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1 **Title: Food banks: Understanding their role in the food insecure population in the UK.**

2

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22 and both authors made significant writing contributions to subsequent drafts.

Abstract

This paper reviews the growing body of literature on food insecurity and food bank use in the UK. It provides an overview of food insecurity in this context, followed by a description of the emergence of food banks, highlighting how any role that food banks play in the food insecure population is limited. Data on food insecurity and food bank use suggest many people experiencing food insecurity do not receive help from food banks. To better understand the factors influencing the relationship between food insecurity and food bank use, a conceptual framework is outlined, suggesting the relationship is far from straightforward and contingent on many factors. The nature and availability of food banks and other local support services and individual-level factors influence the likelihood of food banks being used in the context of food insecurity. Then, the extent to which food banks can impact on food insecurity is also dependent on the quantity and quality of food distributed, as well as other support services offered from food banks. Closing reflections highlight rising living costs and food banks reporting that they do not have capacity to cope with increasing demand, underscoring the need for policy interventions. Reliance on food banks to respond to food insecurity may ultimately impede formulation of effective policy interventions to reduce food insecurity, giving the illusion of widespread available support, while food insecurity persists among those receiving help from food banks and those who experience food insecurity but do not use food banks.

1 **Introduction**

2 Food banks (or food pantries in the USA) are established charity organisations across many
3 Western countries, proliferating in the USA and Canada in the 1980s (1, 2), in some Nordic
4 countries in the early 1990s (3) and in other European nations such as Germany and the
5 Netherlands through the 2000s (3). In the UK, they have only become widespread since 2010
6 (4-6). They most commonly operate as voluntary projects where people can receive free bags
7 of groceries in the face of insufficient finances for food. They are now established features of
8 informal welfare systems, and funding from food corporations and governments show how
9 normalised they have become (6). Research in Western countries has examined the
10 relationship between food insecurity and food bank use from a population perspective (7-10)
11 and considered the nutritional quality of foods food banks offer (11, 12), experiences of
12 people using food banks (11), and ethics of charities being relied on to support people
13 experiencing food insecurity (3). In the UK, research focused on food insecurity and food
14 bank use was relatively rare before the rapid spread of food banks and growing usage from
15 2010 but since then, has burgeoned. This paper reviews this body of evidence, asking, what is
16 known about food insecurity in the UK, and what is the role of food banks among people
17 experiencing food insecurity?

18 **Food insecurity in the UK**

19 *Use of food insecurity concept and measurement prior to regular monitoring*

20 Household food insecurity is a widely used concept in high-income countries to describe
21 “uncertainty about future food availability and access, insufficiency in the amount and kind
22 of food required for a healthy lifestyle, or the need to use socially unacceptable ways to
23 acquire food.” (13). A number of survey instruments have been developed to measure and
24 monitor household or individual-level experiences of food insecurity in high-income
25 countries (14), with one of the most commonly used being the United States Department of
26 Agriculture (USDA)’s Household Food Security Survey Measurement Module (FSSM) or
27 Adult FSSM, which excludes questions referring to children in households. Measurement of
28 food insecurity in large population-based surveys has led to a large body of research on how
29 it associates with non-communicable diseases (15) and measures of mental health (16, 17),
30 among other social and well-being outcomes. Of particular concern to the nutrition and
31 dietetics community is how food insecurity is associated with poor dietary quality and
32 nutrient intakes (18).

33 In the UK, the term household food insecurity had not widely been used among researchers,
34 policymakers, or the third sector until recently. In 2003, however, Dowler highlighted how
35 the term “food poverty” was gaining traction in the UK and pointed out that it was
36 conceptually similar to the concept of household food insecurity used in USA literature (19).
37 Dowler defined food poverty as “the inability to acquire or consume an adequate quality or
38 quantity of food in socially acceptable ways, or the uncertainty that one will be able to do
39 so”, which is the definition that comes from early qualitative and conceptual research of food
40 insecurity in the USA by Radimer and colleagues (at the time, used to describe “hunger” but
41 referring to food insecurity)(20, 21). Research into food insecurity experiences in the UK was
42 relatively scant at that time and predominantly qualitative (19, 22), though quantitative
43 studies examining the patterning of diets and nutrition by socio-economic status were
44 common (23). Additionally, questions asking about households’ abilities to eat certain foods
45 (e.g. fruit and vegetables, meals with a protein source) and participate in social norms around
46 eating (e.g. number of meals a day, ability to have friends over for a meal) were a part of
47 material deprivation measures in the UK and gathered across the EU (19). One of the first
48 quantitative pieces of research that used a validated survey instrument to capture food
49 insecurity (the USDA’s HFSSM) was a survey of people using GP practices in London
50 conducted in 2002 (24). This study suggested high levels of food insecurity among GP
51 patients, though levels ranged from 3% to 32% across GP practices. Two place-based surveys
52 targeting mothers of children recruited into birth cohorts also included food insecurity
53 measurement in the 2000s: the Southampton Women’s Survey (25) and a sub-study from the
54 Born in Bradford birth cohort study (26). In the Southampton women’s study, 4.6% of
55 women were classed as moderately or severely food insecure (25). In the sub-sample of
56 women from the Born in Bradford cohort, 14% of women were moderately or severely food
57 insecure. Of course, given the targeted nature of these studies, it is not possible to generalise
58 these findings to the general population, but they give an idea of the scale of the problem in
59 these samples at that time.

