ROBERT GORDON UNIVERSITY ABERDEEN

Obesity, dietary inequalities, and implications arising from poverty-driven food and other material insecurities

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Overview

Designed to help us reflect on:

- Obesity as a socially patterned public health problem in the UK context
- Dietary inequalities and the current economic context
- What it means to live with poverty-driven food and other material insecurities
- Why living with precarious, uncertain and/or insufficient economic access to food and other material needs (fuel & housing) might be driving dietary inequality and obesity in the UK

Obesity and health inequalities: AKA stuff we all know only too well

Figure 1. Proportion of adults overweight and obese, 1995-2017 (ages 16-64) and 2003 to 2017 (ages 16+)

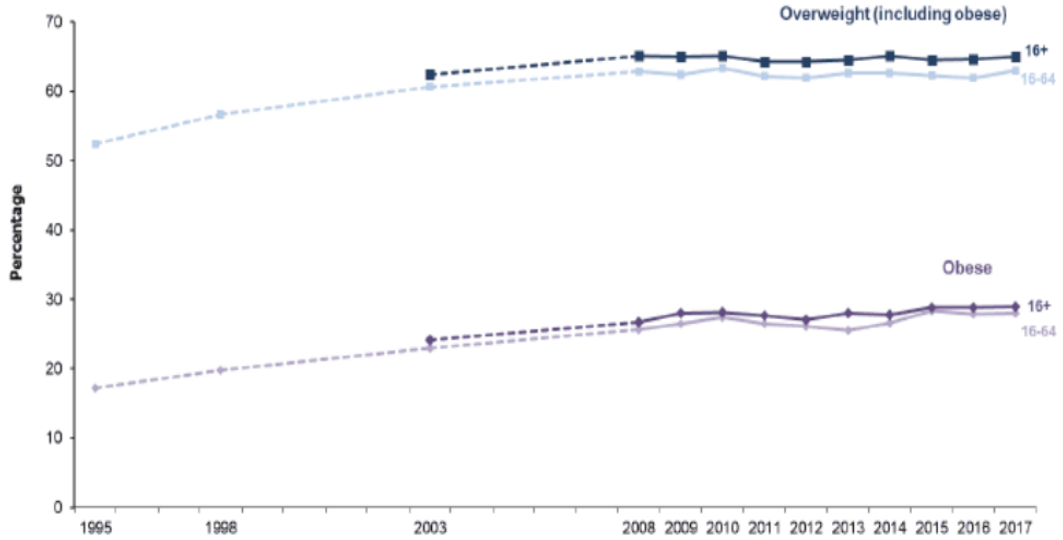
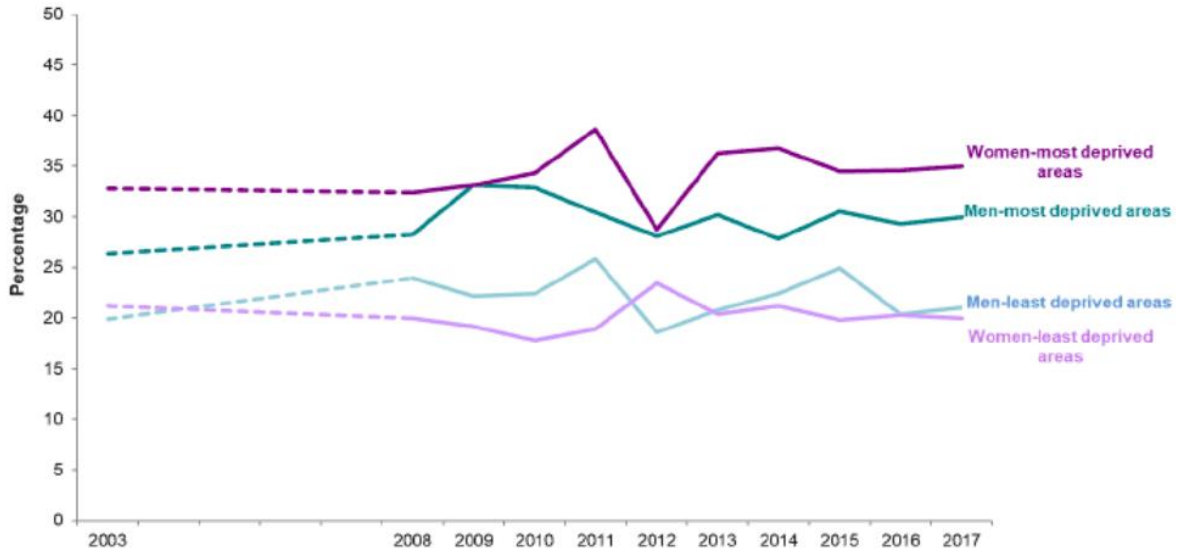


