

Exploring the lived experience of food insecurity through the camera lens: A photo elicitation study

Journal of Health Psychology

1–18

© The Author(s) 2026



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/13591053261490193

journals.sagepub.com/home/hpq

Abigail Stephen¹, Ella Guest², Oana Petre¹,
Janet Kyle¹, Frank Thies¹ and Julia L. Allan³

Abstract

Healthy eating remains unattainable for many due to limited access to affordable, nutritious foods. In the United Kingdom, over 11% of the population is estimated to be food insecure. This study explored the lived experiences of adults living with food insecurity and examined how these experiences shape their dietary health behaviours. Using a photo-elicitation approach, food insecure adults ($N=9$) photographed their food environments. The photos were used to guide semi-structured interviews which were transcribed and analysed using reflexive thematic analysis. Participants viewed healthy foods as inaccessible, causing reliance on cheaper, more calorie-dense options. Participants observed increasing food insecurity among people in full-time employment and described food bank support as inconsistent and often complicated by stigma. Findings illustrate the multidimensional nature of food insecurity, influenced by economic hardship, limited food environments, and social change. Policy responses must address structural barriers and enhance the accessibility and dignity of food support.

Keywords

photo-elicitation, food insecurity, dietary health, stigma, food banks

Introduction

Dietary health behaviours are determined by a complex interplay of systemic and environmental factors (Williamson et al., 2017). Though diets are generally considered as modifiable, the price and availability of food often make optimal dietary health unattainable for those living on a limited income. This has been exacerbated by the ongoing cost-of-living crisis with the price of healthier food items rising more rapidly than unhealthy foods (Hoenink et al., 2022; Jones et al., 2014; Scott et al., 2018). Such factors have contributed to an increase in the prevalence of food insecurity.

In the United Kingdom (UK), it is estimated that over 11% of the population are experiencing food insecurity (Francis-Devine et al., 2025) meaning that they lack regular access to safe and nutritious food due to restricted financial resources. In response, the number of food

¹University of Aberdeen, Scotland, UK

²University of the West of England, Bristol, England, UK

³University of Stirling, Scotland, UK

Corresponding author:

Julia Allan, University of Stirling, Stirling, Scotland FK9 4LA, UK.

Email: julia.allan@stir.ac.uk

banks across the UK has increased dramatically. The Trussell Trust, whose network accounts for around 50% of UK food banks, operated approximately 35 food banks across the UK in 2010–2011 but this rose to around 1300 by 2019–2020 (Sosenko et al., 2022; Zaidi, 2025). Food insecurity not only constrains the types of foods that individuals can access, but also restricts certain behaviours such as cooking (due to fuel poverty, when a household cannot afford to pay for energy), consuming balanced meals, and eating sufficient fruits and vegetables (Yau et al., 2020). This limited access to affordable and nutritious food poses a critical public health challenge as food insecurity is associated with poorer health-related outcomes including risk of non-communicable disease (Garthwaite et al., 2015; Liu and Eicher-Miller, 2021).

Listening to, and understanding the lived experiences of adults experiencing food insecurity provides valuable insights (Leung et al., 2022; Moraes et al., 2021) into the barriers and facilitators of dietary health behaviours in this population. Such insights could inform the development of more appropriate forms of support and contribute to reducing health inequalities (Craig and Robinson, 2019; Moraes et al., 2021). One way in which lived experience of food insecurity has been explored is through creative methods, including photo-elicitation (Collier, 1957). Photo-elicitation is an empowering and participant led research method developed by Collier (1957), which involves incorporating photographs into research interviews to stimulate discussion and reflection. It is particularly well suited to exploring complex social issues because it allows participants to guide the conversation towards the aspects of their everyday lives that they consider most meaningful (Bates et al., 2017; Kurtz and Wood, 2014). Photo-elicitation has been used to study food insecurity, (Barrington et al., 2017; Johnson et al., 2011; Kamdar and Hernandez, 2022), but this has only rarely included the UK context (Pettinger et al., 2017).

In photo-elicitation, participants take photographs (following a broad ‘assignment’ specifying what the researchers want to understand) that are then used as prompts within interviews (AS). This approach encourages deeper reflection and generates richer, more nuanced accounts than verbal interviewing alone (Van Auken et al., 2010). Work by Collier (1957) demonstrated that interviews incorporating photographs tended to be longer and more detailed than traditional interviews, suggesting that images can help evoke memories, emotions, and experiences that may be difficult to access through direct questioning. Similarly, Pettinger et al. (2017) used photo-elicitation to explore the food experiences of homeless individuals and suggested that this method has the potential to engage hard-to-reach groups in an empowering way.

Moreover, taking and sharing photographs is a familiar practice in contemporary life, whereas participation in research interviews may feel unfamiliar; photo-elicitation can therefore help bridge this gap and support more comfortable, participant-centred engagement (Roger and Blomgren, 2019; Stephen & Guest, 2026). This study sought to build up a detailed ‘picture’ of the food environment from the perspective of those who experience it, providing insight into barriers to healthy eating and informing future service design (Pettinger et al., 2017), including behaviour change interventions targeted at this population.

The aim of the current study was to explore the lived experiences of food insecure UK adults from low-income communities and to understand how these experiences relate to health behaviours.

Materials and methods

Design and procedure

An inductive qualitative design, employing photo-elicitation alongside reflexive thematic analysis (Braun and Clarke, 2006, 2019) was used to explore the lived experiences of food insecurity. Participants were invited to photograph relevant aspects of their lives which then serve as prompts for discussion in later

Table 1. Scottish Health Survey food insecurity scale.

1. In the last 12 months, have you worried you would run out of food due to a lack of money or other resources?
2. In the last 12 months, have you eaten less than you should due to a lack of money or other resources?
3. In the last 12 months, have you ran out of food due to a lack of money or other resources?

interviews. The study was pre-registered on the Open Science Framework (DOI: 10.17605/OSF.IO/E5T7F) reviewed and approved by the Rowett Ethics Committee in September 2024.

