Unravelling the Link Between Socioeconomic Status and Obesity

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A longitudinal study conducted during the Covid-19 pandemic suggests that stress plays a key role in explaining why obesity is more common among the poor than the rich.

The world is getting bigger, quite literally. By 2035, just over half of humankind will be **overweight or obese**, with associated costs on the global economy.

As complex and multifaceted a disease as obesity is, its link with socioeconomic status is clear: Obesity is more common among people of lower socioeconomic standing. In the **United Kingdom**, for example, obesity is nearly twice as common in the country's most deprived regions than its least deprived (36 percent vs. 20 percent).

The question is why.

Research has identified five factors as possible links between modern-day obesity and socioeconomic status: stress, temporal focus or whether one is focused on the past or the future, well-being expectations, time spent

outdoors and food scarcity. However, studies typically examine only one or two factors at a time and not the relative importance of all five. In addition, past research has typically been cross-sectional, meaning it examined data in a single point in time, which limits the ability to infer causality.

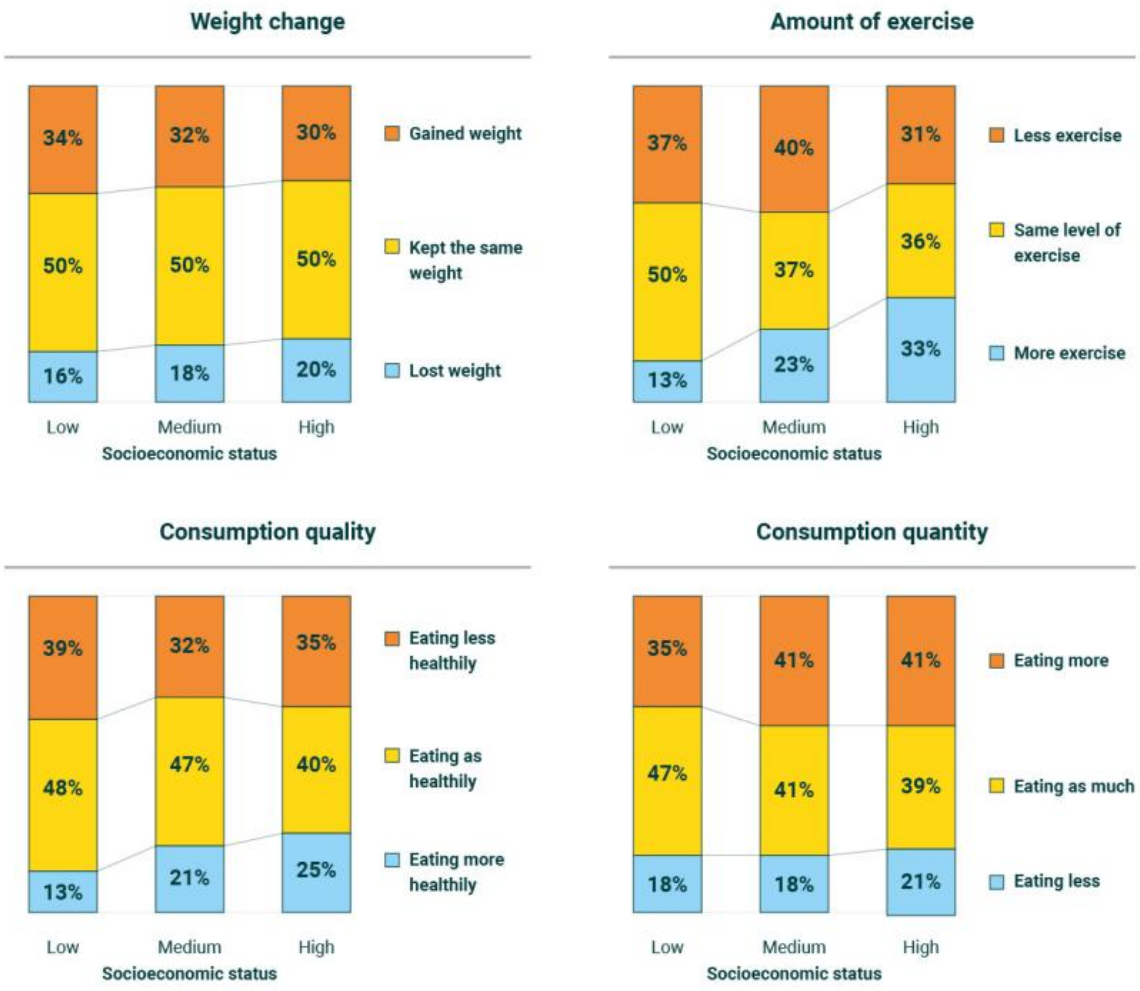
The Covid-19 pandemic threw up the rare opportunity to probe these mechanisms and their impact on weight gain over time. In a **study** published in the *Journal of the Association for Consumer Research,* we found that people of lower socioeconomic status gained more weight than the higher-status ones during the pandemic, further exacerbating the existing association between socioeconomic status and obesity.

