

Families Experiences of Household Food Insecurity during the School Summer Holidays; a qualitative analysis from a behavioural perspective using the COM-B model

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Abstract

This research examines the experiences of household food insecurity within a cohort of adults with school-aged children in Sheffield, England. An online survey formed the primary method of data collection which was distributed to participants on two occasions. The full data set recorded responses from 394 participants in July and 199 participants in September. The Capability, Opportunity, and Motivation to Behaviour change model (COM-B) appraised a thematic analysis. This analysis highlighted four key themes (*food preparation knowledge, decision-making and self-monitoring, affordability and family dynamics*) that influence household food insecurity. In sum, this research indicates that many parents possess the psychological capabilities and motivation to prepare healthy meals; however, considerable opportunity barriers inhibit their ability to maintain positive food behaviours. Thus, it is recommended that future policies aim to enhance the consistency and accessibility of food resources for the most deprived households to reduce prevalent inequalities.

Keywords

household food insecurity; affordability; food poverty; behaviour change; family dynamics

Introduction

This paper examines the experiences of household food insecurity (HFI) in adults with school-aged children in Sheffield, England. The Capability, Opportunity, and Motivation to Behaviour Change model (COM-B) will apprise a thematic analysis. Dowler (2003) states that 'food poverty is the inability to consume an adequate quality or sufficient quantity of food that is useful for health in socially acceptable ways'. Subsequently, HFI is a ramification of wider poverty and exists when people do not have physical or financial access to enough safe and nutritious food to meet their dietary intake requirements (FSA, 2022). In high-income countries, acute HFI is more likely to be experienced in single-parent families, low-income households with children, and families in receipt of social assistance (DWP, 2021; FSA, 2021; Parekh et al., 2021; Temple et al., 2019). In 2021, 18% of households experienced HFI in the UK and approximately 22% of children in poverty lived with a low to very-low food security status (DWP, 2021). Despite this, there is limited evidence on the impact of HFI on the UK population; therefore, this review draws upon a wealth of international literature, primarily conducted in other high-income countries. Of note, the term parent represents all adults with parental responsibility for a child.

Literature review

Interventions in place

Loopstra (2018) posits that cash transfers and food subsidies can form effective strategies to attenuate the experience of HFI. For instance, the US Supplemental Nutrition Assistance Programme is linked to greater fruit and veg (FV) consumption in children (Saxe-Custack et al., 2021). Conversely, community-level initiatives, such as food banks, can improve short-term food security and the nutritional intake of families but have limited impacts on reducing or eliminating HFI (Loopstra, 2018; Oldroyd et al., 2022). Notwithstanding, The Trussell Trust system provided 1.3 million food parcels from April to September 2022, including 483,677 distributed to children (The Trussell Trust, 2022). Thus, the efficacy and suitability of current HFI interventions are mixed despite the significant demand for support from the most disadvantaged families.

Consequences of household food insecurity

Food poverty is not a uniform experience; however, the current epidemiological evidence suggests that food insecurity is associated with poor diet for the most disadvantaged populations from low-income households (FSA, 2021; Aggeli et al., 2022; Pollard & Booth,

2019; Thompson, 2022). For this reason, food-insecure families may be disproportionately affected by the detrimental health impacts of inadequate diet quality, such as malnutrition and non-communicable diseases. The National Diet and Nutrition Survey indicated that adults with a lower household income consume significantly less FV and more free sugars (PHE&FSA, 2019). Furthermore, a distinct socio-economic gradient is reflected in oily fish and fibre consumption with the most deprived fifth of the population consuming 54% and 17% less, respectively, compared to the least deprived fifth (Goudie, 2023). Conjointly, several studies demonstrate that childhood experiences of HFI are associated with lower intakes of FV and whole grains, alongside increased intakes of processed food, high-calorie snacks, fast food, sugar-sweetened beverages, desserts, and sweets (Adams et al., 2020; Daly et al., 2018; Godrich et al., 2019; Lee et al., 2019; Saxe-Custack et al., 2021). Subsequently, living in a low-income household with food insecurity may predispose individuals to short and long-term deleterious effects on their physical health.

The psychological burden of food insecurity provides a potential mechanism to explain the association between HFI and the increased rates of self-reported anxiety, depression, and stress among parents (Cain et al., 2022; Jackson & Testa, 2020; Ward & Lee, 2022). Furthermore, some parents living with prolonged HFI can develop coping mechanisms comprising social withdrawal, excessive sleep, and augmented alcohol consumption (Leung et al., 2022; Lindow et al., 2022). Additionally, there is an increased risk of mental health issues in children that live in food-insecure households (Jackson & Testa, 2020; Velardo et al., 2021; Yang et al., 2022). Child reported HFI is associated with eating pathology risk factors such as food and weight preoccupation, attempted weight loss, disordered eating, and unhealthy weight control practices (Barry et al., 2022; Bidopia et al., 2023; Masler et al., 2021). Further, previous studies demonstrate that children living with HFI experience anxiety over food shortages, comprehend financial issues and express concern about their parent's well-being, which may in turn negatively affect their mental health (Leung et al., 2020; Velardo et al., 2021).