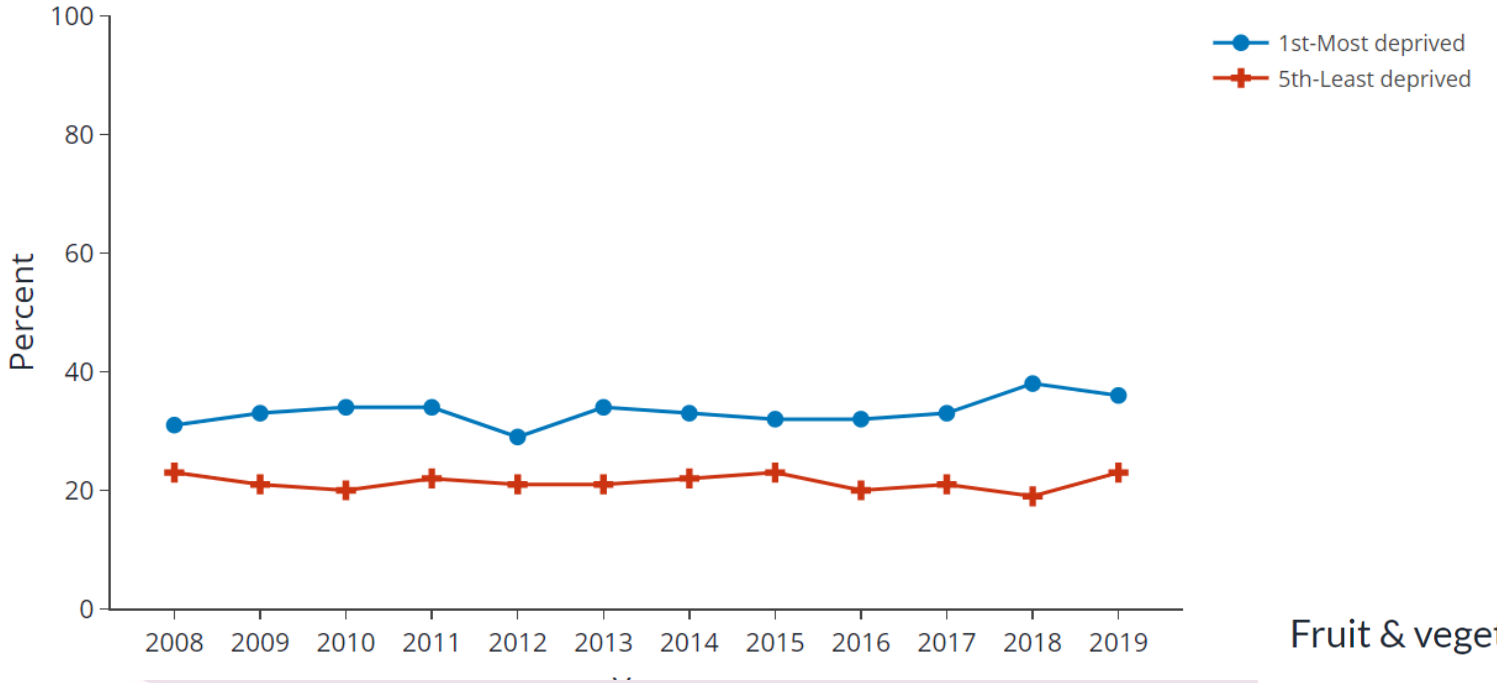
Figure 2. Proportion of adults (16+) obese by gender and area deprivation[8], 2003-2017



[Diet and healthy weight: monitoring report 2020 - gov.scot (www.gov.scot)]

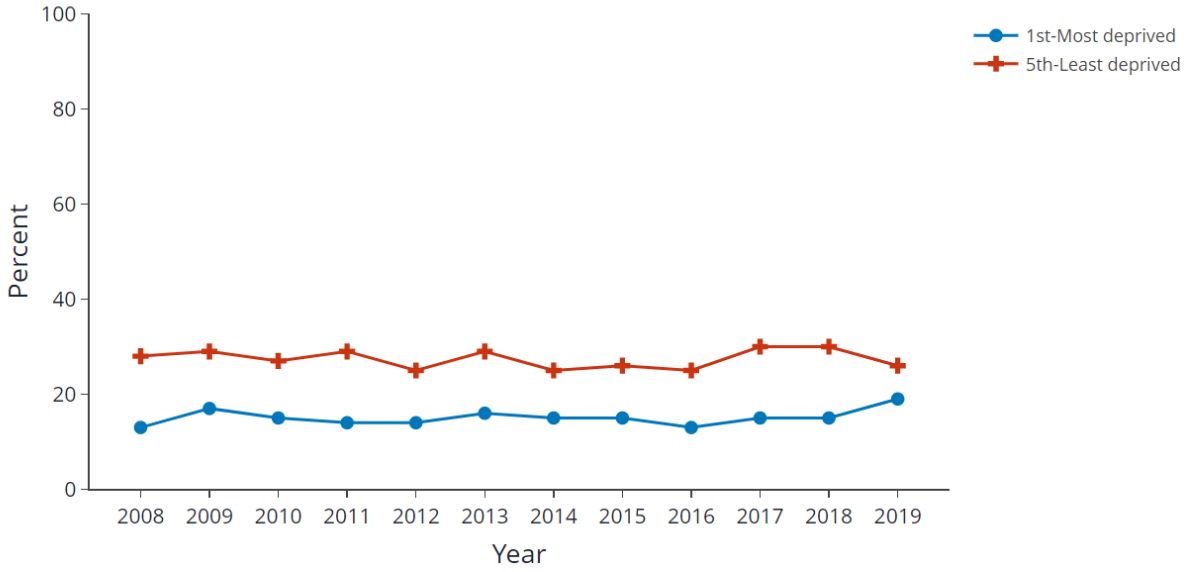
The gap has been particularly pronounced for women in recent years - obesity rates in 2017 were 35% in the most deprived areas compared to 20% in the least deprived.

Obesity by SIMD (age-standardised), Obese, Scotland**



Source: Scottish Health Survey 2018

Fruit & vegetable consumption (guidelines) by SIMD (age-standardised), 5 portions or more, Scotland**



[FF_Broken_Plate_Report-2021_Overview.pdf (foodfoundation.org.uk)]

New(?) stuff to think about

Food expenditure in Scotland (2007-2012)

Figure 1: Weekly food expenditure (absolute £) on food from the LCFS for HBAI and Non-HBAI

