [2017 study](#) found that children between the age of eight and ten from homes that do not have easy access to healthy food are five times more likely to be obese compared to those from households that have enough food.

The study, which looked at 50 mothers and their children, found that children in households where food scarcity is a problem ate food when they were not hungry and were more likely to eat five or more snacks per day.

This is what is known as the "[insurance hypothesis](#)"—the theory is that people who do not have ready access to food eat more to store energy when they do have food, to avoid hunger in the future when food is scarce.

But another [recent study](#) conducted with 394 adults in the UK found no difference in the total energy intake of food-insecure and food-secure people. What it did find, though, was that the diet of people without ready access to healthy food was high in carbohydrates, with less fiber and protein than other people in the study.

The time gaps between when food-insecure people ate were also inconsistent when compared to those with ready access to [healthy food](#). This could be due to financial reasons. The people who lacked access to food could not keep regular intervals between meals, but instead ate as food became available.

These research findings are concerning because eating [high-calorie foods](#) (often high in sugar and fats and classed as unhealthy food items) and

[skipping meals](#) have been found to be linked with obesity.

It suggests that eating practices which result from food insecurity are factors that can lead to obesity.

The role of stress

The emotional toll of a childhood living in poverty may also lead to obesity. A 2018 [research review](#) of the factors leading to childhood obesity looked at the role played by family environment.

It suggests that [low income](#), the inability to access or afford nutritious food and the stress caused by lack of income and food create a negative psychological and emotional environment for children. This family disharmony disrupts homeostasis—the body's ability to monitor and maintain its internal state.

Over time, this research suggests, this can lead to obesity. One way this can happen is through overeating to cope with stress—what is known as "emotional eating"—when we use food to soothe or make ourselves feel better.

[Increased stress levels](#) cause [dysregulation](#) of certain peptides and hormones in the body, such as insulin, cortisol and ghrelin. In turn, higher levels of these hormones and peptides are associated with increased appetite for [high-calorie foods](#).

Children are particularly affected because they are in the process of developing habits that will last into adulthood. Negative emotions cause changes in parts of the brain that are responsible for the development of [habits and memory](#). If children eat comfort foods to reduce distress and this [becomes a habit](#), they will use the same strategy to respond to [future stress](#). Over time, this could lead to obesity.

Emotional eating

Other research studies have explored the link between emotional eating and obesity. A [study](#) conducted in 2019 with 150 adults explored the relationship between obesity and socioeconomic disadvantage, psychological distress and emotional eating.

It found that lower socioeconomic status was associated with higher distress, and that higher distress was associated with higher levels of emotional eating. In turn, higher emotional eating was associated with higher BMI.

[Research carried out](#) at the University of Salford with more than 600 adults also found that that food insecurity was associated with a poorer diet, and that greater distress and eating to cope was linked with higher BMI.

This research was conducted with adults rather than looking at the childhood causes of obesity. But it suggests that [psychological distress](#) and subsequent emotional eating is a pathway that links poverty with [obesity](#).

What's more, a study [carried out in the US](#) with 676 adolescents from [diverse backgrounds](#) found that perceived stress, worries and confused mood were associated with emotional eating.

In the UK, 29% of men and 27% of women [are obese](#). This rate will be higher in the coming years if more is not done to protect children living in poverty.

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