Behaviour change in response to household food insecurity

For many food-insecure households, HFI can impact the procurement and acquisition of food. Throughout the school holidays, parents report downgrading branded food to supermarket equivalents, only purchasing food they know their child will eat, shopping online (to attenuate pester power), and shopping more frequently (Shinwell & Defeyter, 2021). In a similar vein, food-insecure families adapted their purchasing habits and bought reduced-priced produce,

bulk-bought items, travelled to several different supermarkets, and created shopping lists (Askelson et al., 2018; Gray et al., 2020; Kinsey et al., 2019; Schuster et al., 2019). Oronce et al. (2021) found that direct food provision was also associated with a significant reduction in food insecurity in high-income countries, regardless of setting. Once considered a stopgap strategy for individuals experiencing financial emergencies, it is proposed that direct food provision, via community assistance programmes, now play a pivotal role in the regular food procurement of low-income households (Loopstra & Lambie-Mumford, 2023; Sosenko et al., 2019; The Trussell Trust, 2023). Thus, produce acquisition for many families may be contingent on food assistance programmes; and parents with HFI must adapt all aspects of food provisioning during the school holidays, regardless of the level of support available.

In the UK, there is a considerable dichotomy between the price of FV and unhealthy food. In recent analysis by the University of Cambridge, FV is the most expensive section of the Eatwell guide (£11.79 per 1,000 kcal), in contrast with the price of high-fat and sugar products (£5.82 per 1,000 kcal) (Goudie, 2023). Similarly, parents who have experienced HFI argue that convenience foods are more affordable than healthy foods, including fresh FV (Kemper et al., 2023; Leung et al., 2022; Lindow et al., 2022). Furthermore, due to its relatively flexible nature, parents will often cut back on their food budget to meet the competing demands of essential living costs including rent, mortgage payments, utility bills, and school uniforms (Askelson et al., 2018; Lindow et al., 2022; O'Connell et al., 2019; Shinwell & Defeyter, 2021). Recent data indicates that the most deprived fifth of UK adults would need to spend 43% of their disposable income on food to meet the Eatwell Guide recommendations, juxtaposing a mere 11% required of the least deprived fifth (Goudie, 2023; PHE, 2018). Consequently, the budgeting, shopping, and consumption behaviours of low-income families can be modified or inhibited in the context of heightened deprivation, thus exacerbating their experience of HFI.

As the majority of children's consumption behaviour occurs in the home, this often forms their most fundamental eating context. Adams et al. (2020) state that some food-insecure parents introduce food monitoring behaviours, greater restrictions on consumption habits, and pressure on their children to eat full meals. Notwithstanding, children living with HFI may not experience the direct effects, such as hunger or food shortages, as parents often employ self-monitoring and regulatory behaviours (O'Connell et al., 2019). For instance, parents have often reported eating inadequate quantities of food, skipping meals, and only consuming their child's leftovers (Aggeli et al., 2022; O'Connell et al., 2019; Shinwell & Defeyter, 2021). Of note,

children may be protected from the direct repercussions of HFI, but this does not consistently equate to their level of nourishment. In sum, the home environment provides the physical and social context for many of the eating behaviours of UK families; however, HFI can negatively impact important characteristics (such as interpersonal relationships, mealtime eating practices and adult role-modelling).