Significantly, we found that this was driven by a higher level of stress among people with a lower socioeconomic status, and not by any of the other four factors. Our research also indicates that stress drives weight gain because it leads people to eat more, eat less healthily and exercise less.

Lower status, higher stress

We launched the study shortly after the outbreak of the coronavirus pandemic. We surveyed a total of 892 Americans three times between March and May 2020 (see graphic below), and a final time 18 months later, in November 2021.

Changes in weight, exercise, food quality and quantity, March-May 2020



There were 271, 330 and 291 respondents in the low, medium and high socioeconomic status groups respectively.

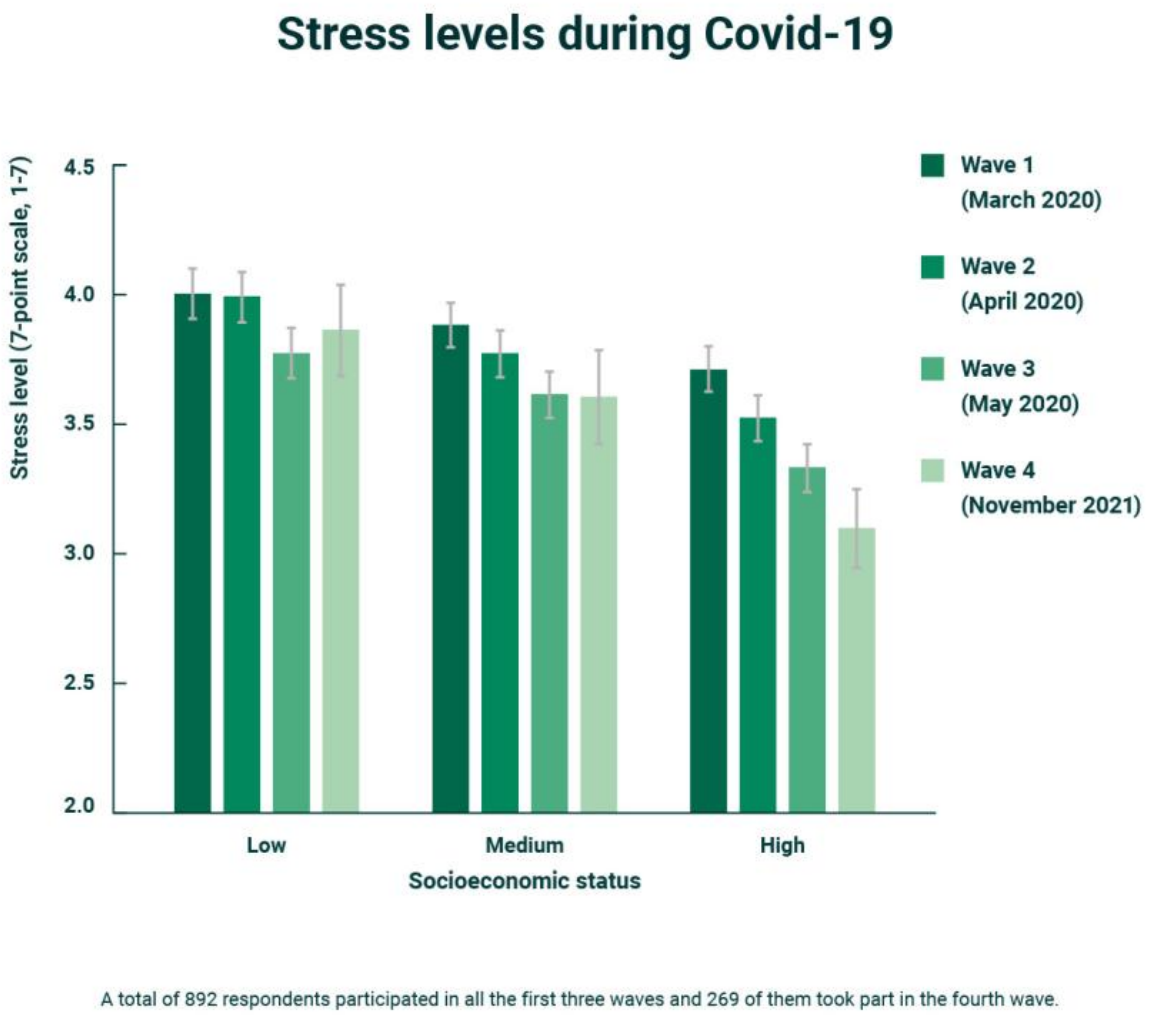
Notably, we asked participants to indicate their socioeconomic status – in terms of financial wealth, education and job – on a 10-point ladder, with 10 being the highest. As it happens, **past research** shows that self-assessed social standing and perceived inequality may be stronger determinants of health outcomes than objective measures such as income.

