

New research from CEDAR is showing that, beyond conventional indicators of socioeconomic status, financial hardship at all levels of society can affect people's diet, health and weight. With financial uncertainty affecting people in different ways, what does this mean for strategies to promote healthy weight?

Socioeconomic status, hardship and obesity

It is well established that those with lower socioeconomic status (SES) are more likely to be overweight and obese. However, there is evidence that conventional measures of SES, such as educational attainment or income, do not capture all the different elements of a person's social and economic position that might be relevant for health.

New research from CEDAR indicates that beyond SES, financial hardship (not having enough money to meet your needs or difficulty paying bills) is also associated with less healthy diets and obesity.

Hardship and weight gain in working adults

CEDAR researchers analysed data on 3701 adult British civil servants over 11 years in the **Whitehall II Study**, examining their weight gain and whether they felt that they had persistent difficulty paying bills or affording food or clothing. The analysis found that:

- Women who reported persistent financial hardships gained significantly more weight over 11 years compared to those who did not. No consistent pattern was seen in men.
- 46% of women in the study gained at least 5kg, and were significantly more likely to gain this excess weight if they frequently had difficulty affording adequate food and/or clothing.
- Lifestyle factors such as diet, exercise and smoking were not sufficient to explain the excess weight gained from persistent hardships in this study.



Hardship, diet and weight among the over 50s

Older people in particular may be vulnerable to financial hardships, commonly resulting from events they are more likely to experience such as divorce, death of spouse, or job loss.

CEDAR researchers assessed the social and psychological circumstances of nearly 18,000 people aged over 50 in the **EPIC-Norfolk study**. They examined whether older people had sufficient money to meet their needs, and how often they had difficulty affording essentials and paying bills. This information was then examined in relation to diet and weight.

Key results over the page.

Brief in brief

- Traditional measures of socioeconomic status do not provide a full picture of how a person's economic situation is associated with their health and weight
- Data from the Whitehall II Study showed that women who reported persistent financial hardships gained more excess weight compared to those who did not.
- EPIC-Norfolk data showed a greater likelihood of obesity for older men and women who reported hardships. Financial hardships were also associated with less healthy eating in older women and men.
- As well as wider strategies to tackle general health inequalities, interventions such as fuel assistance and money management programmes may be required to reduce the impact of financial hardships on health.

EPIC-Norfolk results

- British over-50s reporting greater financial hardships were more likely to be obese and have a larger waistline than those who did not report hardships.
- The relationship between financial hardships and obesity was stronger than the one between socioeconomic status and obesity.
- Women who reported greatest difficulty paying bills were more than twice as likely to be obese as those who had no difficulty. For men with greatest difficulty paying bills, this effect was even stronger - approaching two and a half times as likely.
- Financial hardships, lower education, lower social class, and not owning a home were each associated with the consumption of lower fruit and vegetable variety.
- There were gender differences in the effect of financial hardship on diet. For men, greater hardship was more strongly related to lower variety of vegetables; for women, hardship was more strongly related to lower fruit variety.

Future research: how is hardship and obesity connected?

The relationship between financial hardship, diet and obesity is potentially influenced by a number of environmental and personal factors:

- Healthy food can be more costly and less accessible for those experiencing hardships. Whilst those with greater hardships may purchase less food as a trade-off with paying utility bills, they may also purchase cheaper, more calorific food, which could contribute to excess weight.
- Financial hardships may cause stress and lack of sleep, which are both associated with obesity.
- Other research has shown considerable cognitive burdens associated with financial hardships, which can trump rational decision making. Psychological traits such as a person's perceived ability to control and make changes in his or her life may improve the ability to cope with hardships.

Policy implications

- When tackling the financial factors that influence diet and obesity, it is important to consider elements beyond education, social class or home-ownership.
- In particular, older people may need support in their more immediate and pressing financial hardship, for instance support in accessing fuel assistance programmes to avoid the 'heat or eat' dilemma.
- Coping and money management programmes are also important. There are existing programmes that could be better supported to reach more of those who could benefit - e.g. AgeUK's *Money Matters*: www.ageuk.org.uk/money-matters
- Money management is now part of the national curriculum in England and Wales. Early education in key life skills could be enhanced by additional interventions in the workplace or community centres that provide advice and financial planning tools.

What is CEDAR?

The Centre for Diet and Activity Research is studying the factors that influence dietary and activity related behaviours, developing and evaluating interventions, and helping shape public health practice and policy. CEDAR draws on the expertise of a wide range of scientific disciplines, including behavioural science, biostatistics, epidemiology, health geography, health economics and human nutrition research.

References and resources

- A fully linked and referenced version of this Evidence Brief can be found at www.cedar.iph.cam.ac.uk/resources/evidence
- *Persistent financial hardship, 11-year weight gain and health behaviors in the Whitehall II Study*. Conklin et al. *Obesity*, August 2014 DOI: 10.1002/oby.20875 <http://onlinelibrary.wiley.com/doi/10.1002/oby.20875/full>
- *Socioeconomic status, financial hardship and measured obesity in older adults: a cross-sectional study of the EPIC-Norfolk cohort*. Conklin et al. *BMC Public Health* 2013, 13:1039 www.biomedcentral.com/1471-2458/13/1039
- *Variety more than quantity of fruit and vegetable intake varies by socioeconomic status and financial hardships: Findings from older adults in the EPIC cohort*. Conklin et al. *Appetite* September 2014 www.sciencedirect.com/science/article/pii/S0195666314004413



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