60 Over 2003-2005, a survey targeting households in the top 15% of deprivation levels in the
61 UK was commissioned by the Food Standards Agency (referred to as the Low Income Diet
62 and Nutrition Survey) and included the USDA’s Adult FSSM (27). Among adults in this
63 high-risk population, 14% were classified as moderately or severely food insecure. However,
64 this one-off survey was not repeated, and to our knowledge, no government body
65 commissioned a survey to capture food insecurity in the UK population again until 2016. Of

66 note is that the Department for Environment, Food and Rural Affairs (DEFRA) was
67 responsible for reporting on food insecurity, but this largely consisted of reporting on the
68 food supply, food prices and household food expenditure, and did not include any data on
69 individual or household measures of insufficient or insecure access to food (28).

70 *Regular monitoring of food insecurity in the UK*

71 Whilst these studies suggested food insecurity was a problem for some groups prior to 2010,
72 it was the rapid rise in numbers using food banks reported in the media from 2012 (29) and
73 the qualitative research highlighting experiences of food insecurity among food bank users
74 (30) that led to many third sector organisations and academics calling for the need for
75 measurement of food insecurity in the population to understand its scale and who was most at
76 risk (31-33).

77 In 2016, the Food Standards Agency (FSA) included the USDA's Adult FSSM, with a 12-
78 month recall period, in Wave 4 of their Food and You survey (34). Whilst not representing
79 the whole of the UK, as Scotland has its own Food Standards Agency, this was the first
80 attempt by a UK government agency to measure food insecurity in a nationally-representative
81 survey. These data were the first to show how widespread the problem of food insecurity was
82 in the general UK population, with 13% of adults experiencing marginal food insecurity and
83 a further 8% experiencing moderate or severe levels. From 2016, the FSA has continued to
84 include food insecurity in their Food and You survey (35) and its successor, Food and You 2
85 (36). In addition, from 2019-20, the Department for Work and Pensions is also including the
86 Adult FSSM in their Family Resources Survey, using a 30-day recall period (37). Based on
87 these data, prior to the COVID-19 pandemic, 8% of adults were experiencing moderate or
88 severe food insecurity each month, with a further 6% experiencing marginal levels. In some
89 areas, for example, the North East and North West, levels were much higher with 11 and 10%
90 of households experiencing moderate or severe levels food insecurity respectively (37).

91 In addition to revealing the scale of food insecurity, these data have enabled identification of
92 socio-demographic groups that experience significantly higher levels of food insecurity than
93 their counterparts (for examples, see table 9.6 available from (37) and (38)). These include
94 adults with disabilities, adults who are unemployed, adults in receipt of Universal Credit,
95 households with children, and adults from some Black, Asian and Minority Ethnic groups.
96 Multivariate analyses of Food and You data from 2016 have shown that unemployment, low
97 incomes, and disability are significant predictors of severe levels of food insecurity (39).

98 **Food banks in the UK**

99 *Growth in number of food banks and distribution of food parcels*

100 Whilst it is clear from the data outlined above that insecure and insufficient access to food
101 were experiences among low-income households in the 1990s and 2000s, food banks only
102 became widespread from 2010. Their proliferation is linked to the recession of 2008 and
103 subsequent austerity measures implemented, which reduced spending for local services,
104 reformed the benefit system, and reduced funding for financial crisis support in local
105 authorities in England (5, 40-43). The Trussell Trust is a national network of food banks,
106 which established its first food bank in 2000 and became a social franchise in 2004, allowing
107 community groups, mostly Christian churches at that time, to become members and start their
108 own food banks (44). But it was only after 2010 that the Trussell Trust model spread rapidly
109 across the UK (45). Outside of the Trussell Trust, independent food banks have also been
110 operating, but a survey of independent food banks operating in 2018-19 found that in the
111 representative sample of 114 food banks, just under 10% were distributing food parcels
112 before 2004, and that the majority, 75% of the sample, started in 2010 or later (4). Today, it is
113 estimated that food banks operate in most local authorities (45), with about 430 Trussell Trust
114 members distributing food parcels from about 1300 client-facing food bank distribution
115 centres (46), and at least 1170 independent food banks operating outside of the Trussell Trust
116 network, though this does not include schools, hospitals or Salvation Army centres that
117 provide food parcels (47). The latter data were collated by the Independent Food Aid
118 Network (IFAN), which was established in spring 2016 to provide mutual support and share
119 resources amongst food aid providers operating outside of the Trussell Trust, among other
120 aims (48). About 550 non-Trussell Trust food aid providers, predominantly food banks, are
121 part of IFAN.