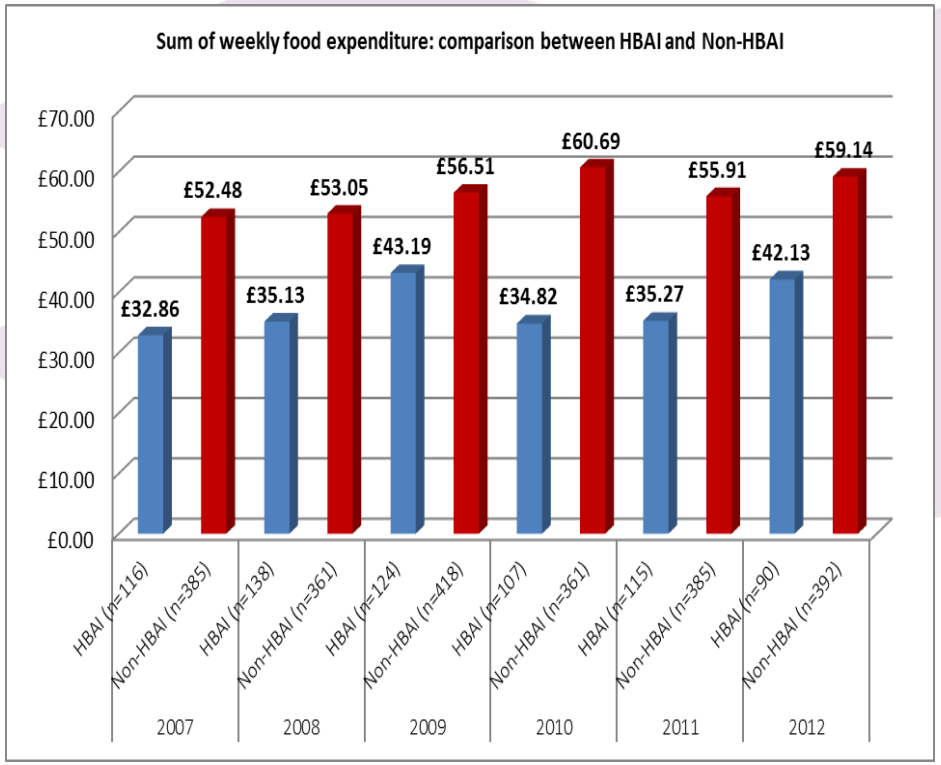
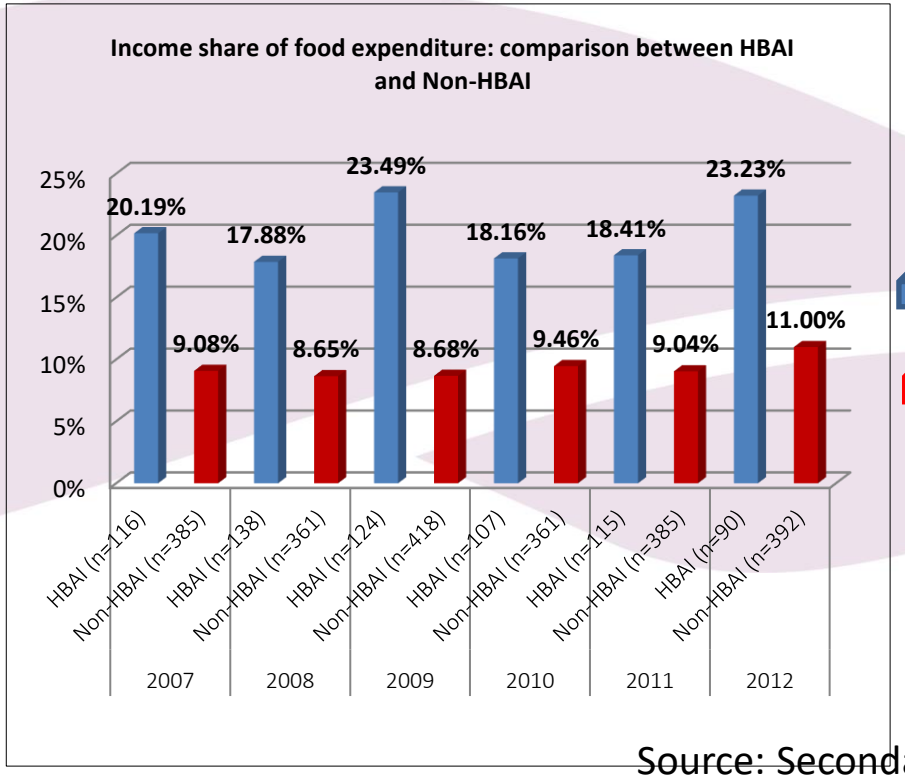


Figure 2: Proportion of equivalised income spend on food from the LCFS for HBAI and Non-HBAI



Source: Secondary Analysis of Living Costs and Food Survey

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The poorest fifth of UK households would need to spend 40% of their disposable income on food to meet Eatwell Guide costs. This compares to just 7% for the richest fifth.

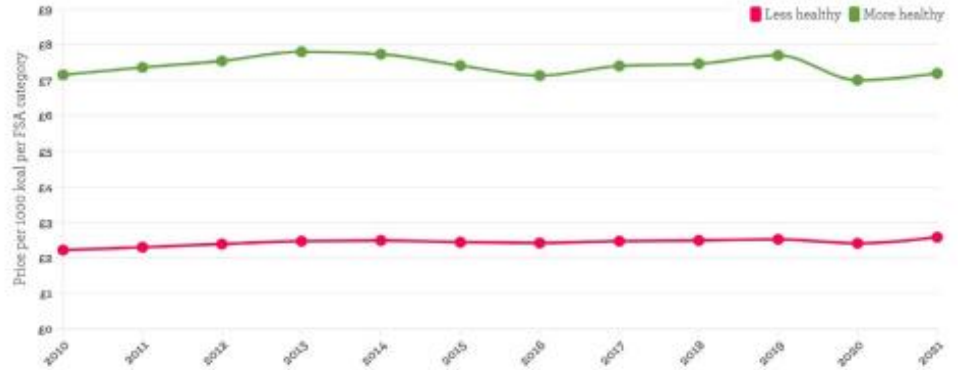
Percentage of disposable income* used up if the cost of the Eatwell Guide was spent by all households, by income quintile

*after housing costs. **Source:** Secondary analysis of the Family Resources Survey, 2017/18 and 2018/19

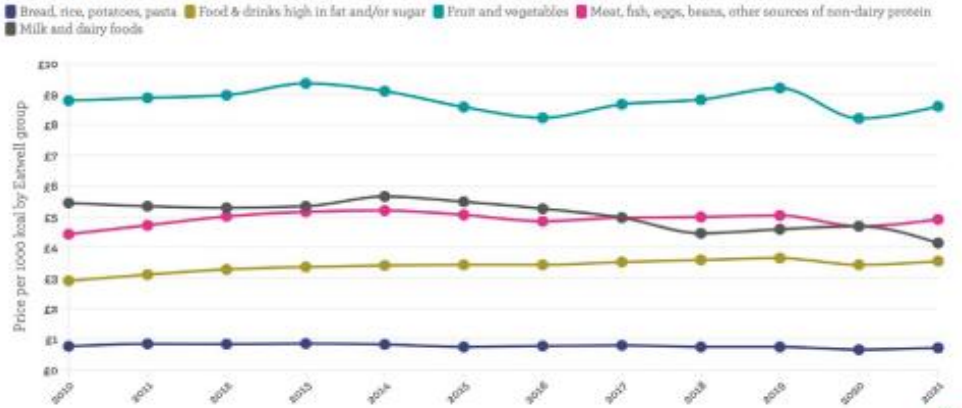
FOOD PRICES

More healthy foods are nearly three times as expensive as less healthy foods calorie for calorie

Average price of foods per 1,000 calories using the Food Standards Agency's nutrient profiling score category



Average price of foods per 1,000 calories by Eatwell Guide food group



Source: CEDAR analysis using Consumer Price Index (CPI) average retail price food indices, 2010–2021 (ONS). Please note all averages are unweighted means.