Participants, recruitment, and data collection

Between October 2024 and May 2025, participants were recruited from community projects in areas of economic deprivation in a city with a diverse socioeconomic landscape, through flyers, snowball sampling, and word of mouth. Deprived areas were identified using the Scottish Index of Multiple Deprivation (Scottish Government, 2020). Eligible participants were adults experiencing food insecurity, screened using the Scottish Health Survey food insecurity scale (Table 1; Scottish Government, 2023) with a response of ‘yes’ to at least one item sufficient for inclusion indicating that they were experiencing some degree of food insecurity. Eligible participants were enrolled and consented into the study.

An initial target sample size of 10 was set, informed by previous photo-elicitation health research (Fritz and Lysack, 2014; Habib Perez et al., 2022; Musselman et al., 2018; Shell, 2014). Information power, which refers to the idea that the adequacy of a qualitative sample depends not only on the number of participants recruited but on the relevance, specificity, and richness of the data in relation to the study aim, was then used to determine the final sample size (Braun and Clarke, 2021). This approach helps avoid over-recruitment and unnecessary burden on participants. Recruitment continued alongside initial coding, during which transcripts and codes were reviewed to consider whether the data were sufficient to address the research questions.

The study comprised three activities: the enrolment session with photo assignment, the photo-taking period, and the follow-up interview. During the enrolment session, participants received information about the study, provided written consent, and completed a short demographic questionnaire assessing income, age, employment, marital status, ethnicity, education level, and gender. Scores on the food insecurity screening tool were summed as an indication of level of food insecurity where 1 indicates moderate food insecurity and 3 indicates more severe food insecurity. Participants were also asked to indicate whether they were happy for their photos to be used in dissemination; this was not conditional to participation.

Participants were then given a 1-week photo assignment, in which they were asked to take 4–5 photographs per day of food they saw, obtained or ate, to capture their experience of food insecurity. Photos were submitted via email or WhatsApp, and participants were advised to avoid photographing people and to only take images if comfortable and safe to do so.

Following the photo-taking period, participants attended a face-to-face semi-structured interview, held either at the university or at a local community centre, according to participant preference. Photos were printed and numbered. During the interview, photos were arranged between the interviewer and participant. The topic guide (Supplemental File 1), which was designed to be used flexibly, included four core questions focussed on the photographs, including why the participant had taken each photograph, what they felt it communicated about food insecurity, and how the experiences represented in the photograph related to their eating behaviours. These questions were modified appropriately in advance of

the interview after reviewing the images submitted (e.g. if a participant submitted an image of a takeaway menu rather than the meal that they ate, the question would be modified from 'food shown' to 'menu shown'). The topic guide also included questions about participants' broader experiences of food insecurity and dietary behaviours which were asked of all participants without modification. This approach allowed participants' photographs to shape the direction, sequencing, and depth of discussion, while maintaining consistency across interviews. Interviews were audio-recorded and transcribed verbatim.

Analysis

Transcripts were analysed using reflexive thematic analysis (Braun and Clarke, 2019). Photographs were used as participant-led elicitation prompts rather than analysed as independent visual data. The photographs supported participants to guide the interview discussion, reflect on their everyday experiences, and explain what food insecurity meant in the context of their lives. The research team did not conduct a separate visual analysis of the images, as the meaning of each photograph was understood through participants' own accounts of why they had taken it and what they felt it communicated. In this way, the photographs were interpreted alongside, and through, participants' narratives rather than treated as standalone data. Initial coding was conducted by AS and checked by EG. Themes were then developed collaboratively by AS and EG and discussed with the wider research team, with theme names and descriptions compiled by AS and checked by JA and OP. As coding was collaborative, inter-coder reliability could not be calculated, but the authors did reach consensus on all coding and theme development. Themes were developed as broader patterns of shared meaning relevant to the research questions, and subthemes were used where distinct but related aspects of a broader theme required further differentiation.

Positionality statement. The research team involved in data collection and analysis comprised three White researchers: two British (AS and EG) and one Romanian (OP). One interviewer had lived experience of food insecurity, and two researchers have engaged with food insecurity research in the past 2 years. We recognise that both these professional and personal experiences might have shaped how we approached the research, including the assumptions we brought to the interviews and how we interpreted participants' accounts. Reflexivity was approached by the research team as an ongoing process throughout data collection and analysis. The interviewer kept a reflexive journal to record reflections after interviews including emotional responses and initial interpretations of the accounts shared. For example, the researcher's lived experience of food insecurity created opportunities for empathy and relatability, perhaps reducing the power imbalance but also requiring careful attention to avoid over assuming shared meanings or experiences. Reflexivity was also supported through discussions within the wider research team during coding and theme development. These discussions involved re-visiting codes and proposed themes alongside the transcripts and photographs, considering alternative interpretations, and ensuring that the analysis was grounded in participants' accounts.

Results

Ten participants enrolled into the photo-elicitation study with nine completing both the photo taking and interview phases of the study. One participant declined the interview, so their data were removed from the study. Guided by information power, later interviews did not substantially alter the analysis, indicating that the sample provided sufficient information power, and no further participants were recruited. Participants were aged between 25 and 64 years old and most were in either full-time or part-time employment. An overview of participant characteristics can be seen in Table 2.

Table 2. Demographic information for participants included in this study.

Participant number	Age group	Gender	Employment status	Marital status	Ethnic group	Education	Monthly income (net)	Food insecurity severity (3)
1	25–34	Male	Long term sick	Single	White (British/Scottish/Irish)	College	Less than £1200	2
2	35–44	Female	Full time	Single	White (British/Scottish/Irish)	College	£1200–2000	2
3	55–64	Female	Full time	Divorced	White (British/Scottish/Irish)	University	£1200–2000	1
4	45–54	Female	Full time	Married	White (British/Scottish/Irish)	University	£2000+	1
5	55–64	Male	Full time	Married	White (British/Scottish/Irish)	University	£2000+	1
6	45–54	Male	Full time	Married	White (British/Scottish/Irish)	School	£2000+	3
7	45–54	Female	Full time	Married	White (British/Scottish/Irish)	College	£2000+	3
8	25–34	Female	Part time	Single	Canadian Hispanic	University	£1200–2000	3
9	35–44	Female	Unemployed	Single	White (Other)	None	Less than £1200	3

Through reflexive thematic analysis, four themes were identified, some with their own subthemes. Firstly, participants spoke of the difficulties of navigating and living with limited access to affordable and healthy food (theme 1). Some participants had reached out to food provision services but found the support inconsistent (theme 2). As the cost-of-living prevails, participants felt that food insecurity was becoming more prevalent in those in employment (theme 3). Lastly, participants in this study really spoke to the burden of living with food insecurity, both in terms of the social and emotional impacts (theme 4).