122 Of course, the provision of food in response to concerns about hunger in the UK population
123 was not new (42). Other forms of food aid have a long-standing history in this country
124 context, with soup kitchens and later soup runs being among the most visible (22). However,
125 the establishment and proliferation of national scale organisations to facilitate or coordinate
126 food assistance in the form of food banks is new since 2010, systematically supporting a
127 basic provision of food for people to take away, prepare and eat off site, on top of financial
128 transfers through the social security system, largely in recognition of the inadequacy of the
129 level of financial support and also because of issues with the system or operations of the

130 system which caused benefit payments to be delayed or stopped (22). Of note is that initially
131 the Trussell Trust saw themselves as primarily responding to people in financial
132 “emergencies” and a stopgap until financial issues could be solved (i.e. when benefit
133 payments came through, etc.) (44). To some extent, their data reflected these situations, with
134 problems with benefits and benefit delays being among the most frequent reasons for referral
135 to food banks. However, in light of benefit freezes and rising living costs, there has been a
136 steady increase in the number of referrals being attributed to “low income”, which suggests
137 that food banks are supporting people with chronically low incomes, rather than providing
138 stopgap support (45). This shift may reflect that benefit levels have eroded over 2014 to 2019
139 (49).

140 In the absence of monitoring of food insecurity data prior to 2016, quantitative data on food
141 bank usage has been used to describe the scale of hunger. Even with survey data, many local
142 authorities rely on food bank statistics because they are available at the local level (50). Data
143 on food bank use have primarily come from The Trussell Trust, which requires food banks in
144 its network to keep record of the number of households and corresponding household
145 members that receive food parcels. Data tracking is facilitated by the use of the Trussell
146 Trust’s referral model, where redeemed referral vouchers enable data collection on number of
147 household members receiving help and reason for referral. The Trussell Trust has been
148 regularly reporting their end-of-year statistics and mid-year statistics since 2011, with trends
149 showing a steady increase in the number of times adults and children have received food
150 parcels (45, 51). In their most recent report of end of year statistics, people were helped by
151 food parcels 2.17 million times over 2021-22, compared to 1.20 million in 2016-17 (51), and
152 fewer than 500,000 in 2012-13 (45). Data on individuals are not reported, though data on the
153 frequency of use among recipients has been reported to be about 2.6 times per year (45).
154 Thus, these data cannot be interpreted as prevalence of Trussell Trust food bank use, but
155 rather are an indicator of the volume of food bank usage, with both an increase in the number
156 of people receiving food parcels or an increase in the number of times an individual or
157 household receives food parcels increasing the volume of food parcels distributed.

158 IFAN has periodically collated data on food bank use from their membership, reflecting the
159 volume of food parcel distribution among a subset of independent food banks that are not part
160 of the Trussell Trust network. Their latest data from December 2020, from a sample of IFAN
161 members, suggested food bank food parcel distribution in 2020 was more than double what it
162 was in 2019 (52). Based on an almost complete audit of independent food banks operating in

163 Scotland in 2019, IFAN data also showed that independent food banks provided a near
164 equivalent of food parcels as Trussell Trust food banks, though ratios may vary across the
165 country and by how independent food banks operate (53).

166 Whilst there were debates about whether the rise in food bank use reflected a growing
167 amount of food bank assistance available or a genuine rise in need in the population (5, 41),
168 there has been evidence that vulnerability to food insecurity has risen in the UK. An analysis
169 comparing levels in 2004 observed among low-income households from the aforementioned
170 Low Income Diet and Nutrition Survey (27) to low income households from the 2016 Food
171 and You survey (35) found that when matched on participant characteristics, there was strong
172 evidence of a rise in food insecurity among low-income households, from 28% to 46% (39).
173 Importantly, however, the data from the 2016 survey also allowed the scale of food insecurity
174 in the population to be compared to volume of food parcel distribution from the Trussell
175 Trust network from the first time. Based on the prevalence of food insecurity among adults, it
176 was estimated that 10.2 million adults were experiencing marginal, moderate, or severe food
177 insecurity in 2016, with 1.3 million experiencing severe food insecurity (39). The estimated
178 number of individual adults using Trussell Trust food banks at that time was only 324,000,
179 suggesting fewer than 1 in 4 adults with severe experiences of food insecurity were using
180 Trussell Trust food banks (39).