With thanks to CEDAR

Why Don't We Just… understand why it costs more to be poor?

- "At 5.4 per cent, it's the highest annual increase the UK has seen in decades and it means that a shopping bill that cost £100 last year now costs roughly £5.40 more for the same exact goods. However, these figures are based on averages across the entire economy and focusing on just one number can mask how poorer people are experiencing the rising cost of living."
- "In their Twitter thread, Monroe documents the massive price increases occurring across many staple food items for discount brands – **seeing 30-300 per cent increases, miles away from the headline 5 per cent figure**. Plus, some discount brands get discontinued, often meaning a large price increase to the next-cheapest brand."

Dominic Caddick
The Big Issue *Why Don't We Just… understand why it costs more to be poor?*
14th Feb, 2022
Why Don't We Just… understand why it costs more to be poor? - Big Issue North

Here we need to talk about food insecurity and what that looks like for people so affected

Household Food Insecurity : An indication of economic hardship

‘The inability to acquire or consume an adequate quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so.’ (Radimer *et al* 1990)

‘the inability to acquire or consume an adequate quality or sufficient quantity of food due to insufficient income’

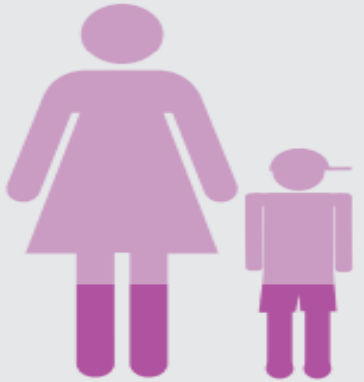
Household Food Insecurity in Canada - PROOF (utoronto.ca)

Scottish Health Survey 2018
Food Insecurity Prevalence

9% of adults experienced food insecurity in 2018 (as defined by being worried during the past 12 months that they would run out of food due to lack of money or resources).

6% of all adults also said they had eaten less than they should for this reason, while 3% of adults said that they had actually run out of food because of a lack of resources.

In 2017/2018, the household types most likely to have experienced food insecurity were single parents and adults below the age of 65 living alone:



25%
of single parents

21%
of adults aged under 65 living alone

- In 2017/2018, 16% of adults in the most deprived areas reported being worried about running out of food, compared with 4% in the least deprived areas.
- In 2017/2018, mental wellbeing was substantially lower for those reporting food insecurity: mean WEMWBS score of 42.2 compared with 50.3 for other adults.

[Scottish Health Survey 2018: summary report - gov.scot (www.gov.scot)]

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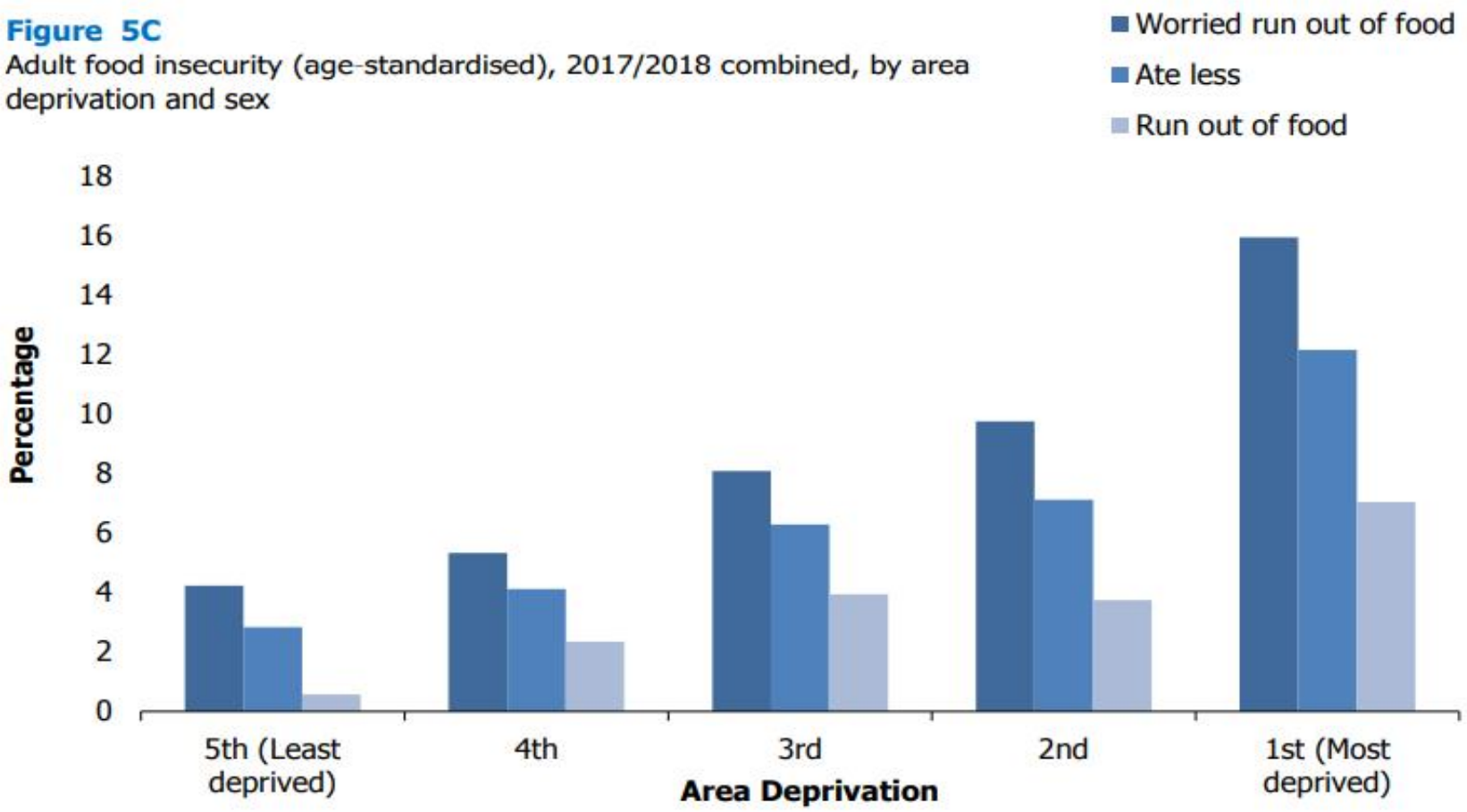
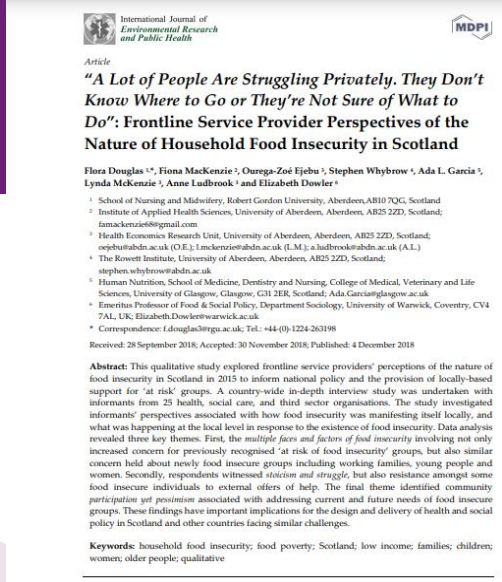
Household Food Insecurity Prevalence: Scottish Health Survey 2018