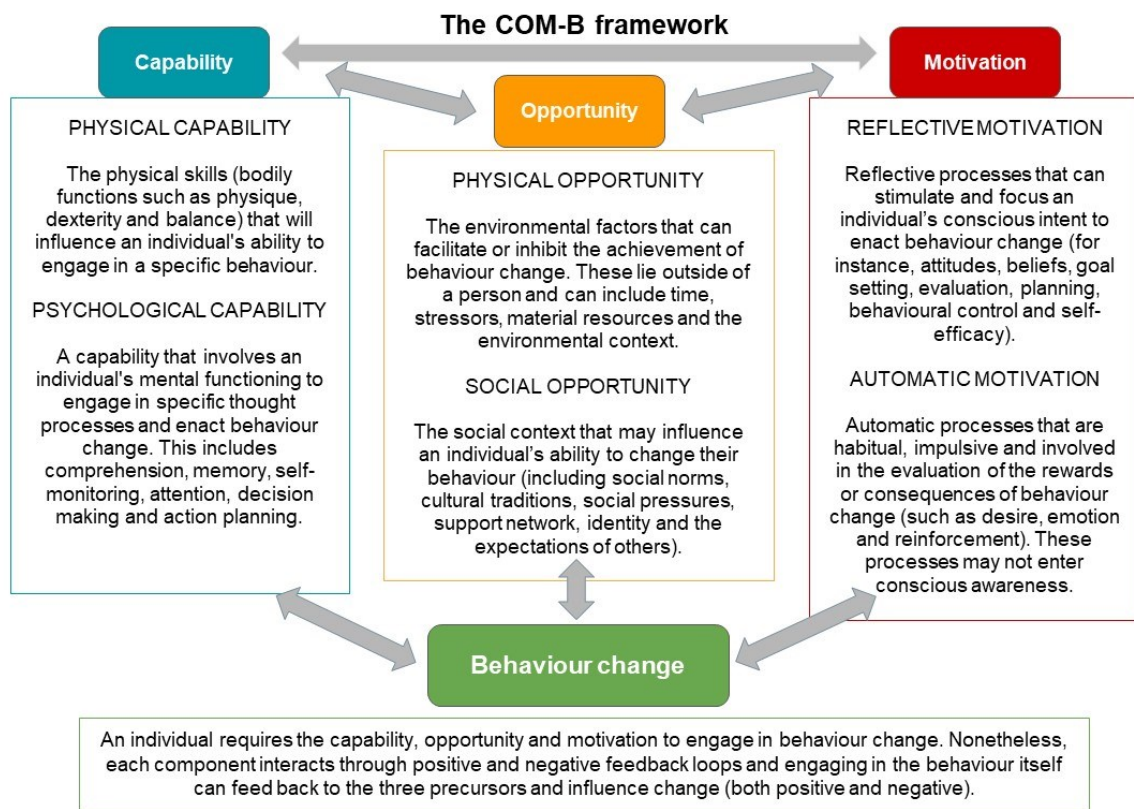


Figure 1: A model of the COM-B framework adapted from Michie et al. (2011, 2014)

Methods

Study Design: This research employed a cross-sectional study designed to collect primary data HFI at two timepoints (July and September 2020). Despite the traditional dichotomy between qualitative and quantitative research paradigms, a mixed-method approach can arguably attain a broader comprehension of a research question while facilitating systematic and empirical data analysis (Beto, 2019; Zoellner et al., 2017).

Participants and recruitment: Participants were adults with one or more children attending primary or secondary school in Sheffield. Recruitment was via the distribution of the electronic

survey link, which include participant information and consent form, that was sent to parents and carers via the City Council's school meal service. The link was sent via the school's usual method for contacting parents and carers (e.g. school newsletter, via email or text message). All parents and carers were eligible to complete the survey whether their child/children were in receipt of free school meals or not. This approach to convenience sampling was selected as a time and cost-effective procedure to explore the nature and prevalence of HFI in all households, as opposed to attempting to identify causal factors within low income households (Denscombe, 2021; Hammond & Wellington, 2020). On completion of the survey in July participants were asked to provide an email address if they were willing to complete the survey in September, for which they were sent the link directly.

Data collection: An online questionnaire (designed using Qualtrics software) was selected to enable highly structured data collection within a large, representative sample (Breakwell et al., 2020). The survey, including quantitative and qualitative responses, was part of a wider evaluation of the City's food assistance programme in the summer of 2020, the Healthy Hampers programme; data collection took place in July (before summer holidays) and September (after summer holidays). For the purpose of this study, the qualitative responses for the full data set for July and September were used; this comprised 394 respondents in July and 199 respondents in September. The occupational status and eligibility for free school meals (FSM) were recorded to establish proxy indicators of household income. In the UK, the FSM programme is means-tested and available to families if a parent receives one or more social security benefits (DfE, 2023).

Data analysis: The qualitative responses from both the July and September surveys were collated and a framework analysis approach (Gale, et al, 2013), using the COM-B model, was conducted to explore the barriers and facilitators for food provision during the school summer holidays. The COM-B framework posits that behaviour requires an individual to possess the appropriate capability (knowledge and cognitive ability), opportunity (environmental context and social factors) and motivation (inspirations, emotions and beliefs) (see Figure 1) (Michie et al., 2011). Viewing food provisioning as the set of behaviours that determine a household's food experience and access to adequate and healthy food, the COM-B framework provided a useful tool to analyse both the intrinsic and extrinsic factors impacting on these behaviours, across three themes: attempts to change family diet, key worries and concerns, plus additional support required. Previously, enablers and barriers to various health-related behaviours have

been explored using the COM-B framework, including sexual health, smoking cessation, diet quality and physical activity levels (Cowdell & Dyson, 2019; Kumar et al., 2021) therefore this was deemed an appropriate framework in this context to explore behaviours related to food provisioning that are determined by internal (individual/household) and external (environmental/social) factors.

Figure 2 and Figure 3 illustrate the initial coding and categorisation for all qualitative comments relating to food changes and concerns during the school summer holidays, presented within the constructs of the COM-B framework; Figure 4 presents the same for areas that respondents felt were a priority for additional support to achieve an adequate and healthy diet. The results presented and discussed in this paper will focus on the COM-B constructs identified as the barriers and enablers associated with achieving an adequate and healthy diet (Figure 5).

Ethical Consideration: The original survey was submitted to SHU Research Ethics Committee for ethical scrutiny (Ref: ER25414094) and was approved on 29th July 2020. Following the completion of a UREC1 application, ethical approval was obtained in January 2023 for the secondary data analysis. On data collection participants were provided with details of the research aim, data collection process, and the voluntary nature of participation. All individuals provided informed consent and their responses were anonymised and stored securely on a password-protected device.