181 Further evidence of a wide discrepancy between the numbers of people experiencing food
182 insecurity in the UK and the numbers using food banks come from the 2021 Food and You 2
183 survey, which included a measure of food bank use alongside food insecurity measurement
184 (54). In 2021, 13% of adults were classified as marginally food insecure in this survey and an
185 additional 15% were classified as moderately or severely food insecure. In response to a
186 question asking respondents whether they “received a free food parcel from a food bank or
187 other emergency provider in past 12 months.”, only 4% of adults reported this (54). These
188 figures highlight that levels of moderate and severe food insecurity are 3.75 times higher than
189 food bank use.

190 These data illustrate that food banks do not appear to reach the majority of households
191 experiencing food insecurity in the population. A discordance between experiences of food
192 insecurity and food bank use has been observed in other data sources as well (55, 56). This is
193 important for understanding the role of food banks among people experiencing food

194 insecurity in the UK: any role is limited to those they reach. However, even when food banks
195 serve people experiencing food insecurity, the impact they have may be limited.

196 In the next section, we present a framework for understanding the factors influencing the
197 reach of food banks among people experiencing food insecurity and the potential for food
198 banks to have an impact on the food insecurity or nutritional needs of this population.

199 **Conceptual framework: understanding food bank use in the context of food insecurity**
200 **in the UK**

201 In figure 1, we present a novel framework for understanding the discrepancy between food
202 insecurity and food bank use in the UK context, drawing from the academic literature on food
203 insecurity and food bank use from the UK. As already covered, we show known risk factors
204 for food insecurity observed in the UK survey data: low household income, unemployment,
205 receipt of income-replacement benefits, disability, having children in the household, being of
206 working age in comparison to pension age, and characteristics often associated with
207 disadvantage, like single parenthood and belonging to UK-ethnic minority groups. The
208 discrepancy between the scale of food insecurity and the scale of food bank use is depicted by
209 the differently sized red triangles.

210 The central arrow shows how it is food insecurity that drives food bank use; however, central
211 to this conceptual framework, we propose that the strength of this relationship, i.e. the
212 likelihood of someone who is food insecure receiving help from a food bank, is impacted by
213 two main groups of factors shown above and below this arrow: (1) individual-level factors
214 relating to the circumstances and feelings about food bank use among people experiencing
215 food insecurity, shown in green; and (2) the landscape and operational features of the local
216 community food and support sector, shown in yellow. In addition, we show potential
217 outcomes of food bank use that we need to better understand in order to understand the
218 relationship between food insecurity and food bank use, namely, whether there are immediate
219 impacts on quality of diet and hunger relief, and longer-term impacts, both positive and
220 negative, that could arise from using food banks. We also indicate that outcomes may differ
221 depending on the nature of the help provided by food banks. Below, we outline the evidence
222 we drew from to develop this conceptual model and where evidence gaps remain.

223 [Figure 1 about here]

224 *Individual-level factors influencing the relationship between food insecurity and food bank*
225 *use*

226 Qualitative studies based on data from food bank users in different places in the UK have
227 described people's feeling about using food banks, highlighting their reluctance to use food
228 charity and resistance to doing so until their circumstances were desperate (57, 58). These
229 studies highlight that feelings of shame have an important role to play, with people describing
230 having to use the food bank as a source of embarrassment and feelings of failure (57-59).
231 This is supported by quantitative evidence showing the high prevalence of severe food
232 insecurity found among food bank users in the UK, suggesting that people have been unlikely
233 to use food banks until they have experienced going without food and have no other
234 alternative (45, 60, 61).

235 Access to other forms of informal food and/or financial support from family or friends and
236 religious or cultural communities may also influence who people turn to for help when faced
237 with insufficient access to food. Qualitative research has suggested that people will draw
238 from support networks available to them before turning to charity (58). Surveys of people
239 using Trussell Trust food banks have found that a high proportion of food bank users report
240 having exhausted the option to ask family or friends for help or not having family or friends
241 to ask for help or who are in position to help (45, 60). Qualitative research among Pakistani
242 women in Bradford found that in contrast to women from White British backgrounds, they
243 were more likely to describe their social and familial networks of support and less likely to
244 report using food banks (62).

245 The ability to physically access food banks and bring parcels of food home has also been
246 identified as a barrier to food bank use for some. Though people with disabilities are over-
247 represented in food banks,(45, 60, 61) some qualitative work has documented how people
248 with physical disabilities in particular find it difficult to carry food parcels home (63). This
249 might particularly be an issue for people with disabilities who do not live close to food bank
250 centres, with research showing an association between food bank use and disability rates
251 across local areas in the UK, but that this relationship is attenuated when there are fewer food
252 banks operating in an area (64). Qualitative research by Purdham et al outlined the personal
253 "costs" to people using food banks, which included long journeys to food banks (58).

254 *Landscape and operational features of local community food and support sector influencing the*
255 *relationship between food insecurity and food bank use*

256

257 As shown in Figure 1, the landscape and operational features that may influence the
258 relationship between food insecurity and food bank use include operational features, and the
259 inputs and ideologies that shape these, and the forms of community food and support services
260 available in a local area.

