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Engaging with 'less affluent' communities for food system transformation: a community food researcher model (FoodSEqual project)

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Authorship

CP led the review paper: drafts, writing, reviewing, collation and management of contributions; LH and HG reviewed the paper and contributed to specific sections; PG reviewed the paper, contributed to specific sections and worked on reference management; CW is chief investigator of the FoodSEqual project

Abstract

The UK food system is distorted by inequalities in access, failing the people most in need, yet it *should* provide access to safe, nutritious affordable food for all citizens. Dietary patterns are associated with sociodemographic characteristics, with high levels of diet-related disease mortality attributed to poor dietary habits. Disadvantaged UK communities face urgent public health challenges, yet area often treated as powerless recipients of dietary and health initiatives.

The need for food system transformation has been illustrated within recent UK government policy drivers and research funding. The Food Systems Equality project¹ is a research consortium that aims to ‘co-produce healthy and sustainable food systems for disadvantaged communities’. The project focusses on innovating food products, supply chains and policies, placing communities at the center of the change.

Tackling the above issues requires new ways of working. Creative approaches in food research are known to empower a wider range of individuals to share their ‘lived food experience’ narratives, building relationships and corroborating co-production philosophies, thus promoting social justice, and challenging more traditional positivist/reductionist ‘biomedical’ approaches for nutrition and food studies.

This review paper critiques the use of community-centric approaches for food system transformation, focusing on one, a community food researcher model¹ as an exemplar, to highlight their utility in advocating *with* rather than *for* less affluent communities. The potential for creative methods to lead to more equitable and lasting solutions for food system transformation is appraised, consolidating the need for community driven systemic change to foster more progressive and inclusive approaches to strengthen social capital. The paper closes with practice insights and critical considerations offering recommendations for readers, researchers, and practitioners, enabling them to better understand and apply similar approaches.

Introduction

Our global food system is distorted by inequalities in access and fails the people most in need. For over a decade evidence has emerged to show that more than enough food is generated for the 7 billion population, yet half the global population is malnourished² and about 2 billion are deficient in key micronutrients³. The consequent ‘double burden’ of disease (obesity and malnutrition), partially driven by ‘the nutrition transition’⁴ with increased dietary intakes of refined sugars, fats, oils, and processed meats, is related to a pandemic of ill-health, which in the UK costs the NHS over £6 billion each year⁵. If unchecked, it is predicted that by 2050 current dietary trends will cause significant damage to the environment (e.g., biodiversity loss and increased pollution), as well as increased ill-health (i.e., higher prevalence of chronic non-communicable disease). The implementation of solutions to address the tightly linked ‘diet–environment–health’ trilemma has been flagged as a pressing global challenge⁶ particularly for lower socio-economic (less affluent) communities, for whom the food system *should* provide sustainable access to safe, nutritious, affordable food.

The purpose of this review paper is to provide a critical overview of the need for food system transformation with a focus on how to engage ‘less affluent’ communities more effectively within this discourse. The paper firstly provides extensive context on the nature of the ‘wicked problems’ faced by less affluent communities, including: i) sustainability of the food system and social justice; ii) food choices to achieve a healthy and sustainable diet; iii) dietary impact of sociodemographic characteristics; iv) (diet related) social and economic inequalities. The paper then proposes the use of more creative community centric approaches as solutions to support the transformation required to improve the food system to build community capacity and capital. A current exemplar is provided (the community food researcher model: FoodSEqual project) and critiqued to reflect on this approach of engaging communities in research processes. The paper ends with practice insights and critical considerations making recommendations on how to optimise the utility of such creative community centric approaches to support food system transformation.

i) Sustainability of the food system and social justice

The term 'sustainability' is widely used and refers to three pillars for sustainable development - social, economic, and environmental. The relevant related historical definition is that: "*Sustainable development [meets] the needs of the present without compromising the ability of future generations to meet their own needs*"⁸. In public health nutrition, 'sustainability' refers to the ability to maintain food system capacity to support the nutritional health needs of current and future populations while protecting the ecological systems that produce food⁹. Traditionally, sustainability has been largely overlooked in public health nutrition activities as they have tended to focus on addressing relatively short-term nutritional needs of populations and framed these needs mainly within a biological health context. Yet in 2005, the Giessen Declaration highlighted how 'new nutrition science' needed to move beyond biomedical science to address ethical concerns that include social and ecological factors¹⁰ and proposed more problem-solving scientific approaches coupled with compassion, socio-economics and a planetary perspective¹¹. The Giessen Declaration stated that an integrative approach with strong technology links is needed to address human security¹⁰.