Changes that participants were attempting to make to their family's diet

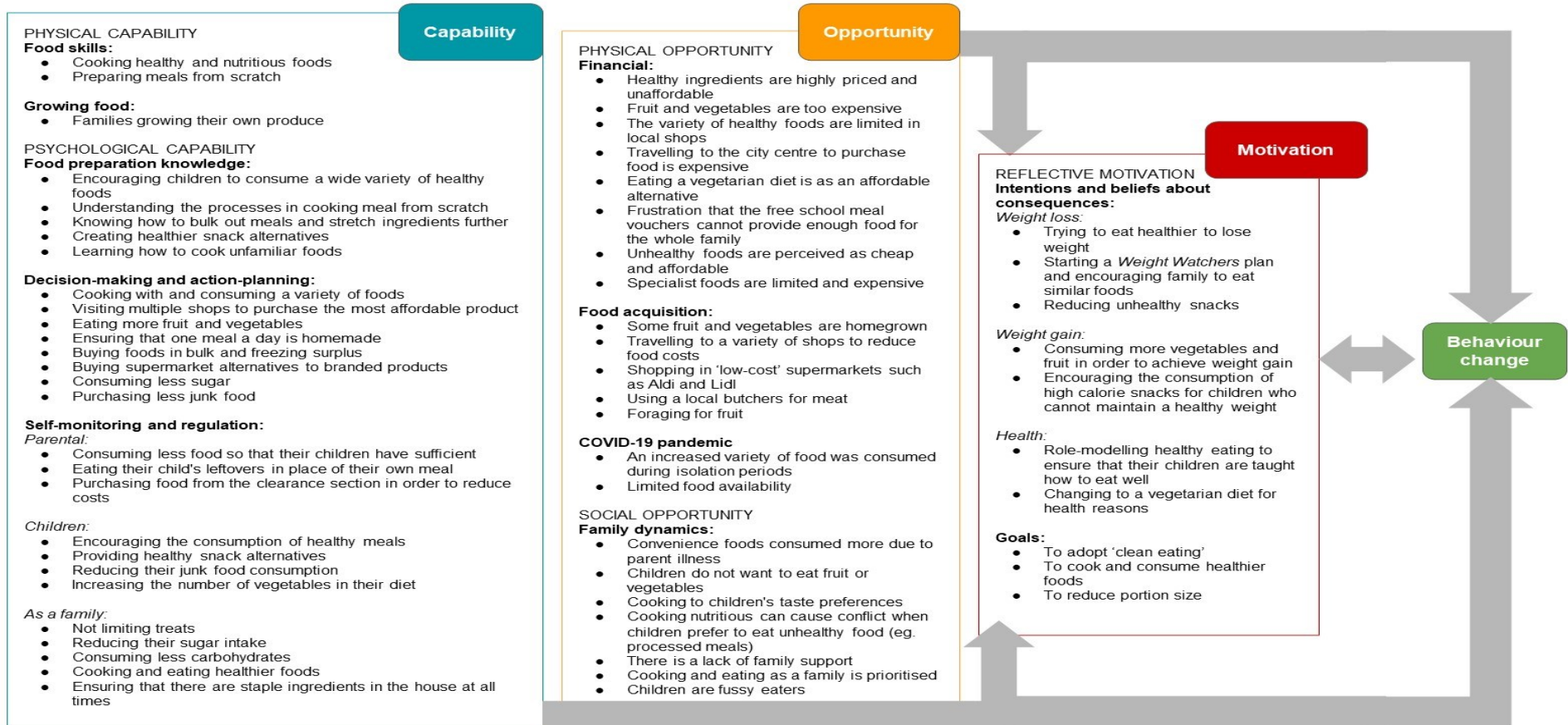


Figure 2: A diagram that illustrates the coding process of qualitative data regarding dietary changes

Worries and concerns from before and after the school holidays

Key:
July (J)
September (S)

Capability

PSYCHOLOGICAL CAPABILITY
The ability to cook nutritious food on a budget

- The capability to provide a variety of healthy meals that are affordable (J)

Opportunity

PHYSICAL OPPORTUNITY
COVID-19

- Children spent less time at school (J)
- Changes to the setting and delivery of children's education (J)
- Decreased opportunities for socialising (J)
- Limited activities were available to children (J&S)
- Reduced food availability (S)
- Changes to employment resulting in the reduction/ cessation of work (S)
- Participants were concerned for the safety of family members when outside of the home or in the community (S)

Financial

- Being able to afford school uniforms (J)
- The high cost of childcare (J)
- The affordability of healthy food (particularly fruit and vegetables) (J)
- Earning above the threshold for free school meals but experiencing deprivation (J)
- The cost of additional food whilst children were not at school (J&S)
- Affording the increased household bills due to family members spending more time at home (J&S)
- The increased cost of healthy food (S)
- Changes in existing benefits and income support (S)

Food availability

- Parents were worried that there was not enough food in the home to feed their family (S)
- A lack of fruit and healthy snack alternatives in the home (S)
- Worries regarding their ability to acquire enough food to make a meal (S)

SOCIAL OPPORTUNITY
Family dynamics

- Coping with the behavioural issues of children (eg. refusing meals, anger management and socialising skills) (J)
- Concerned that parental mental ill health would affect their children (S)
- Children with additional needs require emotional and practical support (S)

Autonomy

- Requiring permanent residence in the UK to allow parents to work (J)

Motivation

REFLECTIVE MOTIVATION
Concern for the health of their children

- Parents were aware of the importance of nutritious foods that promote good health (J)
- Fear of the impact of COVID-19 on physical activity levels and mental health (J&S)
- The impact of limited socialisation with peers (S)
- Children became increasingly isolated from friends and family (S)

Concern for their own health

- Participants experienced social isolation and stress (J&S)
- Some participants experienced low mood and anxiety (S)

Behaviour change

Figure 3: A diagram that illustrates the coding process of qualitative data for regarding worries and concerns.