Figure 5C
Adult food insecurity (age-standardised), 2017/2018 combined, by area deprivation and sex



What it means to be food insecure in the Scottish context: Frontline workers' perspectives

- Lacking choice and experiencing uncertainty about
  - what an individual can buy to eat,
  - when or where they are able to shop **and** eat.



International Journal of Environmental Research and Public Health

MDPI

Article

"A Lot of People Are Struggling Privately. They Don't Know Where to Go or They're Not Sure of What to Do": Frontline Service Provider Perspectives of the Nature of Household Food Insecurity in Scotland

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Received: 28 September 2018; Accepted: 30 November 2018; Published: 4 December 2018

Abstract: This qualitative study explored frontline service providers' perceptions of the nature of food insecurity in Scotland in 2015 to inform national policy and the provision of locally-based support for 'at risk' groups. A country-wide in-depth interview study was undertaken with informants from 25 health, social care, and third sector organisations. The study investigated informants' perspectives associated with how food insecurity was manifesting itself locally, and what was happening at the local level in response to the existence of food insecurity. Data analysis revealed three key themes. First, the *multiple faces and factors of food insecurity* involving not only increased concern for previously recognised 'at risk of food insecurity' groups, but also similar concern held about newly food insecure groups including working families, young people and women. Secondly, respondents witnessed *stoicism and struggle*, but also resistance amongst some food insecure individuals to external offers of help. The final theme identified community *participation yet pessimism* associated with addressing current and future needs of food insecure groups. These findings have important implications for the design and delivery of health and social policy in Scotland and other countries facing similar challenges.

Keywords: household food insecurity; food poverty; Scotland; low income; families; children; women; older people; qualitative

- **Synonymous with people being compelled to seek out nutrient poor, cheap food in order to balance the household budget and pay for other essential household costs, such as housing and energy/fuel.** *Douglas et al, 2018*

The poor know what they should be eating and cooking for health too

..I know my body needs so much fat, it needs so much carbs, it needs so much, ..I know if I haven't got it, [and] try to make up for it when I have got it. So I do know the awareness of… not to eat two boxes of cheese at once….I don't get my benefits till next week so I got to get a food parcel. Normally make that last… I normally do, eh, pasta and masala…And you know that veg that is there as well. I add that through it. So that's a couple of meals. (Single male food bank user)

Public Health

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Accepted date 29June 2015,
Published date 23 July 2015

http://www.aimspress.com/

Research article

Resourcefulness, Desperation, Shame, Gratitude and Powerlessness: Common Themes Emerging from A Study of Food Bank Use in Northeast Scotland

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Abstract: There is growing policy maker and public concern about current trends in food bank use in Scotland. Yet little is known about the experiences of those seeking help from food banks in this country. This research aimed to address this issue by studying the use and operation of a food bank situated in a rich northeast city during January and June 2014. The study aimed to establish who was seeking help from the food bank, their reasons for doing so, and what those who did thought of, and dealt with the food they received from it. Consequently, an audit of the food bank's client database, four months of participant observation based in the food bank, and seven face-to-face interviews with current and former food bank clients were conducted. The audit revealed that clients came from a range of socio-economic backgrounds, with men more likely to access it compared to women. Debt and social security benefit delays were cited as the main reasons for doing so. Qualitative data confirmed that sudden and unanticipated loss of income was a key driver of use. Resourcefulness in making donated food last as long as possible, keeping fuel costs low, and concern to minimise food waste were commonly described by participants. Desperation, gratitude, shame and powerlessness were also prevalent themes. Furthermore, clients were reluctant to ask for food they normally ate, as they were acutely aware that the food bank had little control over what it was able offer. Insights from this study suggest that recent UK policy proposals to address food poverty may have limited impact, without concomitant effort to address material disadvantage. Research is urgently required to determine the precise nature and extent of household level food insecurity in Scotland, and to consider monitoring for adverse physical and mental health outcomes for those affected by it.

Keywords: food poverty; food banks; deprivation; Scotland; nutrition; mental well-being;

Being food insecure affects how you feel

Well, it definitely affects your health cause, if you have, erm, nothing in the fridge that you would consider nice then you're just going to not bother and you're going go back to bed and not eat anything... it will lower your mood ... (Mary, 53)

Douglas et al. BMC Public Health (2020) 20:1309
https://doi.org/10.1186/s12889-020-09299-9

BMC Public Health

RESEARCH ARTICLE Open Access

A qualitative investigation of lived experiences of long-term health condition management with people who are food insecure

Flora Douglas[1*], Emma MacIver[1] and Chris Yuill[2]

Abstract

Background: As more people are living with one or more chronic health conditions, supporting patients to become activated, self-managers of their conditions has become a key health policy focus both in the UK and internationally. There is also growing evidence in the UK that those with long term health conditions have an increased risk of being food insecure. While international evidence indicates that food insecurity adversely affects individual's health condition management capability, little is known about how those so affected manage their condition(s) in this context. An investigation of lived experience of health condition management was undertaken with food insecure people living in north east Scotland. The study aimed to explore the challenges facing food insecure people in terms of, i. their self-care condition management practices, and ii. disclosing and discussing the experience of managing their condition with a health care professional, and iii. Notions of the support they might wish to receive from them.