261 First, the availability of food banks is key to consider. As food banks are voluntary
262 organisations, it is not guaranteed that there will be a food bank available in every
263 neighbourhood or local area. Some research into where Trussell Trust food banks (the local
264 umbrella organisations, not individual neighbourhood distribution centres) were located in
265 2016 suggested poor correlation with indicators of risk for food insecurity (e.g. low income,
266 presence of children in household, lone parent household, receipt of benefits) (65). A
267 qualitative study examining the rise of the Trussell Trust network over 2004 to 2011
268 described their social franchise model and Christian religious beliefs as important drivers of
269 growth, where churches were encouraged to start food banks as part of their social action
270 work, suggesting that this action was not necessarily tied to assessment of need for this
271 provision in local areas (44). An association between the odds of a new Trussell Trust food
272 bank opening and local service spending reductions was observed over 2009-2013,
273 suggesting that food banks might have been opening to fill a gap in local service provision
274 over that period (5); however, to our knowledge and likely reflecting that a decision to start
275 food banks originates from individuals or local community organisations or faith groups,
276 there hasn't been a coordinated strategy to ensure food banks are available in all communities
277 across the UK (though mapping availability of access to food banks in local areas has been an
278 area of focus for some local food poverty alliances (66)).

279 Even when food banks are located in local areas, catchment areas can be large, and food
280 banks may not be located within accessible distance to people's homes, especially in rural
281 areas. May et al. (67) examined the number of independent and Trussell Trust food bank
282 distribution centres in England and Wales and found that the number of locations people
283 could pick up food from food banks, in mainly largely rural areas, ranged from 4 locations in
284 Buckinghamshire County to 28 in County Durham, with the density ranging from 1724
285 people per food bank distribution to centre to 62025 per food bank distribution centre. From
286 qualitative interviews conducted by the same authors, they highlighted that people in rural
287 areas can struggle with the lack of public transportation and high personal transport costs to
288 reach food bank distribution centres and the agencies referring to them.

289 Similarly, research by Loopstra, Lambie-Mumford & Fledderjohann (64) examined the
290 density of the 1145 Trussell Trust distribution centres operating across England, Wales and
291 Scotland, finding an average of 3.43 centres per 100 km² but that this ranged from a
292 minimum of 0.02 sites to a maximum of 27.5 sites. In areas served by more centres, there
293 were higher rates of food parcel distribution, suggesting that availability of centres does
294 influence the likelihood of food banks being used. Other research using data from Trussell
295 Trust food banks has also shown a positive relationship between the number of Trussell Trust
296 distribution sites and the numbers of food parcels distributed in postcode districts or local
297 authorities (41, 68, 69). Importantly, the density of food banks has also appeared to modify
298 relationships between risk factors for food insecurity and food bank usage. For example, a
299 positive relationship between disability rates and Trussell Trust food parcel distribution was
300 observed, but this relationship was much weaker in places where there were fewer food banks
301 available. (64) Similarly, the number of people experiencing benefits sanctions and numbers
302 of people receiving Universal Credit have both been associated with Trussell Trust food bank
303 use, but these relationships are weaker in places where food banks are less available (68, 69).
304 These findings suggest that for a given level of risk of food insecurity in the population, the
305 extent to which this will be reflected in food bank use depends on the availability of food
306 banks in the area.

307 Another observed feature of food banks is their limited operating hours. Data from the
308 Trussell Trust network on when their member food banks were open in 2015 showed that
309 fewer than 20% of food bank distribution sites were open across local authorities in any given
310 hour of the week and that hours of opening were concentrated between 10:00 a.m. and 4:00
311 p.m. Among the 257 local authorities with Trussell Trust food banks operating in 2015, only
312 54 (21%) had food banks that were open on weekends and only 13% (n=34) had food banks
313 that were open during evenings. There was evidence that there were higher rates of usage
314 where food banks were open for more hours and where they operated on weekends. As with
315 density of food bank sites, there was evidence that more restrictive opening hours weakened
316 relationships between risk factors for food insecurity and rates of food bank usage (64).

317 A number of other features of how food banks operate could also influence the likelihood of
318 someone receiving help from a food bank, though the quantitative impact on the numbers
319 served has not as yet been documented. The ability of food banks to provide delivery of food
320 parcels may enhance access for people with disabilities or who live in rural areas (67). During
321 the COVID-19 pandemic, case study research in local authorities across the UK found that a

322 switch to delivery of food parcels was a common adjustment to food bank services during
323 lockdowns (70). Whilst this was largely viewed as a positive change to enable food parcel
324 access for people unwilling or unable to go out during this period, stakeholders engaged in
325 this research also highlighted that for populations without fixed addresses or unable to make
326 contact to request a delivery, the switch from dropping in when food banks were open to
327 delivery may have been a barrier to receiving food bank food parcels over this period (70).