Results

Participant characteristics are presented in Table 1 for the July and September respondents; employment status and eligibility for free school meals (FSM) were used as proxy indicators for household income in the City-wide evaluation of the Healthy Hampers food assistance programme.

Table 1: Participant characteristics for July and September respondents

Characteristic	Category	July (n=394)	September (n=199)
Age (years)	18-34	140 (35.5%)	68 (34.2%)
	35-53	244 (61.9%)	121 (60.8%)
	55-74	10 (2.5%)	10 (5%)
Sex	Female	357 (90.6%)	180 (90.5%)
	Male	37 (9.4%)	17 (8.5%)
	Prefer not to say	0	2 (1%)
Ethnicity	Asian or Asian British	52 (13.2%)	21 (10.6%)
	Black or Black British	31 (7.9%)	15 (7.5%)
	Mixed/Multiple Heritage	21 (5.3%)	12 (6%)
	White or White British	282 (71.6%)	149 (74.9%)
	Prefer not to say	8 (2%)	2 (1%)
Number of adults in household		1.64 (± 0.73)*	1.79 (± 0.93)*
Number of children in household		2.58 (± 1.26)*	2.28 (± 1.07)*
Household size: total number of people		4.22 (± 1.53)*	4.07 (± 1.44)*
Eligibility for Free School Meals **	Yes	323 (82%)	141 (70.9%)
	No	64 (16.2%)	44 (22.1%)
	Don't know	7 (1.8%)	14 (7%)
Received food assistance during summer holidays (2020) **	Yes		120 (60.4%)
	No		75 (37.6%)
	Don't know		4 (2%)
Employment Status	Full-time	25 (6.3%)	18 (9.1%)
	Part-time	91 (23.1%)	52 (26.1%)
	Unemployed	141 (35.7%)	64 (32.2%)
	Not in employment – home/caring	100 (25.3%)	52 (26.1%)
	Casual work	16 (4.2%)	2 (1%)
	Self-employed	8 (2.1%)	11 (5.5%)
	Prefer not to say	13 (3.3%)	-

*Mean and standard deviation (+/-)

**Whilst the primary criteria for receiving food assistance during the summer holidays (Healthy Hampers) was eligibility for free school meals, not all eligible households signed up and benefited from the scheme.

The results for the framework analysis of the qualitative data are summarised in Figures 2, 3 and 4 – illustrative quotes are provided within this section to highlight the enablers and barriers within each of the most relevant COM-B constructs. The results highlight the

Key:

P = Participant number

J = Quotations from the July cohort

S = Quotations from the September cohort

Psychological Capability

1. Food preparation knowledge

Participants demonstrated an awareness of the importance of food preparation knowledge required to feed their families. When discussing the changes they were trying to implement within their diet, common themes included consuming a wider variety of food, making ingredients stretch to feed more people, and creating healthier snack options. Participant concerns included

- “I’m trying to cook from scratch, I know how to do this but find that my family are unwilling... it is expensive to buy the meals they will eat that are fresh and healthy” (P323 J)
- “cooking food on a budget that is healthy and having different ideas for the money that we have to live on” (P151 J)

2. Decision-making & self-monitoring

Consuming a healthy diet (more FV, less sugar and junk food) was a dominant objective for many families. Nonetheless, several participants outlined the crucial role of day-to-day decision-making and action planning in achieving their goals. Accordingly, food procurement was a readily modified behaviour during economic hardship, and participants explained where they had made decisions to substitute for cheaper items when shopping or find alternatives.

- that they have “had to change where and how we shop. We take a list, buy own-brand food, forage for berries etc, have grown some of our own food, limit luxuries, make our own lollies etc” (P76 J)

Self-monitoring and adjusting eating behaviours to regulate the availability of food for household members, prioritising the food for the children, was also an approach taken.