When considering sustainable (food) development, the goal should be to ensure a future when the expanded global population - predicted to reach 10 billion people by 2050¹² has enough food available to eat and access to high quality nutritious foods. Despite substantial evidence linking diets with human health and environmental sustainability¹³⁻¹⁵ historically there has been a lack of globally agreed targets for healthy diets from sustainable food systems. In 2019, the Eat Lancet Commission assessed existing evidence and developed global scientific targets that define a 'safe operating space' for food systems¹⁶. These targets focus on i. healthy diets and ii. sustainable food production and are projected to reduce harmful environmental impacts (climate, freshwater use, biodiversity loss, nitrogen, and phosphorous use); to be capable of sustainably feeding the world's population in 2050; and also, to prevent approximately 11 million premature deaths among adults globally. For example, reduction in red and processed meats is a key target because they are known to have the single biggest environmental impact of any type of food¹⁴ as well as also being associated with high rates of mortality and morbidity¹⁷ and poor health outcomes such as colorectal cancer¹⁸.

The food system includes *'all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including socio-economic and environmental outcomes'* ¹⁹. In the UK, this system affects social, economic, and natural environments²⁰ and aims to provide access to safe, nutritious, affordable food for all citizens^{21, 22}. But strong evidence suggests this aim is not being met. Food is known to be an *"identifier and maker of class, culture, and civilization"*²³ and its symbolic potential is powerful, both individually and collectively within society. Yet, because food sits at the intersection of multifarious disciplines (of which nutrition is one, others include humanities; food science; climate science; geography), it feeds into a highly complex and often contradictory, nuanced and politically-driven social justice discourse.

ii) *Food choices to achieve a healthy and sustainable diet*

There is well established evidence to support our food choices being influenced by a complex mix of interrelated factors such as socio-cultural, psychological, traditional, and political²⁴. Similarly, environmental elements like marketing and labeling play an important role on influencing an individual's preferences and understanding of what constitutes a healthy diet²⁵. These food practices are learned at an early age from parents/carers as well as via the school environment^{24, 26, 27}. Consequently, the socio-economic background and cultures of the family/household has a significant influence on early habit-shaping, leading to longer term dietary preferences.

Evidence shows that the UK population does not currently consume the right balance of food recommended for either a healthy or a sustainable diet²⁸. Poor diets are characterized by irregular eating patterns, high intake of 'less healthy' - processed meats, refined grains, fried and processed foods containing sugar, salt and fat^{29, 30} and low intake of 'healthy foods' - fruit and vegetables³¹, nuts, and seeds³². Due to the constant development in understanding of the roles that foods play in health and disease, the definition of a 'healthy diet' continues to evolve³³. Yet, the adverse health outcomes linked to poor diet continue to rise, including escalating rates of overweight and obesity (currently 64% of the UK adult population are overweight or obese), type 2 diabetes, cardiovascular diseases, and some cancers³⁴⁻³⁶. Indeed, 15.5% of Western European deaths are known to have been attributed

to poor dietary habits alone³⁴. Furthermore, strong evidence supports the role diet and nutrition plays in affecting mental health outcomes^{37, 38} often due to 'marginalization' and social isolation.

How a healthy diet links to a sustainable diet is of key importance. Strong evidence shows that the Greenhouse gas emissions of the average UK diets are reported to be higher than the whole European Union average²⁸. This Scheelbeek study analyzed the UK Eat Well Guide³⁹ and found that if the population could adopt this way of eating, the overall carbon footprint would be reduced by almost a third as well as improvements in mortality risks from diet related diseases²⁸. But this same study also showed very low adherence to the Eatwell guide, with less than 1% of the UK population adhering to all nine of the recommendations. The value of how food choices are influenced by such socio-cultural factors are vital considerations for health practitioners and policy makers²⁴ to better understand food system sustainability.

iii) Dietary impact of socio-demographic characteristics

~~What's more,~~ Dietary patterns are strongly associated with sociodemographic characteristics⁴⁰ with lower sociodemographic groups ~~suggested as~~ being less likely to consume diets aligned with public health guidance⁴¹. According to the National Diet and Nutrition Survey (NDNS), when compared with more affluent households, less affluent households consume fewer fruit and vegetables (2.7 portions per day compared to 4.3 portions per day) and less fish (12g compared to 21 g per week). Similarly, sugar-sweetened soft drinks consumption (108g per day) is high in less affluent households⁴² which is several times higher than the recommended intake for health⁴³. These findings support evidence suggesting UK less affluent communities are failing to eat healthy diets.