328 Other features of how food banks operate may also influence the extent to which people
329 experiencing food insecurity are able to use food banks. One barrier to use may be the need
330 for a referral from other service organisations. The Trussell Trust model requires that people
331 first receive a referral from a third-party agency, such as Citizen's Advice, a GP office, or
332 local council, before they are able to receive a food parcel from a food bank. Among
333 independent food banks, a similar model is also often used: the aforementioned survey of
334 independent food banks found that about 60% had a referral system in place (4). Among
335 those that did not require a third-party referral, other measures were often in place to check
336 identification and/or assess need, such as checking IDs, requiring a registration form to be
337 filled, or a needs assessment questionnaire or interview. The need for a referral from a third-
338 party agency in Trussell Trust food banks in particular may mean that food banks are more
339 likely to serve people who interact with referring agencies than people who do not. Whilst
340 qualitative and quantitative research suggests food bank managers and volunteers may at
341 times relax referral requirements (71, 72), even the perception of the need for a referral may
342 put people off seeking assistance. Further, the criteria that referral agents apply when
343 deciding who to give a food bank referral to may differ across referral agents. To our
344 knowledge, differences in referral practices have not been charted in the UK, even though
345 these are key gatekeepers to food bank access.

346 The spaces, and inadequacy of space, that food banks have to operate in may also be a barrier
347 to use. Many food banks are affiliated with particular faith groups and operate within faith-
348 based settings such as churches or mosques (72). Among independent food banks, just under
349 half operated in faith-affiliated buildings (4); the Trussell Trust also started as a Christian-
350 faith based organisation, with many food banks operating from churches (44). For people of
351 no faith or different faiths, this might be a barrier to using these food banks. Because food
352 banks often also rely on shared premises, they might not be conducive to privacy. In the
353 survey of independent food banks, over 20% reported not having space that allowed privacy
354 for their clients (4). Qualitative research among people using food banks highlighted a story

355 from one participant who shared how the fact that the food bank had a glass-fronted waiting
356 room was a barrier to going in, as he did not want to be seen using the food bank (73).

357 With exception to the examples already provided, there has been little examination of the
358 extent to which the operational characteristics of food banks in a local area influence who
359 among people experiencing food insecurity reach food banks. However, the profile of people
360 using food banks show that people out-of-work and in receipt of benefits are over-represented
361 (45, 60). Whilst these are risk factors of severe food insecurity, and therefore drivers of food
362 bank use in their own right, people without work may also be more able to access food banks
363 in the hours when they are open, and people in receipt of benefits may be more likely to be
364 connected to agencies that can provide referrals. For example, among independent food
365 banks, about 70% indicated that Jobcentre Plus offices were referral agents (4), which
366 predominantly interact with people who are unemployed or underemployed and in receipt of
367 benefits in the UK.

368 In our conceptual framework (Figure 1), we also indicate higher level determinants of the
369 ways that food banks operate. These include the financial and in-kind resources that shape
370 their operational capacity and an organisation's ideologies. The availability of staff or
371 volunteers, the amount of funding and food donations received, the availability of transport
372 vehicles, and the availability of facilities for storing food are all likely influences on how
373 frequently food banks are open, where they operate, and limits and restrictions they place on
374 accessing food. In a survey of independent food banks operating in England over 2018-19,
375 47% of food banks had no paid staff, and where staff were employed, the majority were part-
376 time (4). Each week, 75% of food banks relied on 5 or more volunteers, with 21% relying on
377 20 or more volunteers. This reliance may limit the capacity of food banks to run on a day to
378 day and week by week basis, but it is also a key vulnerability in the system to shocks. For
379 example, when cases of COVID-19 began spreading in the UK in March 2020, resulting in
380 warnings for clinically vulnerable groups to stay at home and not leave home for any reason,
381 many food bank volunteers were not able to continue working in food banks, as the volunteer
382 profile was typically older people, who were at higher risk of illness from COVID-19 (74).
383 Many food banks had to rapidly find new volunteers to meet increasing demand at that time
384 (70).

385 Different ideologies in terms of "deservingness", fear of people becoming dependent on food
386 bank support, and/or whether an organisation views their service as only for people in acute

387 financial emergencies or as a regular form of support to supplement chronic low incomes,
388 may also shape how food banks operate, for example by limiting access to how many times
389 people can receive a referral to a food bank or by setting eligibility criteria (71, 75).

390 It is also important to note here that all food banks will have their own ways of working “on
391 the ground”. This variation is often overlooked, with food banks often being considered as
392 homogeneous entities in the UK. In reality, their operational differences may mean very
393 different patterns of use in different places (and different outcomes, as discussed below).