- “I am the one that eats less as my children are obviously the most important and my partner works a full-time job so he needs the food” (P26 J)
- “I always make sure my son has eaten and if there is anything left over I will then eat” (P199 J)

Physical Opportunity

1. Food affordability & availability

Most participants described the high cost of FV as an inflexible obstacle to consuming a balanced diet, despite possessing strong motivations to consume healthy meals. Many participants were also concerned about the rising cost of living expenses, including food and utility bills, school uniforms, and childcare. Participants noted that

- “I want my kids to eat healthy food but I don’t have enough money to buy healthy food” (P227 J)
- their “food bill doubles in summer again leading to financial worries” (P238 J)
- “With the current situation, the prices of healthy food are increasing” (P84 S)
- food availability had decreased, generating worries regarding “having enough healthy snacks like fruit to eat” (P53 S) and “having enough food in to make a meal” (P75 S)

2. COVID-19

The ongoing and future repercussions of the COVID-19 pandemic formed a pivotal concern for most families. Enforced travel restrictions and social isolation led to changes in food acquisition and reduced food availability as captured in the quotations below:

- “We eat a varied diet but it has been a struggle to get hold of certain food due to lockdown and also with my health being extremely bad at the moment I’ve had to do quick and convenient food” (P222 J)
- Some parents questioned “how safe it was for [their] family to be out in the community or other environments” (P111 S)

Social Opportunity

1. Family dynamics

For many households, family dynamics often hindered the opportunity to consume a healthy diet. The polarity between the food preferences of children and adults formed a critical issue and the ability to prepare healthy meals was governed by the resources available (such as time, capacity, materials, and capital). Participants explained that

- "although I have the skills to cook healthy, nutritious food, my kids have become so used to eating cheap processed food that if I try to feed them good stuff, every meal turns into a battle. The processed stuff is so cheap, it's hard to say no..." (P102 J)
- "My youngest has allergies and sometimes she has limited choice as her foods are expensive" (P204 J)

Reflective motivation

1. Concern for health

For many participants, a persistent worry was the mental and physical health of their children. This was exacerbated by the distress associated with the COVID-19 pandemic and captured in the quotations:

- "It's been five months since school, the kids are used to being in the house and when they do go out it's making some of them anxious and worried" (P93 J)
- "they're not getting and not seeing people and being scared of all the strange situations going on. My younger child does not understand but my older one does understand" (P68 S)

Proposed solutions to achieve an optimal diet

In September, participants were asked, *is there anything else that would help your family to eat well in the future?* Participant responses are outlined in Figure 4.

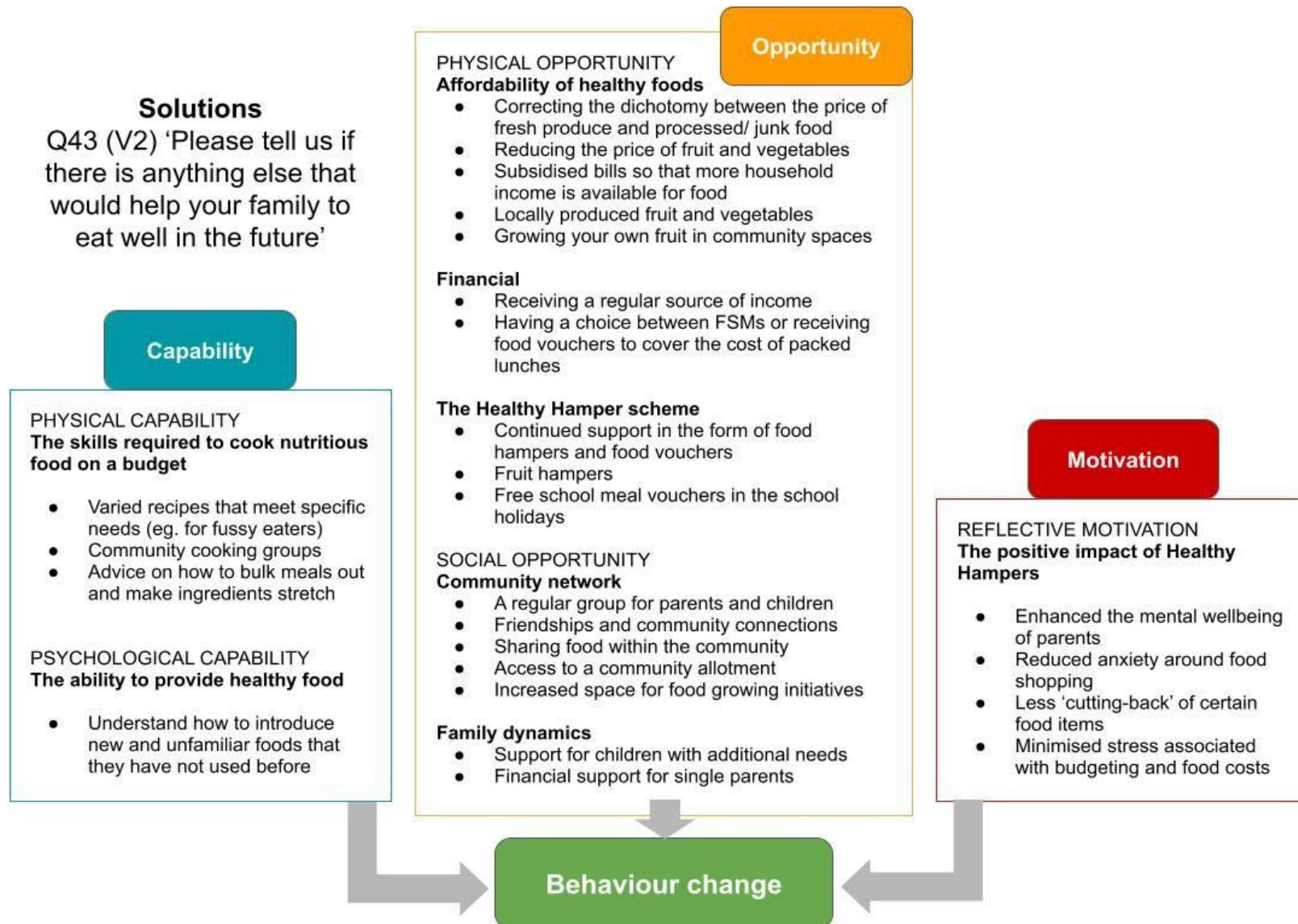


Figure 4: A diagram that illustrates the coding process of qualitative data regarding proposed solutions.