Methods: Twenty in-depth interviews were conducted with individuals attending a food bank and food pantry in north east Scotland. Interview audio recordings were fully transcribed and thematically analysed.

Results: Individuals reporting multiple physical and mental health conditions, took part in the study. Four main themes were identified i.e.: 1. food practices, trade-offs and compromises, that relate to economic constraints and lack of choice; 2. illness experiences and food as they relate to physical and mental ill-health; 3. (in) visibility of participants' economic vulnerability within health care consultations; and 4. perceptions and expectations of the health care system.

Conclusions: This study, the first of its kind in the UK, indicated that participants' health condition management aspirations were undermined by the experience of food insecurity, and that their health care consultations in were, on the whole, devoid of discussions of those challenges. As such, the study indicated practical and ethical implications for health care policy, practice and research associated with the risk of intervention-generated health inequalities that were suggested by this study. Better understanding is needed about the impact of household food insecurity on existing ill health, wellbeing and health care use across the UK.

Keywords: Household food insecurity, Food poverty, Chronic health conditions, Long-term health conditions, Self-management, Self-care, Support for self-care, Lived experiences, Qualitative research

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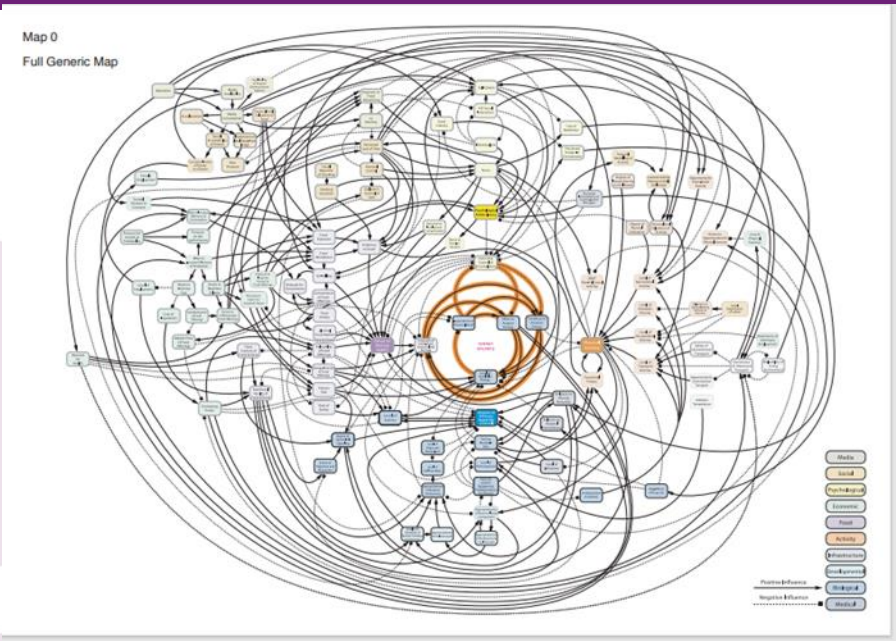
Multifactorial causation accepted, but……

A myriad of socio-economic factors – including income, housing, education, access to space, exposure to advertising and sale of unhealthy foods – impact upon whether we can be active or eat healthily and thus ultimately our risk of developing obesity.



Professor **Rachel Batterham** is Head of the Centre for Obesity Research, Department of Medicine, University College London and Special Advisor on Obesity to the Royal College of Physicians. Professor Batterham is one of the founding members, and Chair, of Obesity Empowerment Network UK

Inequalities in Health Alliance | RCP London

Obesity Action Scotland
Healthy weight for all

» **People living in the most deprived areas of Scotland, particularly children, are more likely to have obesity than those living in the more affluent areas**

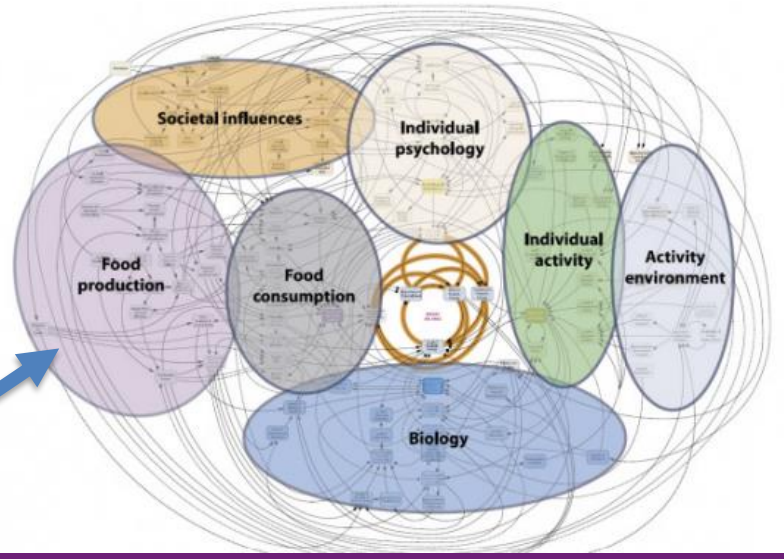
» **Almost one third of Scottish children have obesity or are overweight, even more in deprived communities**

prevalence__evidence_base_b-30.pdf (obesityactionscotland.org)

The Foresight report[17] for the UK government identified 7 clusters of factors/behaviours that are contributing to obesity *(termed a 'system's map')*

1. **food consumption** – characteristics of the foodmarket in which consumers operate e.g. the level of food abundance and variety, the nutritional quality of food and drink, the energy density of food, and portion size
2. **food production** – drivers of the food industry e.g. the pressure for profitability, the price of food, effort to increase efficiency of production; variables reflecting the wider social and economic situation in the UK e.g. purchasing power and societal pressure to consume
3. **individual psychology** – psychological attributes e.g. self-esteem, stress, 'demand for indulgence', level of food 'literacy'; variables related to the level of parental control and level of children's control of diet
4. **societal influences** – factors that have influence at the societal level e.g. education, media availability and consumption, TV watching; variables related to social norms around weight and body image
5. **physiology** – biological variables e.g. genetic predisposition to obesity, level of satiety and resting metabolic rate
6. **individual activity** – individual's or group's level of recreational, domestic, occupational and transport activity, parental modelling of activity and learned activity patterns
7. **physical activity environment** – factors that may facilitate or obstruct physical activity e.g. cost of physical exercise, perceived danger in the environment and the 'walkability' of the living environment; variables that reflect cultural values associated with activity patterns

These clusters are interconnected. For example, some individuals may exhibit compensatory behaviour such as allowing themselves an energy-dense snack as a 'reward' after exercising. This connectivity is important when designing/delivering interventions, as it may help to explain unexpected impacts or losses of impact due to mitigating effects of different factors/ behaviours.