394 Alongside the provision of food parcels from food banks, there is a much wider landscape of
395 third-sector and statutory organisations that form the local community food and support
396 sector; these organisations also aim to increase access to food for low income people in local
397 areas. As already highlighted, some projects have a long-standing history in the UK, such as
398 the provision of meals through “soup kitchens” (22). In recent years, new models of food
399 projects have been rolled out, such as social supermarkets (also known as food pantries or
400 food clubs (76, 77)). These are often membership based and provide access to groceries and
401 other essentials for a low membership fee. One study conducted in Bradford, which involved
402 mapping “community food assets” in 2015, documented a range of activities undertaken by
403 67 community food organisations, all aimed at increasing access to food (72). These
404 variously included food growing projects, social supermarkets, community centres providing
405 low-cost meals, and food box schemes. Case studies of local responses to concerns about
406 food insecurity over the COVID-19 pandemic also documented a wide range of food
407 provisioning activities in local areas (70).

408 A key question is how other types of food projects impact on who seeks help from food
409 banks when facing food insecurity. Some projects are not targeted to help people facing an
410 acute need for food, such as food growing projects. However, many food projects suggest
411 they are an alternative to food banks, emphasising participatory elements such as operating a
412 membership and providing social benefits alongside the provision of food (70, 73). However,
413 to our knowledge, potential differences and overlaps between people receiving help from
414 food banks and using other forms of food provision has not been charted in the UK.
415 Nonetheless, the wider landscape of agencies engaged in activities targeted towards
416 enhancing food access for low-income people might be a factor influencing food bank use.

417 Alongside the availability of community food programmes, local authorities may also play a
418 role in responding to acute financial hardship and in turn, food insecurity, in their

419 populations. In Scotland, Wales and Northern Ireland, local authorities administer emergency
420 financial schemes, grants provided to people in acute financial need (78). In the past, a
421 similar scheme operated according to a similar model in England, but after 2013, local
422 welfare assistance was devolved to local governments. As a result, a myriad of local welfare
423 assistance schemes now exist across England; although in about 1 in 4 local authorities, there
424 is none (78). Some councils provide cash grants or offer vouchers for food, but others use
425 their funds to support local third sector organisations, such as food banks, and in turn, provide
426 referrals to food banks as their response to people facing insufficient financial access to food.
427 Because local authorities are under no obligation to monitor their schemes or keep data on
428 who receives support or what types of support is provided, there is little evidence of the
429 impact of various types schemes on food insecurity, and in turn, food bank use. However, we
430 would hypothesise that in places where a local authority provides a “cash-first” approach,
431 referring to an approach advocated by IFAN for local authorities to provide cash grants to
432 people in financial crisis and advice on financial support available in place of, or alongside,
433 referrals to a food bank (79), people who are facing food insecurity may be less likely to use
434 a food bank; in comparison, where local authorities offer food bank referrals in response to
435 someone presenting in acute financial difficulty rather than a cash first approach, food bank
436 use may be more likely. Indeed, a recent pilot of a cash grant programme in Leeds, UK,
437 which provided people in financial need with cash grants found that the majority did not use a
438 food bank whilst they were receiving grant installments (80).

439 As already highlighted, access to food banks may also be impacted by the nature and number
440 of local support agencies in a local area who act as gatekeepers to food banks where referrals
441 to food banks are required. During the COVID-19 crisis for example, case study research
442 found that some food banks experienced a decline in referrals because their referral partners
443 were no longer seeing clients and were not then able to provide referrals (70).

444 *Potential outcomes of food bank use*

445 Compared to studies in other country contexts, published academic research on the nutritional
446 quality and quantity of food provided from food banks in the UK context is minimal (11), as
447 are data on the impacts on diets among people receiving help from food banks. One study has
448 examined the contents of food parcels for a single adult across two Trussell Trust food banks
449 and nine independent food banks operating in Oxfordshire, finding that when compared to
450 nutrition and energy requirements for a three day period, food parcels provided more than

451 what is needed for macronutrients and most micronutrients, with the exception of vitamins A
452 and D (81). Very similar results were found in an analysis of food parcels from Trussell Trust
453 food banks operating in London, which used a similar approach (82). The study from
454 Oxfordshire suggested that food banks in the study provided very different amounts in their
455 food parcels, with some providing enough food to last nine days. This finding aligns with a
456 survey of independent food banks, which found that about 45% of food banks aimed to
457 provide food for four days or more (4).