Discussion

Four key themes (*food preparation knowledge, decision-making and self-monitoring, affordability and family dynamics*) were derived from the framework analysis of the July and September data. Figure 5 (below) presents the four cross-cutting themes within the context of the COM-B framework; red highlighting barriers and green highlighting enablers to providing an adequate and healthy diet, and thereby reducing experience of HFI.

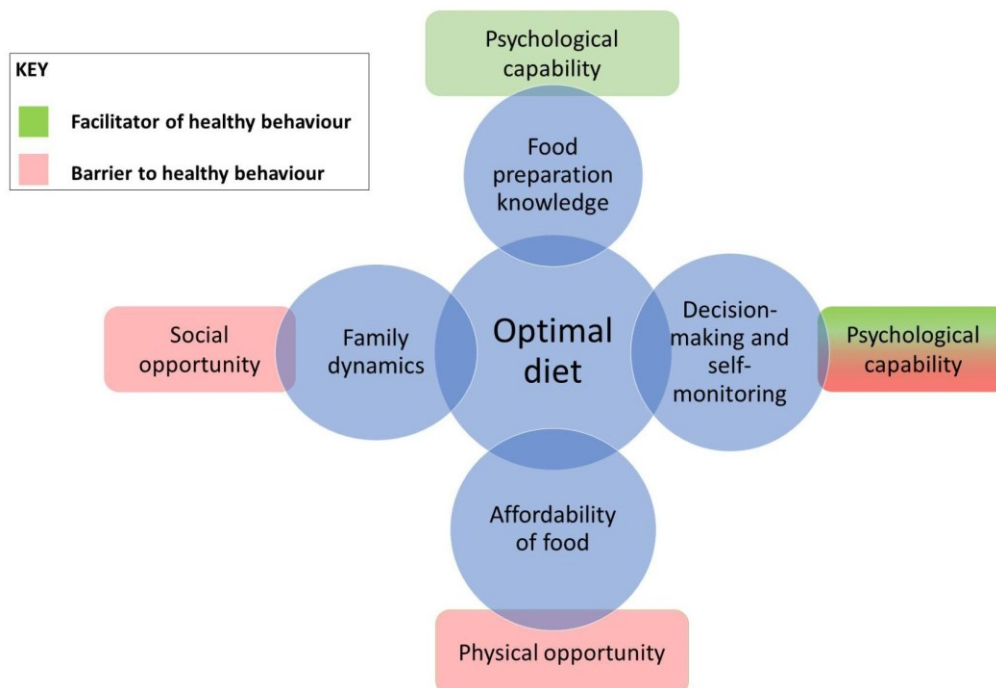


Figure 5: A model that illustrates the four key themes identified in the data set.

1. Food preparation knowledge

The findings of this study reveal that a competent knowledge of food preparation (psychological capability) was a facilitating agent in the provision of healthy family meals. It is widely accepted that lower household income is negatively associated with diet quality and adverse diet-related health outcomes (Thompson, 2022); despite this, the analysis illustrates that most participants had a broad understanding of food skills, exemplified by reports of cooking with a variety of produce and preparing homemade meals (Figure 2). Moreover, the majority of participants valued healthy eating and were highly motivated to feed their children

nutritious food. Nevertheless, many participants reported that regardless of their motivations, the affordability of healthy ingredients was a physical opportunity barrier to achieving their diet objectives. The findings are in line with previous research that has demonstrated no association between poor food literacy and food insecurity in adults; instead, it is the financial uncertainty of food poverty that reduces the frequency of opportunities in which to apply food skills to meal preparation (Larson et al., 2020; Peppone et al., 2021; Puddephatt et al., 2020). Furthermore, Blanchet et al. (2020) posit that children living with HFI can exhibit a higher level of food skills and involvement in food preparation. This implication may be attributable to an increased responsibility with managing limited food resources or less opportunity to consume out-of-home meals. Therefore, it can be disputed that there may be no deficit of food skills in low-income households; however, resource constraints can create an unavoidable obstacle to enacting healthy behaviour.