Theme 1: Navigating the landscape of food insecurity and limited affordable and healthy options

Participants spoke often of the difficulties caused by their financial situations. Participants' accounts primarily highlighted the ongoing challenge of accessing and consuming healthy food in an expensive food environment within the constraints of limited financial resources. This theme captures how food insecurity shapes everyday decisions, with participants balancing affordability, quality and convenience in their food choices.

Healthy food feels unattainable, and unaffordable. Most participants described healthy food as expensive and often unattainable when living with food insecurity. Fresh produce and meat, were frequently perceived as a luxury only available to those in a secure financial position. Participants often spoke of how their purchasing patterns have changed in response to their food insecurity:

...before it would have been every week loads of fresh fruit and veg, meats and nice things, whereas it actually feels like quite a luxury now – P2.

Participants worked hard to implement strategies to 'stretch their budgets', including prioritising filling foods over healthier options; they spoke of how cheaper, energy-dense foods were

often deliberately chosen and preferred to foods perceived to be healthier but less satiating when funds were limited. Usually, the priority was to avoid hunger rather than be nourished. One participant spoke of how his local food pantry assigned the same financial value to different food items despite variation in nutritional quality and satiety. This highlights the decision-making processes made in the face of food insecurity, where a trade-off has to be made between maximising the amount of food and its health value:

Within the [food] pantry [. . .] you could either get a big pizza like that, [mimics size] or you could get a yoghurt? [. . .] what really are you going to eat, like, if you're kind of in survival mode [. . .] it's hard to diet when you're just, you know, you'd rather go for a big pizza than a little yoghurt, do you know what I mean? Just because you know that big pizza, like, worst case you can put half of it cold and eat it the next day – P1.

This behaviour was often characterised as 'survival mode', where participants were prioritising how much food they could obtain and how long they could make it last over enjoyment or nourishment. Similarly, participants frequently compared the relative quantity of food available for the price. A recurring observation was that promotional discounts were more commonly applied to chocolates than to fruit, which shaped purchasing decisions:

Strawberries are never £1.00 a packet like a packet of five chocolate biscuits are. You know, sometimes you only maybe get about nine strawberries and you're paying around £3.15 but you can get a packet of Kit-Kats about six for £1.00. There's always offers on the chocolate bar – P4.

The perception that healthier food was more expensive often caused anxiety among participants, with many expressing a desire to provide healthier options for themselves and their families, yet the associated cost presented an ongoing conflict. Participants tried to incorporate

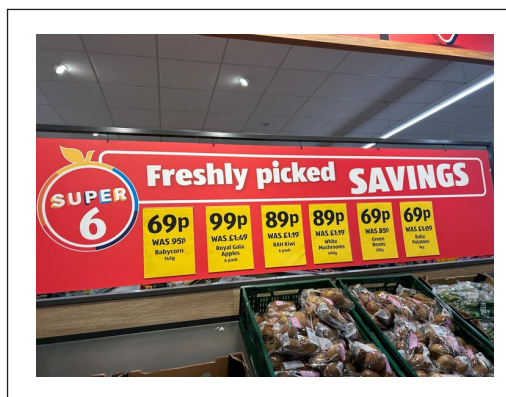


Image 1. Special offer on fresh fruit and vegetables.

fruit and vegetables into their diets by taking advantage of special offers on fruit and veg (see Image set 1). Decisions involved weighing not only price but also the perceived usefulness and quality of items, alongside whether purchases would be acceptable to other household members.

Occasional treats were carefully budgeted, reflecting the tension between the wish for enjoyable healthy meals and concern about overspending. Notably, participants often framed 'proper' food as a treat or even a luxury. As one participant reflected:

But that week [. . .] I had a bit of money in my back pocket, so I thought, do you know what, I'm actually going to treat myself to some actual food what I like, you know what I mean? – P1.

Uncertainty, precarity, and making do in the face of food insecurity. Though the perceived unaffordability of healthy foods presented a key barrier, the unpredictability of income, fluctuating food prices, and limited storage capacity also influenced participants' shopping and eating behaviours. Many described eating less or using leftovers strategically to make food last, relying on batch cooking, freezing, stockpiling, or purchasing long-life foods to avoid waste.

I don't like waste; I can't afford waste – P2.

I hate to waste food so I will freeze just about everything within reason, and I definitely don't pay an awful lot of attention to use by dates [. . .] and milk, I buy the [long life milk] it lasts longer – P3.

Participants experiencing more severe food insecurity frequently planned meals on an ad hoc basis around discounted or reduced-price items, often compromising on personal preference or nutritional value in order to save money. Freezers were commonly described as being 'packed' with such foods, reflecting a reliance on discounts as a primary food source. Many photos documented large quantities of 'yellow stickered' discounted foods as seen in Images 2a, 2b, and 2c. While this strategy helped to stretch limited budgets, participants also highlighted how it restricted their freedom and reduced their ability to choose the foods they genuinely wanted to eat:

Half my stuff in my freezer is, like, yellow stickered, and I just never thought about it like that, but it is [. . .] literally everything I've eaten is from a reduced bit [. . .] it just makes you think literally everything this week I've eaten has been reduced or free [. . .] it feels like we have less choice. We have to go with what's reduced – P2.

Financial and practical constraints, such as electricity cost or lack of cooking equipment, further limited flexibility in meal preparation. Strategies like bulk buying or bargain hunting were common, although not always straightforward. These narratives illustrate the constant negotiation between scarcity, convenience, and dietary ideals. The end of the month was particularly challenging time and most associated with uncertainty, with participants reporting survival-mode eating, prioritising energy consumption over enjoyment or health.