Socially and economically disadvantaged communities can be defined as 'individuals and families at risk of food and housing insecurity, often culturally diverse, who can experience multiple challenges; financial, mental health, physical health'¹. Such communities are particularly at risk of food insecurity due to their inability to afford healthier foods^{44, 45}. Food access, quality and quantity are significant social determinants of health and there remains a lack of understanding about what underpins food choices (or lack of choices) in such

communities⁴⁶⁻⁴⁸. This is because multiple and complex factors underpin food consumption patterns such as: low income⁴⁹, homelessness⁵⁰, drug and alcohol addictions⁵¹, lack of nutritional knowledge and life skills such as such as food preparation, cooking and shopping⁵² and limited cooking facilities⁵³. Moreover, the food experiences of socially excluded adults vary widely with individual circumstance⁵⁴, further accentuating the complexity of this topic. Although keen to improve their diets, socially and economically disadvantaged communities are often prevented from doing so by barriers such as poor access to affordable and healthy fresh produce⁵⁵. Indeed, structural factors⁵⁶ and the food environment are known to play a key role in food/nutrition inequities, with disadvantaged communities having compromised access to and availability of healthier foods⁵⁷ and higher availability of low quality, highly obesogenic foods⁵⁸ e.g. hot food takeaways⁵⁹ and convenience offerings⁶⁰. For this reason, disadvantaged communities are often treated as powerless recipients of dietary and health initiatives or as ‘choiceless’ consumers within food supply chains.

iv) (Diet-related) social and economic inequities

More recently, socially, and economically disadvantaged communities have faced further challenges due to the coronavirus pandemic and now the cost-of-living crisis⁶¹, which is exacerbating affordability issues⁶², coupled with escalating risk of food insecurity⁶³. This means enhanced potential for physical and mental health concerns. Food insecurity is more than just an economic issue; however, it is also driven by social determinants. Inequalities in diets contribute to overall health inequalities⁶⁴ and are key preventable risk factors to ill health. Health inequalities arise because of the conditions in which we are born, grow, live work⁶⁵. This aligns with evidence on the state of equality and human rights in England⁶⁶ highlighting geographical variation in life expectancy and health, supporting lack of fairness across England. Covid-19 had a stark impact on nutrition⁶⁷ and exposed widening inequalities in the UK food system⁶⁸. Indeed inequity, as a known cause of malnutrition, was found to be linked to worse COVID outcomes⁶⁹. There exists a growing recognition of unequal nutritional health and fragmented/insufficient welfare provision, particularly affecting vulnerable individuals, e.g., unemployed, households with children, people with health conditions and disabilities⁷⁰ and most notably ethnic minority groups, illuminating

stark racial disparities⁷¹. Consequently, there are short term and longer terms implications for wellbeing and equity⁶⁵.

When it comes to diet and nutrition, in terms of their measurement, Dowler⁷² confirmed a lack of UK research on the food and nutritional experience of individuals whose circumstances fall outside official surveys. Indeed, traditionally quantitative datasets (i.e. using dietary survey methodologies, such as NDNS outlined above) are the predominant source of information about UK diets⁷³ yet it is known that such datasets may mis-represent the diets in disadvantaged communities because sub-sample sizes are small⁷⁴ and they fail to consider the wider structural perspectives⁷⁵. Interventions addressing individual factors and physical environments are necessary cornerstones for dietary reform but on their own are insufficient to bring about the large-scale social and system changes needed to fully respond to sustainability challenges⁹. Recent qualitative scoping review evidence highlights the need for food systems research to focus more on macro/structural factors, such as the nuances of socio-economic interactions and affordability and access issues⁵⁶. The same review highlights the need to take a systems-thinking approach, embrace new theoretical perspectives and adopt innovative ‘co-production’ methods to support food system transformation and amplify community voices to build resilience, resourcefulness, and community capital.

The need for (socially driven) food system transformation

As illustrated above, our dietary behaviours and the way we have developed and operate food systems are contributing to the disruption of ecological systems that are crucial to sustainability. The consequences of this disruption are profound and include adverse impacts on food security⁷⁶, nutritional quality⁷⁷, variety, food safety⁷⁸ and ultimately public health nutrition⁹. Not to mention the quality of lives of those producing the food, especially in resource-poor settings¹². The need for urgent action is critical – action to remove the causes of the problem(s), build resilience to the problem(s) and treat the symptoms of the problem(s). Equitable dietary and food system change is needed at scale, and to do this, a multi-criteria approach is warranted, one that gives equal weight to nutrition and public health, the environment, socio-cultural issues, food quality, economics, and governance¹⁵.