2. Decision-making and self-monitoring

Before the school holidays, decision-making and self-monitoring (psychological capabilities) affected an individual's ability to procure healthy food. The findings are consistent with previous qualitative research that revealed how low-income families modified their acquisition behaviours and travelled to multiple shops to take advantage of sales or promotions, purchased unbranded products, created shopping lists, and bought freezable items in bulk (Askelson et al., 2018; Gray et al., 2020; Kinsey et al., 2019; Schuster et al., 2019). As such, most parents carry the burden of logistical and financial stress associated with food procurement, including managing the taste preferences and nutritional requirements of family members and acquiring sufficient food on a budget. For some low-income households, the stress of food procurement will likely be compounded by chronic HFI, thus decreasing their psychological capability to make healthy food choices.

For participants in July, their decision-making and self-monitoring abilities shaped household diet quality. Of note, the study demonstrated that within a parent cohort, the effects of financial precarity and HFI can manifest as unhealthy coping strategies such as skipping meals and reducing their dietary intake, as documented by several supporting studies (Adams et al., 2020; Puddephatt et al., 2020; Schuster et al., 2019; Taylor et al., 2021). From this perspective, parents outwardly sacrifice their nutritional intake to shield their children from the direct ramifications of food insecurity (including hunger and undernutrition). These regulatory

behaviours can create a hierarchy within the household in which child satiety is more important than that of other family members. Nevertheless, when children describe their own experience of HFI, it is concerning that some individuals report hunger, consciously eating less to make food stretch, and anxiety regarding food shortages and financial constraints (Leung et al., 2020; Velardo et al., 2021; Yang et al. 2022). Consequently, the negative implications of perpetual HFI may affect the health of all family members, regardless of various coping mechanisms employed by parents.

3. Affordability of food

The affordability of healthy food was a persistent physical opportunity barrier to the consumption of an optimal diet before and after the school holidays. This finding is consistent with previous research that emphasised how the cost of produce is a substantial barrier to procuring nutritious food, namely FV, in low-income households (Landry et al., 2020; Palmer et al., 2020; Zhen-Duan et al., 2019). Moreover, child taste preferences may drive purchases in households that cannot afford to waste food that is not eaten (Askelson et al., 2018; Daniel, 2020). Therefore, parents may be reluctant to purchase unfamiliar ingredients or practise experimental cooking methods. As parents must pay for what their children consume and refuse, food waste is integral to their overall expenditure thus justifying the purchasing of familiar produce (with potentially lower nutritional value or higher cost). The complex economic hardship faced by parents may inhibit their psychological capability to make optimal food choices. Further, the disproportionate cost of healthy food in comparison to unhealthy options formed a significant concern within the sample and is consistent with previous studies of food-insecure families (Kemper et al., 2023; Leung et al., 2022; Lindow et al., 2022).

4. Family dynamics

For some participants, the interpersonal relationships and patterns of interactions within a household (family dynamics) became a social opportunity barrier to healthy eating before the school holidays. A recent systematic review postulated that family chaos (attributable to work conflicts, limited food resources, and coping with poverty) caused household stress, negatively impacted interpersonal relationships, and modified meal frequency and location (Eicher-Miller et al., 2023). Moreover, our study highlighted that child resistance to healthier food can regulate the diet quality of the household, an implication synonymous with previous qualitative studies

(Palmer et al., 2020; Zhen-Duan et al., 2019). Thereby, it can be argued that the home environment context can determine dietary intake and food procurement or preparation behaviours. Health behaviours may be facilitated when families employ a collaborative approach to mealtimes, characterised by sustained communication, motivation, and role modelling (Zhen-Duan et al., 2019). Nonetheless, the study highlighted how the reflective processes of participants may be inhibited by multiple concerns, including food shortages and their child's mental health. Subsequently, the prolonged distress experienced by parents may impact parental feeding practices, diminish their ability to provide nutritious food, and augment the likelihood of adverse child appetite behaviours (Berge et al., 2020; Eagleton et al., 2022; Frankel et al., 2023).

Conclusion

This study found that participant food knowledge (psychological capability) was not a barrier to healthy eating in low-income households. Despite this, the concept that inadequate food skills contribute to food insecurity is a pervasive belief among the public, policymakers, and governments. Community food programmes that aim to improve the confidence and competence of individuals in food preparation and budgeting are often the default approach (Loopstra, 2018; Reicks et al., 2018) however, intervention efficacy will still depend on financial resources and adequate food access at a household level. Although immediate improvements in food insecurity are often observed post-intervention (West et al., 2020) the adequate evaluation of long-term experiences and impact of HFI is absent from current studies.

The potential harms of the cost-of-living crisis have been documented by several recent studies, with the most vulnerable families predicted to be disproportionately affected by amplified poverty and a reduction in mental and physical health (Broadbent et al., 2023; Farrow et al., 2022; Singh & Uthayakumar-Cumarasamy, 2022). For many parents, it can be argued that their decisions regarding food choice are largely automatic in reaction to current stressors rather than carefully deliberated and reason-based thought processes. With prolonged or exacerbated destitution, low-income families may be forced to reduce their expenditure on essentials and restrict choices that support healthier living. Policymakers should prioritise augmenting the accessibility of healthy food, through assured financial assistance or increasing the affordability of healthy food, for families most vulnerable to HFI. In addition, as our study

demonstrated there is the potential for all household members to be negatively affected by HFI, further research should explore lived experiences of children within the same household.

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