[. . .] I'm not particularly wanting to eat what I've made but I have to eat it because I've made too much of it or it was reduced and I bought it



Image 2a. Discounted sausages and eggs close to their 'use by' date.

because it was a bargain and I'll eat it but there's no real enjoyment in it, it's more just sort of a sustenance [. . .] I'm fed up [. . .] – P3

One participant spoke of how they only had access to an air fryer which had broken down during the study. As they had no cooker, they had to rely on takeaways or ambient food until they could afford to buy a cooker or a replacement air fryer:



Image 2b. A participants food shop, consisting of primarily discounted food items.

I've [had an] accident with my air fryer because [it broke and] I need to put this to the bin. I only buy a fridge and [I had an] air fryer because I don't have cooker. [Now] I [have to] go in with kids and take something takeaway or something – P9.

Many participants spoke of just '*making do with what's in the house*', usually in the form of bread and butter or spreads (Images 3a, 3b, and 3c) whether it was due to having no cooking facilities or due to a lack of money and food:

[it's] just bread and butter, just simple. I mean I'm not, you know, prices have gone crazy on, like, fillings and that, so I just [. . .] bread and butter and live with it, do you know what I mean? – P1.



Image 2c. A discounted food section within a participant's local supermarket.



Image 3a. Bread with cheese spread for a family dinner.



Image 3b. Bread and butter as a dinner.

At the same time, the social side of eating could be challenging and distressing to those experiencing food insecurity, particularly when access to preferred foods was limited:

[. . .] just that, like, that family cooking and just I think we're missing that a little bit [. . .] I feel like I'm missing cooking. I feel just like I'm just reheating stuff – P5.

Despite these constraints, participants emphasised the emotional significance of food, which was associated with love. Participants reflected on the enjoyment derived from sharing meals, preparing treats, or maintaining traditions and described saving money specifically for special occasions, such as holiday celebrations.



Image 3c. Scottish buttery with butter for supper.

I know if I wasn't having my daughter with me, Christmas day I don't know what I would eat [. . .] but I want to make it really nice for us and I want to have the table laid nicely and make it an occasion because it's very rare that my daughters come to me for Christmas [. . .] because it's an expensive time, I've already. . . the meat and the gammon they'll go in the freezer because I know nearer the time the offers won't be on them or the price might go up. So, I'm prepared in that respect for Christmas day because I know that the wages won't go far enough to cover everything – P3.

Theme 2: Patchy provision: The struggle for Reliable Food Services

Some participants reported using food banks, pantries and other food provision services. Although they expressed gratitude for being able to access these services, they described food provision as inconsistent and often difficult to access, highlighting the challenges of

relying on support such as food banks or pantries. Participants found that opening hours often conflicted with typical working patterns or that they were not eligible to use services, meaning that attempts to improve their financial situation through employment could result in missing out on food provision.

I wasn't allowed to [use the food bank] because [I live outside the city], so he says – P7.

Even when food was available, the selection was sometimes poor or did not align with personal preferences, with fresh fruit and vegetables being particularly sought after but often scarce.

[. . .] it's always close to going off, and do you know what I mean, if you don't use it that day or you don't freeze it, you can't use it [. . .] there is, like, such limited choice though [. . .] you get home and you open [your bread] and it's, like, it's stale [. . .] I mean they do their absolute best, and I know they do, but, yeah, sometimes it's just, you know, I think they do rely on donations – P1.

I think when I went, it was just like pastas and rices, and I think, like, very limited amounts of, like, bread loaves. And I think they had, like, beans or chickpeas that they had, but, again, like, very low stock, very, not a lot of fresh produce I would say. So, I just never really accessed it – P8.

Participants also voiced their frustration with the broader system of support. Some noted inequalities in access, including perceptions that less needy individuals sometimes used services at the expense of those in greater need:

But some people are greedy, who like, you know, maybe I'm being presumptuous, but I don't think they would have needed it. You know, it should be there for people who are struggling – P2.

Some participants relied on stockpiling food resources from food banks in case of future food shortages (Images 4a and 4b). Others described feeling constrained by the lack of



Image 4a. A stockpile of canned/tinned foods from food banks.



Image 4b. A stockpile of canned fruit taken from food pantries.

long-term solutions, particularly those not receiving government support. These individuals were often ineligible for food provision services, or unable to access them due to opening hours that conflicted with work commitments.

I don't know, maybe just some of the services that like people on benefits can access should be available to people who are working as well, you know, who maybe aren't left with much at the end of the month – P7.

Several participants reflected on occasions when they had sought support from such services but found access blocked by waiting lists or oversubscription, meaning help was unavailable at the point of need.

And that was a bit of a waiting list, and it was kind of frustrating because I was, like, I kind of need something now, rather than, like, a few weeks from now. So that was quite, like, hard for me – P8.

Despite these challenges, participants acknowledged that services were generally trying to help, and some valued the support provided by food pantries or local initiatives, particularly when they offered more choice than traditional food banks. Overall, participants' accounts illustrated that while food assistance provided important short-term relief, it was often unreliable and limited in scope, necessitating ongoing navigation, flexibility, and resilience on the part of individuals experiencing food insecurity.

Theme 3: Shifting realities of food insecurity

In the present study, participants described how food insecurity reshaped their everyday routines, creating a 'new normal' in which food practices were constrained by financial pressures and limited access to preferred foods. This theme highlights how changing circumstances and environments limited participants' ability to plan, shop, and eat in ways that felt adequate or desirable.

Working yet hungry: Food insecurity in the employed. Participants highlighted that food insecurity affected individuals across a range of employment statuses. Many reported struggling despite working full-time, which for many, was unexpected and destabilising. It challenges assumptions about who might experience food insecurity. Despite variation in employment status, participants described a sense of shared struggle and mutual understanding with others facing similar difficulties. They frequently reflected on how food insecurity might affect people in different circumstances, considering both those in part-time or inconsistent work and those without any income support.

