

How does socio-economic status influence body weight? The mediating role of psychological distress and maladaptive eating behaviours

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Socio-economic status (SES) and obesity

- Lower socio-economic status is robustly associated with obesity.
- Areas with higher levels of poverty also have high levels of child obesity.
- Socio-economic inequalities in child weight reversed from 1953-2015.

Socioeconomic inequalities in childhood and adolescent body-mass index, weight, and height from 1953 to 2015: an analysis of four longitudinal, observational, British birth cohort studies

David Bann, William Johnson, Leah Li, Diana Kuh, Rebecca Hardy

Why are there SES inequalities in obesity levels?

- Food insecurity – limited or uncertain availability of nutritionally adequate and safe foods.
- Lower-income areas as “Food Deserts” (Larson et al., 2009; Beaulac et al., 2009).
- But individual differences and psychological factors also important but under-studied.



The psychology of eating

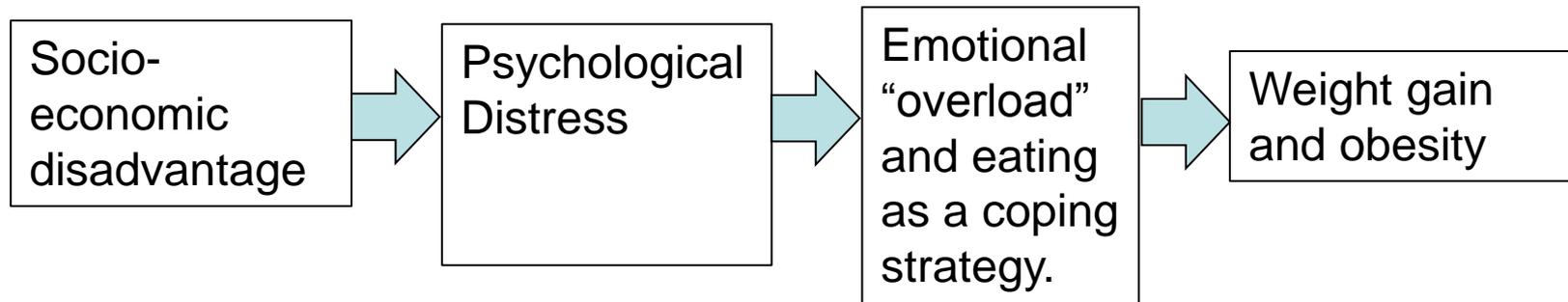
- Eating is much more than just responding to a biological need.
- Our mood affects what we eat. Emotions such as feeling stressed, sad or anxious can lead to “eating to cope”.
- Eating to cope is linked with disordered eating and having a higher body weight (Boggiano et al., 2014).
- Obesity often co-occurs with mental health problems, such as depression and anxiety (Luppino et al., 2010).

Socio-economic disadvantage and psychological distress

- There is a well-established link between socio-economic disadvantage and higher levels of stress and mental health problems (Hatch et al., 2011; Timms, 1996).
- Being chronically stressed takes its toll on physical and mental health.
- Stress makes it harder to control our behaviour, to engage in effortful behaviour and to resist temptation (Jones et al., 2013).
- Stress can also lead to unhealthy behaviours such as drinking alcohol or eating unhealthy food as a way of coping (Boggiano et al., 2015; Fanelli Kuczmariski et al., 2017).

Socio-economic disadvantage, psychological distress and obesity

- New theoretical model of obesity (Hemmingsson, 2015):
Psychological and emotional distress is a fundamental link between socioeconomic disadvantage and weight gain.



- In the current study, we tested these predictions.

Method

Participants and design

- Adults ($N = 150$) from a range of socio-economic backgrounds.
- Cross-sectional design.

Measures

- Income and education level as indicators of socio-economic status.
- Psychological distress (Depression, Anxiety and Stress Scale).
- Emotional eating (Dutch Eating Behaviour Questionnaire).
- Resilience (Brief Resilience Scale).
- Height and weight for calculation of body mass index (BMI).



Procedure

- Advertised through Urban Community and Neighbourhood Centres (UCAN's), situated in deprived areas.
- Online advertisement.
- Paper based copies.

Results

As predicted, there was a significant indirect effect of socio-economic status on BMI via psychological distress and increased emotional eating:



Resilience was also entered into the model as a moderator but this did not change the main finding.

Summary of findings

- The relationship between lower socio-economic status and body weight may be partly explained by psychological distress and subsequent emotional eating as a coping strategy.
- Results provide new insight into psychological processes that may underpin the association between lower socio-economic status and health.
- Targeting unhealthy coping behaviours in response to distress may be one way of reducing obesity and improving health in lower-income populations.

Current work on household food insecurity

AIM. To develop understanding of the impact of household food insecurity (HHFiS) on mental health, eating behaviour, food choice and obesity.

Key questions:

Is HHFiS related to psychological distress (depression, anxiety, stress) and eating as a coping strategy?

Do distress and eating to cope mediate the relationship between HHFiS and poor diet quality/obesity?

How do you feel about your household's current access to food?

It's **depressing** because it should be easier to live, basically, and get food.

I'm really **scared** I'm gonna run out of food.

I always **worry**. Every month and I'm worrying now because I know it's never gonna last.

I just **stress**. And you don't get too much sleep. Or I **panic** that if it wasn't for food banks I don't know what I would do.

You find it, like, hard to talk as well, like, I haven't had hardly anything to eat, that's why I feel a bit, like, not on the ball.

Overall Conclusions and Implications

- Action is needed to increase the availability of healthy nutritious foods in lower income areas. But individual psychology is also important.
- Stress makes it harder to engage in behaviour that is perceived as effortful → need to make healthy eating the easy choice.
- Greater psychological support is needed in lower income communities.
- Upstream changes to social welfare policies are needed to tackle food poverty and improve physical and mental health.



It's poverty, not individual choice, that is driving extraordinary obesity levels

February 19, 2018 5.21pm GMT

“We need to collectively tackle the places where obesity germs breed – in stressed communities characterised by insecure and erratic employment, inadequate education, stress, depression and a lack of social cohesion. That this requires an enormous shift in public priorities is only to be expected – but the consequences of not acting are far worse.”

<https://theconversation.com/its-poverty-not-individual-choice-that-is-driving-extraordinary-obesity-levels-91447>