We assessed respondents' stress levels by asking them to indicate how often each of eight statements, such as "I find myself getting agitated", described

them. Temporal focus was measured by items such as “I replay memories of the past in my mind” and “I focus on my future”. Well-being expectations were measured by respondents indicating where they thought they would stand on a 10-point ladder scale, with 10 representing their best possible life, in a year’s time.

Analyses of the responses revealed that, in the early, chaotic months of the pandemic, lower-status respondents gained more weight than higher-status ones. This was brought on by a higher level of stress and not by respondents being less focused on the future, having worse expectations about the future, spending less time outdoors or being deprived of food.

Sadly, lower-status respondents continued to display elevated stress 20 months into the crisis. Meanwhile those of higher status, who suffered less strain to begin with, experienced significantly less stress. People who initially reacted to the pandemic by eating more, eating less healthily and exercising less were likely to still be doing so 20 months later, while those who ate less and better and exercised more also persisted with their new habits. As a result, those who gained weight retained most of the extra pounds whereas those who lost weight kept it off.



A total of 892 respondents participated in all the first three waves and 269 of them took part in the fourth wave.

Healthy nudges for the less privileged

A similar association between stress and weight gain during Covid-19 has been observed in a separate study involving **British** participants. Taken together, that study and ours suggest that although Covid-19 is no longer a global health emergency, it is likely to cast a long shadow in the form of worsened health inequalities by fuelling elevated, chronic stress among lower-status members of society. For not only does stress lead to weight gain and possibly obesity over time, it is also associated with inflammations that can cause diseases such as cancer and diabetes, and impact general health.

Our study offers takeaways for the ongoing, long-term war on obesity. The first is that governments and responsible corporations should design interventions with socioeconomic differences in mind. These might include measures that directly target higher and persistent levels of stress among

the less-privileged, as well as behavioural nudges or programmes that offer financial rewards for engaging in healthy behaviours, since monetary incentives appear to be particularly effective among this demographic. Think discount coupons, rather than cognitive nudges like **nutritional labelling**.

Health authorities might also look into tightening regulations around marketing tactics designed to **frame nutritionally poor food as healthy**, in light of Pierre's recent research that shows that people with obesity are more responsive to these tactics than those of normal weight.

Our findings hopefully shed light on the strong albeit complex link between socioeconomic status and obesity. The sobering fact is that the less advantaged among us are also more vulnerable to stress, weight gain and a whole host of adverse health outcomes, including being sickened by the coronavirus. These factors in turn trigger more stress and eventually a vicious spiral. More research on the underlying causes of the stress and measures to tackle them will go a long way towards alleviating health inequalities.

Find article at
https://knowledge.insead.edu/responsibility/unravelling-link-between-socioeconomic-status-and-obesity

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About the research

"Inequality, Stress, and Obesity: Socioeconomic Disparities in the Short- and Long-Term Effects of the COVID-19 Pandemic" is published in *Journal of the Association for Consumer Research.*

About the series

Healthcare Management

The **Healthcare Management Initiative** at INSEAD was founded on the belief that many of the systemic challenges of the healthcare industry globally can benefit from the application of principles that stem from rigorous, evidence-based thought leadership.

Covid-19

Covid-19 is no longer a global health emergency but its impact on public health, the global economy and the future of work cannot be overstated. INSEAD's thought leaders — both faculty and their close collaborators in the practitioner and entrepreneurship communities — give their informed perspectives that could help us not just weather the crisis but emerge from it stronger than ever.