2 food production – drivers of the food industry e.g. the pressure for profitability, the price of food, effort to increase efficiency of production; variables reflecting the wider social and economic situation in the UK e.g. purchasing power and societal pressure to consume

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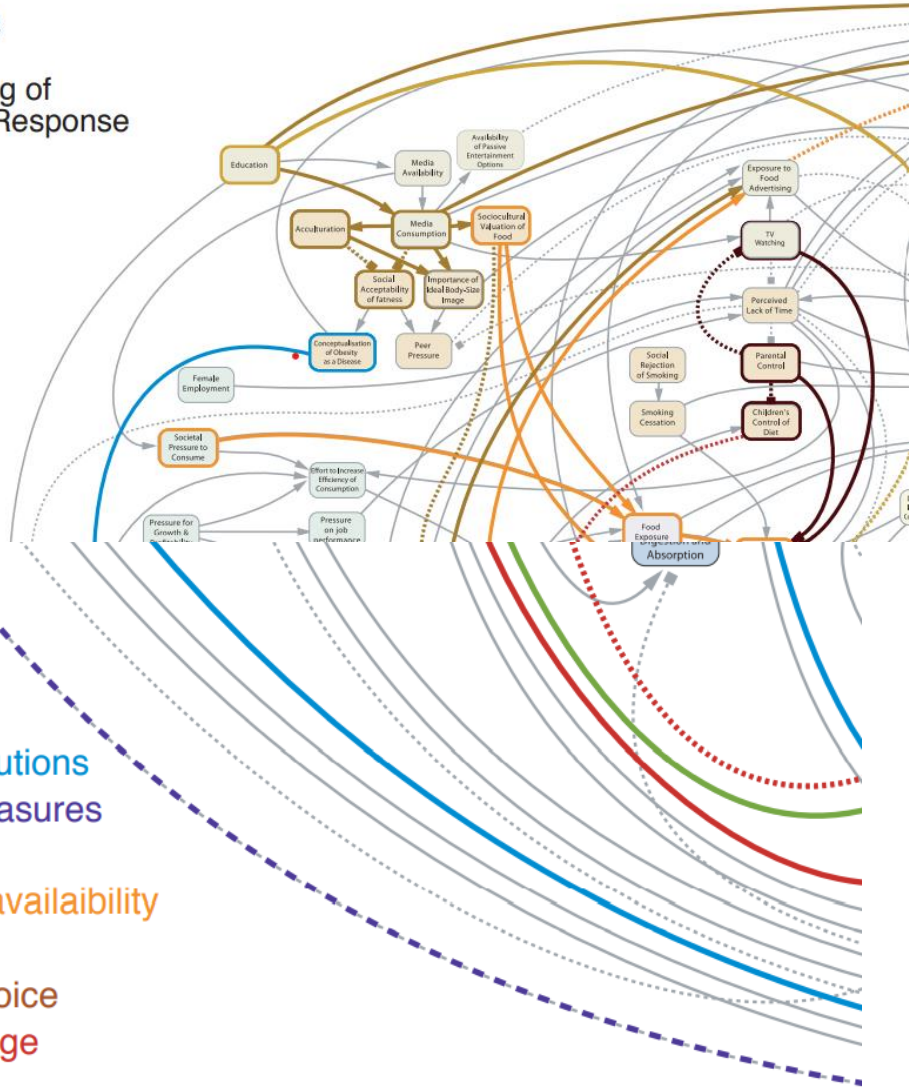
But how much attention are we really paying to individual/ household economic hardship as a determinant of obesity and overweight in our research, policy and practice focus to date?

Map 33

Mapping of Policy Response Ideas



2. Safety perceptions
3. Walkability
9. Tax on food
10. Fiscal levers on health institutions
11. Individual targeted fiscal measures
12. Improve food literacy
13. Control food exposure and availaibility
14. Change cultural norms
15. Technology for individual choice
16. Interventions at early life stage
17. Penalise parents

[07-1177-obesity-system-atlas.pdf]

Conklin et al. BMC Public Health 2013, 13:1039
http://www.biomedcentral.com/1471-2458/13/1039

BMC Public Health

RESEARCH ARTICLE Open Access

Socioeconomic status, financial hardship and measured obesity in older adults: a cross-sectional study of the EPIC-Norfolk cohort

Annalijn I Conklin[1,2], Nita G Forouhi[1], Marc Suhrcke[2,3], Paul Surtees[4], Nicholas J Wareham[1,2] and Pablo Monsivais[2,4*]

Abstract

Background: Socioeconomic status is strongly associated with obesity. Current economic circumstances are also independently associated with self-reported weight status in Finnish civil servants. We aimed to examine three types of financial hardship in relation to measured general and central obesity in a general population of older adults, while considering conventional socioeconomic indicators.

Methods: Data from 10,137 participants (≥50 years) in the EPIC-Norfolk cohort who responded to a postal Health and Life Experiences Questionnaire (1996–2000) and attended a clinical assessment (1998–2002). Multivariable logistic regression models assessed likelihood of general obesity (BMI ≥30 kg/m^2) and central obesity (women: ≥88 cm; men: ≥102 cm) calculated from measured anthropometrics.

Results: Obesity prevalence was consistently patterned by standard socioeconomic indicators, with over-50s in the lowest social class being twice as likely to be obese than those in the highest class (women OR 2.10 [CI95: 1.41—3.13]; men OR 2.36 [1.44—3.87]). After adjustment for socioeconomic status, reporting *having less than enough money for one's needs* (compared to more than enough) was associated with obesity in women (OR 2.04 [1.54—2.69]) and men (OR 1.83 [1.34—2.49]). Similar associations were demonstrated between obesity and *always or often not having enough money for food/clothing* (women OR 1.40 [1.03—1.90]; men OR 1.81 [1.28—2.56]), compared to reporting this never occurred. The strongest independent associations were seen for obesity and reported greatest level of *difficulty paying bills* (women OR 2.20 [1.37—3.55]; men 2.40 [1.38—4.17]), compared to having no difficulties. Findings for central obesity were slightly higher in women and lower in men.