458 Importantly, however, food banks are limited in their ability to follow nutritional guidelines
459 and meet the cultural and health needs of the people who they serve (4, 83). There is also a
460 lack of evidence tracking how foods from food banks are used and consumed by the
461 households receiving them. Though studies may find food parcels lacking in some nutrients
462 and abundant in less healthy foods, the impacts of these observations on diets depends on
463 how foods are distributed to different household members and the time frame over which
464 they are consumed. Importantly, any influence food banks have on the diets of people using
465 them is going to be bound by how often people can access their support. In the past, the
466 Trussell Trust had a guideline in place that suggested people shouldn't receive more than
467 three food parcels without an intervention from the food bank to then identify why another
468 referral was necessary (44). Administrative data from the Trussell Trust used to identify
469 unique households using their food banks over 2019-20 found that on average, households
470 received a food parcel from a Trussell Trust food bank 2.2 times in a year, with 57% only
471 receiving a food parcel once and only 10% receiving a food parcel four or more times (60).
472 Among independent food banks operating in 2018-19, a survey revealed that whilst about
473 44% placed no limits on how often people could receive a food parcel, about 30% restricted
474 use to 6 or fewer parcels per year (4). With food banks being accessed so infrequently by the
475 majority of people using them, the impacts of food bank provision on diets in the population
476 is likely to be minimal.

477 Beyond meeting nutritional needs, there are also important questions about whether food
478 banks can provide foods appropriate for a variety of cultural and health needs. A qualitative
479 study of people using food banks in Stockton-on-Tees highlighted that people with digestive
480 problems particularly struggled with the foods they received from food banks, which were
481 not tailored to their dietary needs (63). Although study findings show that people using food
482 banks often express gratitude for the food they receive, at the same time as being grateful,
483 participants also express costs to their mental health of receiving food charity, physical

484 discomfort when having to carry a quantity of foods home over a long distance, and costs to
485 their health due to consuming foods that are ill-matched to their preferences and needs (63).

486 Quantitative data on the dietary impacts of receiving food bank food parcels and measures of
487 severe food insecurity following food bank use are lacking in the UK context. Thus, in our
488 conceptual model (Figure 1), we highlight that immediate impacts on diets and relief from
489 hunger are unknown. We also suggest a potential feedback loop: improvements in dietary
490 quality and relief from from hunger resulting from food bank use may influence the
491 likelihood that an individual would return to a food bank when experiencing food insecurity
492 in the future. However, the lack of these positive outcomes may also influence of the
493 likelihood of people continuing to use food banks in that if people do not experience enough
494 or any benefit, they may not view use of food banks as worth their while.

495 Beyond short-term impacts (i.e. immediately following receipt of help from a food bank),
496 there is little to suggest that food bank use has a long-term impact on food insecurity, as most
497 people using food banks are severely and chronically food insecure (61). However, the nature
498 of wrap-around support offered by many food banks may have the potential to reduce food
499 insecurity among those receiving assistance from them. Food banks are often engaged in
500 providing a range of services, including signposting, advocacy on behalf of clients, benefits
501 advice, debt advice, housing advice and community cafes (4). However, the impact of this
502 additional support on long-term food insecurity outcomes has as yet not been evaluated.

503 **Role of food banks into the future**

504 In October 2022, a press release from IFAN reported on new survey collected from their
505 members, which indicated that among the 188 independent food banks surveyed, 24%
506 reported reducing the size of the food parcels they distributed because they did not have
507 sufficient supplies of food to meet the demand they were experiencing in recent months due
508 to rising demand attributed to rising costs of living (84). A clear message that food banks
509 were struggling to cope was contained in the press release, with reports that food banks were
510 deeply concerned they would not be able to meet escalating demand through the winter. A
511 similar message was recently released in a press release from the the Trussell Trust (85).

512 These stark messages from food bank providers raises questions about the role of food banks
513 into the future. The Trussell Trust and IFAN and their members regularly campaign for
514 interventions that will increase incomes in line with the cost of living and call for the end of
515 the need for food banks. The need for these types of interventions is also underscored by the

516 fact that food banks reach only a fraction of people who experience food insecurity in the
517 population. Population-based policies are needed. As shown, food banks are inherently
518 constrained in their capacity to respond to the level of need in the population, but also lie
519 outside societal norms for how people should be able to acquire food in the UK context.
520 Here, we return to the definition for food insecurity (86), which includes “uncertain ability to
521 acquire acceptable foods in socially acceptable ways” as part of the experience of food
522 insecurity. As reflected in qualitative research on food banks, food banks are clearly not a
523 socially acceptable way of acquiring food. Academics have long voiced concerns that the
524 existence of food banks in high-income countries serves to give the impression of meeting the
525 needs of the population and allows governments to turn away from their responsibilities to
526 ensure that their populations can afford and access sufficient food (1, 2, 87, 88). Thus, as we
527 look to the future of food banks in the UK, it is hoped that their role in food insecure
528 populations will be to advocate for the upstream policies that will make them obsolete, rather
529 than give the impression that they are an available and sufficient form of support for people
530 facing food insecurity. In light of the evidence presented here that food banks neither reach a
531 majority of people experiencing food insecurity, nor have capacity to increase provision or
532 reach to ensure food needs are met, and that among those using them, food insecurity
533 remains, there is clearly a need for different interventions to this critical public health
534 problem.

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544

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546 Both authors contributed to the conceptual development of this paper. RL wrote the first draft
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