[. . .] I have a good wage, and this has happened, like, without me even realising [. . .] I work full time, and I still struggle and have to look at the cost of everything [. . .] I'm struggling on a full-time wage, what about people that are part time or unemployed? They're living off nothing. And they get, you know, foodbanks and things like that, it's basics. Gratefully received, but not everyone's got the cooking facilities to reheat a tin of soup or beans. They can't wash their pans because they've no hot water. It's, you know, it's a really complex area – P2.

And I just feel like [. . .] everyone's in the same boat [. . .], do you know what I mean? – P1.

Alongside community food banks, participants described the increasing presence of food provision services in schools and workplaces. For some, this was seen as a necessary response to widespread need within local communities. As the landscape of food insecurity continues to change, more employed adults are struggling to access food, creating greater demand for such provision. One participant noted:

But also, our school's got a food bank [. . .] because of the level of deprivation, a lot of children need to take bags of food home – P5.

[a food bank] deliver to our work [. . .] staff can help themselves; you can come back at night-time if you want to wait or come in early and take food off the table when there's nobody around if you feel self-conscious – P4.

These accounts illustrate how food provision had become normalised and embedded into everyday settings, blurring the boundary between temporary relief and routine food access. This also challenges the common misconception that food insecurity primarily affects unemployed single adults, showing that employed full-time workers can also experience significant vulnerability.

Food swamps. The local food environment also shaped participants' options, with many describing limited access to affordable, nutritious food. Convenience stores and corner shops were often perceived as expensive and poorly stocked, while the prevalence of multiple takeaways created what some participants described as 'food swamps'. These establishments tended to cluster in areas of deprivation. For many, this environment normalised reliance on ready-to-eat, unhealthy foods, even when they were not considered desirable. Participants documented and reported the presence of numerous takeaways and corner shops selling unhealthy (but expensive) foods in close proximity to their homes.

[. . .] within the vicinity, you've got, like, five takeaways [. . .] it's no good for you, do you know what I mean? – P1.

Participants also recognised that takeaways were often the most convenient option despite the associated expense. This speaks more to the double disadvantage faced by those living with food insecurity; the clustering of unhealthy takeaway establishments in areas of deprivation restricts food choices for those with the least resources. This, in turn, contributes to deepening the inequalities in dietary health.

But yeah, so eight takeaways, so if you went up there, you're very tempted to buy a takeaway, you

know, but again four people it's going to be expensive, you know. And I'm not saying we don't, we do sometimes have it, it's a real treat if we have it [. . .] I suppose how easy it would be for people to fall into that trap and say, I'm just going to get a takeaway tonight, you know, I can't be bothered cooking; I'm here, I smell it, it's ready, I'll just grab it – P7.

These accounts illustrate how the wider food environment interacted with financial pressures to constrain participants' choices, often limiting the possibility of healthier or more satisfying meals.

Theme 4: The Weight of shame, and stigma – The social and emotional realities of food insecurity

Participants' experiences of food insecurity were often intertwined with profound social and emotional challenges. Many described feelings of shame and self-consciousness, particularly when accessing food banks or other support services. Some reflected on dissatisfaction or embarrassment regarding their diets, expressing guilt over 'treats' or takeaway meals and internalising societal messages about food and poverty:

I find it very difficult to treat myself, I would see it as a treat, other people would just see it as a straightforward purchase because I'm always looking for bargains – P3.

Concerns about the appearance and meal quality also contributed to self-consciousness. Participants described feeling that their meals were inadequate or unworthy of serving to others:

I would never serve some of the food that I eat myself to other people because it doesn't look like a decent meal. It's food but it's really not, it's more leftovers and cobbling together of a dish for a meal but nothing I would want to serve to other people – P3.

Feelings of isolation were common, with participants often eating alone due to perceived

stigma. Self-stigmatisation emerged as participants judged their own food choices or circumstances, sometimes compounded by concern over how others might view them. One participant spoke of how they felt like a ‘scavenger’ for looking through discount bins in supermarkets:

I think the concept of rummaging through it as well kind of turns me away, or I’m, like I feel like I’m scavenging for, like, different foods. So, I was kind of like, oh, like, this is kind of, I feel a little type of way when I saw that [. . .] I’m usually pretty good at saying, like, food is food. So I really wouldn’t mind. But I can, I do still get that sort of, I think I just stigmatize myself of, like, ah, well, like, I don’t want people thinking that, like, you know, I’m, like, again, rummaging [. . .] it just feels like you’re really just scraping the bottom of the barrel of, like, you know, you can’t afford other good quality – P8.

The emotional impact of food insecurity was further reflected in feelings of shame and disbelief at personal circumstances:

I mean, it sucks. Like, I felt like as though I was like, I guess there’s also that stigma too of, like, I never thought I’d find myself in that position, you know [. . .] it did feel quite isolating I will say, and I think there’s a lot of self-stigma there, where you’re kind of like, man, like, you don’t want to be that person that’s, like, you know, getting support for food, but, I mean, that was just the reality, like, I had to kind of suck it up – P8.

Participants also demonstrated empathy towards others in similar situations, recognising shared struggles and the broader societal pressures; scavenging for food or making do with limited resources was described not only as a practical necessity but also as an emotionally charged experience, highlighting the complex interplay between survival, pride, and social judgement.

Discussion

This study explored the lived experiences of food insecure adults in deprived areas, using

photo-elicitation interviews and reflexive thematic analysis. The findings of this study suggest that food insecurity is complex and multidimensional, shaped by financial constraints, local food environments, and social and emotional factors (Williamson et al., 2017). Participants’ accounts highlighted the realities of living with food insecurity and its impact on everyday food practices. Participants spoke of the difficulties that they faced when navigating food insecurity, particularly how their shopping, cooking and eating practices were limited by what was available to them. The unpredictability of day-to-day living with food insecurity made it difficult to plan and often resulted in participants stockpiling or and preserving food to ensure they could eat until they could next obtain food. Sometimes, participants did reach out to food provision services to obtain food, but support was reported to be inconsistent or unavailable; they spoke of how catchment areas of infrequent opening hours restricted how they could engage with these services, which further exacerbated their experiences of food insecurity.