Conclusions: Obesity in British over-50s was more likely in study participants who reported greater financial hardship, even after education, social class and home ownership were taken into account. Public health policies need to consider the hitherto neglected role of financial hardship in older people, especially difficulty paying bills, as part of strategies to prevent or reduce obesity.

Keywords: Body mass index, Waist circumference, Anthropometry, Socioeconomic status, Financial hardship, Elderly, Healthy ageing, EPIC-Norfolk

"Our findings confirm that it is **not sufficient to solely** consider **education, social class** or **home-ownership** when examining the **role of socioeconomic factors** in the prevention of obesity or in weight support among older adults.

Rather, public health policies and strategies need to support older people in terms of their **more contemporaneous economic concerns**. Interventions and practice standards to reduce or prevent obesity might include **coping and monetary strategies and a focus on meeting bill payments** might be a suitable target for approaches to address obesity."

*"**Parental nutrition education** and **feeding approaches** varied but positive outcomes from interventions to address these behaviours **will be short-lived** if **inequities in health** caused by **poverty** and **access to affordable** and **healthy food are not addressed.***

***Sustainable changes to dietary habits for families on low-income requires policy responses to low income, food access** and to the **high cost of healthy foods**."*

RESEARCH Open Access

Parental perceptions of the food environment and their influence on food decisions among low-income families: a rapid review of qualitative evidence

Divya Ravikumar[1], Eleni Spyreli[2*], Jayne Woodside[2], Michelle McKinley[2] and Colette Kelly[1]

Abstract

Background: The food environment within and surrounding homes influences family dietary habits with socio-economic areas at a nutritional disadvantage. Families' perception of the food environment and how it influences their food decisions is less clear. This rapid review aimed to synthesise qualitative evidence of parental perspectives of the food environment and their influence on food decisions among disadvantaged families.

Method: Qualitative and mixed-methods peer-reviewed journal articles published after 2000, that explored the perspectives of low-income parents in relation to their food environment and how this impacted food decisions for families with children aged 2-17 years, were included in this review. Embase, Scopus and PsycINFO were the databases chosen for this review. Search strategies included seven concepts related to family, food, perceptions, influences, environment, socio-economic status and study type. Two independent reviewers screened sixty-four studies. Thematic synthesis was employed.

Results: Two thousand one hundred and forty five results were identified through database searching and 1,650 were screened. Fourteen articles that originated from the US, Australia and the UK were included in this review. No articles were excluded following quality appraisal. Child preferences, financial and time constraints, and location and access to food outlets were barriers to accessing healthy food. Parental nutrition education and feeding approaches varied but positive outcomes from interventions to address these behaviours will be short-lived if inequities in health caused by poverty and access to affordable and healthy food are not addressed. The reliance on social support from families or government sources played an important role for families but are likely to be short-term solutions to health and nutritional inequities.

Conclusions: This qualitative evidence synthesis provides an insight into the perceptions of low-income parents on the factors influencing food decisions. Findings have implications for public health and the development of effective strategies to improve the dietary habits of children of disadvantaged families. Sustainable changes to dietary habits for families on low-income requires policy responses to low income, food access and to the high cost of healthy foods.

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Introduction

Childhood is an important time for establishing dietary practices. The importance of the family food environment in establishing healthy eating habits during

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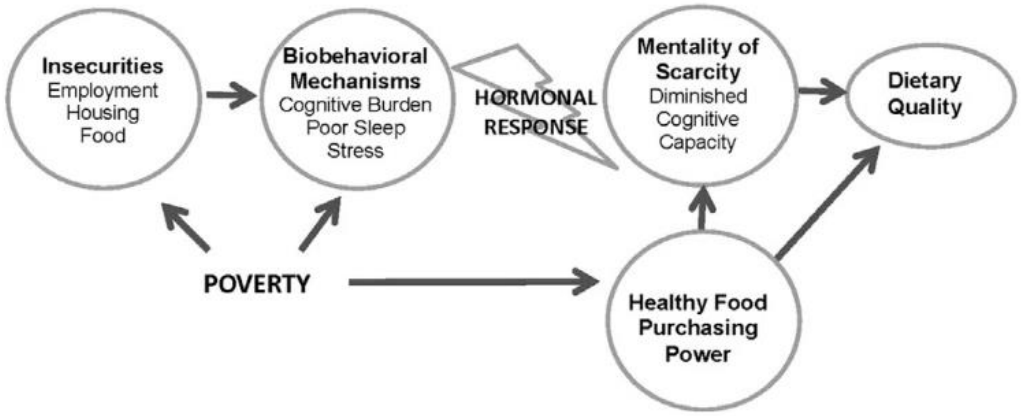

Figure 1. Conceptual framework: how poverty creates environment of scarcity leading to poor dietary quality.

Laraia, Barbara A., Tashara M. Leak, June M. Tester, and Cindy W. Leung. "Biobehavioral factors that shape nutrition in low-income populations: a narrative review." *American journal of preventive medicine* 52, no. 2 (2017): S118-S126.

- Low-income individuals have higher levels of employment -, food -, and housing-related insecurity that threaten household livelihoods
- Poverty and exposure to those insecurities are thought to activate biobehavioural and psychological mechanisms - endocrine, immune and neurologic systems that influence food choice and consumption. – eg. Stress, poor sleep and diminished cognitive capacity
- High levels of stress, poor sleep and cognitive overload **compound the challenges of economic constraints**, creating a mentality of scarcity that leads to poor diet quality

Laraia et al 2017

Concluding remarks

- Obesity and weight management research, policy and practice appears to have largely **ignored household level economic well being**, & the human agency that is undermined where this is **lacking** or **precarious** in the characterisation of obesity as a public health problem.
- If we are to start to address income-driven dietary, other material inequalities and the obesity patterning and prevalence that is so evidently closely linked, we need to start to acknowledge this - and do something about it.
- *"Public health policies and research need to consider **the role of financial hardship,** especially difficulty paying bills as part of strategies to prevent or reduce obesity" Conklin et al 2017*