As the cost-of-living prevails (Hoenink et al., 2022; Jones et al., 2014; Scott et al., 2018), participants felt that food insecurity was starting to impact more people in full time employment. Participants reported that services were typically only open during the day meaning that those in employment often could not access support. In this study, 6 of the 10 participants were full-time employed but struggling. It is estimated that across the UK, 38.6% of those experiencing food insecurity are in employment (The Food Foundation, 2023). This might point to a wider issue with the national living wage, suggesting that it does not meet the minimum income standard (Yau et al., 2020). It seems that being employed does not necessarily preclude individuals from experiencing food insecurity. This challenges a common misconception that food insecurity only affects those in receipt of government-issued financial support. As food insecurity increases, novel food provision avenues are being explored; participants in the present study often spoke of food banks being

offered within schools and workplaces to alleviate food insecurity, in addition to the food banks already established within community centres. This suggests deep-rooted problems within the welfare system where the reality of food insecurity is shifting.

Much of the existing literature discusses the link between food deserts and food insecurity, where we see urban areas lacking in shops that offer food, restricting access (Wrigley, 2002). In food deserts, deprived or low income households are disproportionately affected due to a lack of transportation options, which further exacerbates the impact of food insecurity (Janatabadi et al., 2024). In the present study, however, participants spoke more to the issue of food swamps. Unlike food deserts, food swamps are areas with a high number of establishments (e.g. corner stores, takeaways, restaurants, and cafes) which primarily stock calorie dense, nutrient poor foods (Osorio et al., 2013). Food swamps point to a double disadvantage where food insecure households are disproportionately affected compared to more affluent households; takeaways and corner stores tend to cluster in deprived areas, forcing residents to travel quite far out of their areas (using limited transportation options) to obtain healthier, affordable food. Food swamps are potentially a stronger predictor for obesity than food deserts (Cooksey-Stowers et al., 2017) with those living in deprived or low income areas likely the most effected.

Living in a food swamp may also contribute to cognitive depletion among food-insecure adults; individuals in the present study experiencing food insecurity explained how they must constantly navigate complex decisions about meals, balancing affordability, preferences, and nutritional value within a context of limited and often unhealthy food options. Such decision-making is cognitively demanding, requiring sustained self-control (Dohle and Hofmann, 2017). This ongoing need to evaluate and compromise under financial constraints imposes a significant cognitive load. Over time, this burden may deplete mental resources, reducing individuals' capacity for self-control and increasing the likelihood of

yielding to immediate temptations or engaging in less healthy eating behaviours (Byrd-Bredbenner et al., 2016). Participants in this study similarly indicated that healthy eating was often deprioritised when food was scarce or unpredictable. Although many expressed a desire to eat healthily, immediate concerns about having enough food took precedence over nutritional quality. Participants described a range of adaptive strategies (such as freezing food, stockpiling, or consuming items past their sell-by date) to manage shortages and ensure consistent access to meals. These adaptive practices illustrate a pattern of '**survival eating**' where the primary goal is food security rather than diet quality. Such behaviours may be underpinned by cognitive mechanisms shaped by the chronic stress and cognitive depletion associated with food insecurity. This is problematic as it puts those living with food insecurity at a higher risk of missing key nutrients from their diet due to an over-reliance on foods from food banks, takeaways and corner stores. These establishments tend to have higher volumes of calorie dense, nutrient poor foods. This could explain the higher levels of diet-related illnesses in the most deprived (Leung et al., 2014). To this end, food insecurity affects both access and quality of food, suggested a boarder public health challenge.

Though food insecurity poses a huge threat to dietary health, the importance of food goes beyond nutrition. It is also tied to identity, sense of self, and belonging within a society. In the present study, participants' experiences were profoundly social and emotional where feelings of shame, stigma, and isolation were commonly reported. The emotional burden of food insecurity was further illustrated by disbelief at personal circumstances; participants spoke of how they never imagined living in food insecurity and felt deeply ashamed. This aligns with the existing literature, which suggests that accessing a food provision service has a detrimental impact on a person's self-worth, given that they have very limited choice in what they are given (Purdam et al., 2016). Similarly, stigma contributes to social

exclusion where those experiencing food insecurity can feel forced out of their social circles given they cannot afford to have family or friends for dinner or participate in social activities (Pineau et al., 2021).

Implications for policy and practice

The findings have several implications for public health practice and policy. Interventions targeting food insecurity must consider the diversity of those affected, including employed adults who may not traditionally be seen as at risk. Food provision services, such as food banks, should be designed to reduce stigma and increase accessibility, including consideration of opening times that accommodate working hours, variety, and dignity in distribution. An existing example of this is the US-based Double Up Food Bucks programme which increases food insecure adults' purchasing power for fruit and vegetables, and offers a potentially less stigmatising approach to food support (Garner et al., 2020). Local food environments (i.e. food swamps) also require attention, as the prevalence of takeaways and limited availability of affordable, nutritious options reinforces inequities in food access. Novel behaviour change interventions could be developed to address both physical and emotional barriers to healthy eating, recognising that shame and stigma especially influence food choice as much as financial and environmental limitations. For example, social supermarkets may offer a less stigmatising model of food support by providing access to low-cost food products in a retail-style environment, while also improving the food environment and supporting healthier eating (Mulrooney et al., 2023).

Strengths and limitations

The present study contributes to literature using photo-elicitation to understand food insecurity (Barrington et al., 2017; Johnson et al., 2011; Kamdar and Hernandez, 2022). In doing so, it adds to a small UK evidence base by demonstrating how participant-generated photographs

can support discussion of the everyday, emotional realities of food insecurity.

Photo-elicitation enabled participants in this study to shape the direction of the interviews by deciding what aspects of food insecurity to photograph and discuss. This supported discussion of experiences that may be difficult to capture through traditional verbal questioning alone, including the emotional, practical, and relational dimensions of accessing, preparing, and consuming food while experiencing food insecurity. This methodology also helps to restore the researcher-participant imbalance by giving voice to those lived experiences (Azzarito, 2023). The inclusion of participants across different employment statuses and household types also offers a broader understanding of food insecurity in the UK context.

Limitations include the risk of potential self-selection bias, as participants comfortable with taking photographs and participating in interviews may differ from those who are not. The lengthy study process may have dissuaded some participants from engaging with the study, which may have contributed to the relatively small sample. However, the sample was considered to provide sufficient information power to address the study aims. Additionally, participants came from the same geographical area so reflections may vary from experiences across the UK.

Conclusion

Overall, this study highlights that food insecurity is a multidimensional issue, encompassing financial, social, and emotional challenges. Participants' experiences underscore the importance of considering both, environmental, societal, and psychosocial factors when addressing barriers to healthy eating. Photo-elicitation proved an effective method for capturing the nuanced realities of food insecurity, providing insights that can inform future interventions aimed at promoting equitable access to nutritious food and supporting health behaviours among adults experiencing food insecurity.

ORCID iDs

Abigail Stephen  <https://orcid.org/0000-0002-6742-7901>

Ella Guest  <https://orcid.org/0000-0001-8263-0679>

Frank Thies  <https://orcid.org/0000-0002-9275-9713>

Julia L. Allan  <https://orcid.org/0000-0001-7287-8363>

Ethical considerations

The Rowett Institute Ethics Committee (REC) at the University of Aberdeen approved our photo elicitation study in September 2024.

Consent to participate

All participants provided written informed consent prior to participating in the study.

Consent for publication

Participants gave their consent for their anonymised data, photos and quotations to be used in dissemination.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported and funded by the Rural Environment Science and Analytical Services (RESAS) division of the Scottish Government (grant number: RI-B5-7).

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data availability statement

The protocol for this study was pre-registered on the Open Science Framework (DOI: 10.17605/OSF.IO/E5T7F). The transcript data from the interviews in this study are not publicly available due to the nature of the data, but may be available from the corresponding author upon reasonable request.

Supplemental material

Supplemental material for this article is available online.

References

- Azzarito L (2023) Photo-elicitation to amplify and elevate the voices of research participants. In: Azzarito L (ed.) *Visual Methods for Social Justice in Education*. Springer International Publishing, pp.55–73. https://doi.org/10.1007/978-3-031-25745-2_4
- Barrington C, Villa-Torres L, Abdoulayi S, et al. (2017) Using photo-elicitation methods to understand resilience among ultra-poor youth and their caregivers in Malawi. *Health Education & Behavior* 44(5): 758–768.
- Bates EA, McCann JJ, Kaye LK, et al. (2017) “Beyond words”: A researcher’s guide to using photo elicitation in psychology. *Qualitative Research in Psychology* 14(4): 459–481. <https://doi.org/10.1080/14780887.2017.1359352>
- Braun V and Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2): 77–101.
- Braun V and Clarke V (2019) Reflecting on reflexive thematic analysis. Available at: <https://www.tandfonline.com/doi/full/10.1080/2159676X.2019.1628806> (accessed 24 September 2025).
- Braun V and Clarke V (2021) To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative Research in Sport Exercise and Health* 13(2): 201–216. <https://doi.org/10.1080/2159676X.2019.1704846>
- Byrd-Bredbenner C, Quick V, Koenings M, et al. (2016) Relationships of cognitive load on eating and weight-related behaviors of young adults. *Eating Behaviors* 21: 89–94.
- Collier J (1957) Photography in Anthropology: A report on two experiments. *American Anthropologist* 59(5): 843–859. <https://doi.org/10.1525/aa.1957.59.5.02a00100>
- Cooksey-Stowers K, Schwartz MB and Brownell KD (2017) Food swamps predict obesity rates better than food deserts in the United States. *International Journal of Environmental Research and Public Health* 14(11): 1366. <https://doi.org/10.3390/ijerph14111366>

- Craig N and Robinson M (2019) Towards a preventative approach to improving health and reducing health inequalities: A view from Scotland. *Public Health* 169: 195–200. <https://doi.org/10.1016/j.puhe.2019.02.013>
- Dohle S and Hofmann W (2017) Toward a mechanistic understanding of the impact of food insecurity on obesity. *Behavioral and Brain Sciences* 40: 23–24. <https://doi.org/10.1017/S0140525X16001412>.
- Francis-Devine B, Foley N and Malik X (2025) *Food Poverty: Households, Food Banks and Free School Meals*. House of Commons Library.
- Fritz H and Lysack C (2014) “I see it now”: Using photo elicitation to understand chronic illness self-management [L’usage de la méthode de photo-interview pour mieux comprendre l’autogestion des maladies chroniques]. *Canadian Journal of Occupational Therapy* 81(4): 247–255. <https://doi.org/10.1177/0008417414540517>
- Garner JA, Coombs C, Savoie-Roskos MR, et al. (2020) A qualitative evaluation of double up food bucks farmers’ market incentive program access. *Journal of Nutrition Education and Behavior* 52(7): 705–712. <https://doi.org/10.1016/j.jneb.2019.11.010>
- Garthwaite KA, Collins PJ and Bambra C (2015) Food for thought: An ethnographic study of negotiating ill health and food insecurity in a UK foodbank. *Social Science & Medicine* 132: 38–44. <https://doi.org/10.1016/j.socscimed.2015.03.019>
- Habib Perez OD, Martin S, Chan K, et al. (2022) A qualitative photo-elicitation study exploring the impact of falls and fall risk on individuals with subacute spinal cord injury. *PLoS One* 17(6): e0269660. <https://doi.org/10.1371/journal.pone.0269660>
- Hoenink JC, Waterlander W, Vandevijvere S, et al. (2022) The cost of healthy versus current diets in the Netherlands for households with a low, middle and high education. *SSM—Population Health* 20: 101296. <https://doi.org/10.1016/j.ssmph.2022.101296>
- Janatabadi F, Newing A and Ermagun A (2024) Social and spatial inequalities of contemporary food deserts: A compound of store and online access to food in the United Kingdom. *Applied Geography* 163: 103184. <https://doi.org/10.1016/j.apgeog.2023.103184>
- Johnson CM, Sharkey JR, and Dean WR (2011) It’s all about the children: a participant-driven photo-elicitation study of Mexican-origin mothers’ food choices. *BMC Women’s Health* 11(1): 41.
- Jones NRV, Conklin AI, Suhrcke M, et al. (2014) The growing price gap between more and less healthy foods: Analysis of a Novel Longitudinal UK dataset. *PLoS One* 9(10): e109343. <https://doi.org/10.1371/journal.pone.0109343>
- Kamdar N and Hernandez D (2022) Photo-elicitation: Reflections on a method to study food insecurity among low-income, post-9/11 veterans. *Public Health Nursing* 39(1): 336–343.
- Kurtz HE and Wood J (2014) Stone soup: photo-elicitation as a learning tool in the food geography classroom. *Journal of Geography in Higher Education* 38(4): 546–556. <https://doi.org/10.1080/03098265.2014.958657>
- Leung, CW, Epel ES and Ritchie LD (2014) Food insecurity is inversely associated with diet quality of lower-income adults. *Journal of the Academy of Nutrition and Dietetics* 114(12): 1943–1953.
- Leung CW, Laraia BA, Feiner C, et al. (2022) The psychological distress of food insecurity: A qualitative study of the emotional experiences of parents and their coping strategies. *Journal of the Academy of Nutrition and Dietetics* 122(10): 1903–1910.e2. <https://doi.org/10.1016/j.jand.2022.05.010>
- Liu Y and Eicher-Miller HA (2021) Food insecurity and cardiovascular disease risk. *Current Atherosclerosis Reports* 23(6): 24. <https://doi.org/10.1007/s11883-021-00923-6>
- Moraes C, McEachern MG, Gibbons A, et al. (2021) Understanding lived experiences of food insecurity through a paraliminality lens. *Sociology* 55(6): 1169–1190. <https://doi.org/10.1177/00380385211003450>
- Mulrooney HM, Ranta R, Nancheva N, et al. (2023) Social supermarkets, nutritional implications and healthy eating: Exploration of members and their views. *Journal of Human Nutrition and Dietetics* 36(5): 2108–2120. <https://doi.org/10.1111/jhn.13226>
- Musselman KE, Arnold C, Pujol C, et al. (2018) Falls, mobility, and physical activity after spinal cord injury: An exploratory study using photo-elicitation interviewing. *Spinal Cord Series and Cases* 4(1): 39. <https://doi.org/10.1038/s41394-018-0072-9>
- Osorio AE, Corradini MG and Williams JD (2013) Remediating food deserts, food swamps, and food brownfields: Helping the poor access

- nutritious, safe, and affordable food. *AMS Review* 3(4): 217–231. <https://doi.org/10.1007/s13162-013-0049-6>
- Pettinger C, Parsons JM, Cunningham M, et al. (2017) Engaging homeless individuals in discussion about their food experiences to optimise wellbeing: A pilot study. *Health Education Journal* 76(5): 557–568. <https://doi.org/10.1177/0017896917705159>
- Pineau C, Williams PL, Brady J, et al. (2021) Exploring experiences of food insecurity, stigma, social exclusion, and shame among women in high-income countries: A narrative review. *Canadian Food Studies / La Revue canadienne des études sur l'alimentation* 8(3). <https://doi.org/10.15353/cfs-rcea.v8i3.473>
- Purdam K, Garratt EA and Esmail A (2016) Hungry? Food insecurity, social stigma and embarrassment in the UK. *Sociology* 50(6): 1072–1088. <https://doi.org/10.1177/0038038515594092>
- Roger KS and Blomgren C (2019) Elicitation as a mind-set: Why visual data matter? *International Journal of Qualitative Methods* 18: 1609406919835378. <https://doi.org/10.1177/1609406919835378>
- Scott C, Sutherland J and Taylor A (2018) *Affordability of the UK's Eatwell Guide*. The Food Foundation.
- Scottish Government (2020) Scottish index of multiple deprivation. Available at: <https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020/> (accessed 8 April 2025).
- Scottish Government (2023) The Scottish Health Survey. Available at: <https://www.gov.scot/publications/scottish-health-survey-2023-volume-1-main-report/pages/11/> (accessed 24 September 2025).
- Shell L (2014) Photo-elicitation with autodriv-ing in research with individuals with mild to moderate Alzheimer's disease: Advantages and challenges. *International Journal of Qualitative Methods* 13(1): 170–184. <https://doi.org/10.1177/160940691401300106>
- Sosenko F, Bramley G and Bhattacharjee A (2022) Understanding the post-2010 increase in food bank use in England: New quasi-experimental analysis of the role of welfare policy. *BMC Public Health* 22(1): 1363. <https://doi.org/10.1186/s12889-022-13738-0>
- Stephen A and Guest E (2026) Using photo-elicitation interviews in health research: Methodological, ethical and practical reflections from qualitative case studies. *International Journal of Qualitative Methods* 25: 16094069261455287. <https://doi.org/10.1177/16094069261455287>
- The Food Foundation (2023) *New Data Shows UK Essential Workers Face Devastating Food Insecurity Levels*. The Food Foundation. Available at: <https://foodfoundation.org.uk/press-release/new-data-shows-uk-essential-workers-face-devastating-food-insecurity-levels-0> (accessed 23 September 2025).
- Van Auken PM, Frisvoll SJ and Stewart SI (2010) Visualising community: Using participant-driven photo-elicitation for research and application. *Local Environment* 15(4): 373–388. <https://doi.org/10.1080/13549831003677670>
- Williamson S, McGregor-Shenton M, Brumble B, et al. (2017) Deprivation and healthy food access, cost and availability: A cross-sectional study. *Journal of Human Nutrition and Dietetics* 30(6): 791–799. <https://doi.org/10.1111/jhn.12489>
- Wrigley N (2002) 'Food deserts' in British cities: Policy context and research priorities. *Urban Studies* 39(11): 2029–2040. <https://doi.org/10.1080/0042098022000011344>
- Yau A, White M, Hammond D, et al. (2020) Socio-demographic characteristics, diet and health among food insecure UK adults: Cross-sectional analysis of the International Food Policy Study. *Public Health Nutrition* 23(14): 2602–2614. <https://doi.org/10.1017/S1368980020000087>
- Zaidi K (2025) *Food Banks in the UK*. House of Commons Library.