The fact that diet-related inequalities continue to widen, and the food system is implicated in this, points to the need for urgent food system transformation⁷⁹ but it is highly complex (and political!). Indeed, Haerlin⁸⁰ highlights the scope and complexity of this task calling for a paradigm shift integrating the “*previously segregated sectors of production, processing, trade, consumption, environmental assessment, and health, as well as knowledge systems.*” In response to increasing social inequality, the government’s recent Levelling up agenda⁸¹ purports to highlight ‘social capital’ (i.e. the strength of community’s relationships and trust) as one of their key drivers and priorities. However, there is debate around the nature of the term ‘social capital’⁸², and the levelling up agenda has been critiqued by researchers as unrealistic with limited potential to reduce health inequalities^{83, 84}. Despite this, the proposed agenda aligns with the ‘social sustainability’ pillar [mentioned above] and supports the need to engage the communities within the food system that serves them⁸⁵. This translates into working more closely *with* local people in their communities, empowering and enabling them to drive the change required, whilst also acknowledging power and the political landscape⁸⁶. Thus, tackling the reality of community members often feeling like powerless recipients of dietary and health initiatives or as ‘choiceless’ consumers within food supply chains.

The vision *should be*, therefore, for a food system where the values of health, society and the ecosystem are of equal importance⁷. Critical food justice scholars use a more expansive lens to suggest that a ‘bottom-up’ democratized food system is needed⁸⁵. This requires systemic change that embraces diversity and respects the variability in foodways (‘choices’) within our society. This would also embrace the proposed problem-solving scientific approaches of ‘new nutrition science’ coupled with compassion, socio-economics and a planetary perspective¹¹. Such a model would liberate both the underrepresented and underserved, advocating *with* rather than *for* less affluent communities, as well as the elite, and result in more equitable and lasting solutions to complex social problems in the food system⁸⁷. Engaging citizens in the complex food connections that shape their wellbeing is, however, challenging. Roe and Buser⁸⁸ argue the need for arts-based participatory activities, formed through food’s agentic potential, to support collaborative ecological citizenship. In a way, using creative food activities as a means for enhancing and rebuilding self-organizing community capacity⁸⁹.

Creative community food system solutions

There is an urgent need to ‘get creative’ with the way we tackle social and nutritional inequalities. Indeed, *“health inequalities should be addressed via processes that allow marginalised groups to have a ‘seat at the table’ and a real voice in decisions affecting their lives”*⁹⁰. Community participation is believed to hold a number of benefits, including the incorporation of local knowledge in planning, generation of greater support for and sustainability of local actions and consistency with democratic values⁹¹. Community engagement interventions have been shown to improve health behaviours and self-efficacy⁹² and co-production approaches can, if carried out comprehensively, radically redistribute power within the research process⁹³. Participation in food/nutrition projects in particular can build trust, self-esteem and improve food skills⁹⁴⁻⁹⁶. The inherently social activity of engagement with food combines positive health outcomes with other cultural activities, such as the arts⁹⁷. Creative expression has the potential to engage individuals in personal and community-level change through reflection, empowerment, and connectedness⁹⁸. This suggests that novel methods (with food) can be seen as ‘co-creative’ in empowering people to re-connect with their food which might have the potential to lead to transformative food discourses^{96, 99}. Such suggestions form important building blocks of cohesion and social capital and are therefore worthy of investigation.

Participatory research methods are geared towards planning and conducting the research process *with* those people whose life-world and meaningful actions are under study¹⁰⁰. Participatory Action Research (PAR) specifically is defined as a *“systematic inquiry, with the participation of those affected by the problem, for the purposes of education and action or affecting social change”*^{90, 101}. PAR is a well-documented strategy to improve the situations of vulnerable people^{99, 102}. Such creative approaches can empower communities more effectively⁸⁶ in research processes cultivating narratives of hope and getting people more involved in decision-making⁹³. By challenging elite models of policy and research, they can also subvert traditional top-down expertise and professional authority in favour of more democratically inclusive and participatory quests for knowledge¹⁰³. Thus, we advocate for ‘co-production’ methodologies, which are more inclusive, democratic, fair, and non-stigmatising, challenging issues of power and transparency we often see in research practices^{56, 86, 99}.

Participatory methods with food

As illustrated above, arts-based methods offer emancipatory approaches to health research with the potential to promote social justice¹⁰⁴, challenging more traditional positivist/reductionist ‘biomedical’ approaches for nutrition and other health professionals. By using such creative methods of engagement, the paradigm can be shifted towards more relational and progressive socially inclusive food system research with human connection at its heart¹⁰⁵.

Creative approaches within food research have been extensively explored. Participatory visual methods specifically are considered to be “*modes of inquiry that can engage participants and communities, eliciting evidence about their own health and well-being*”¹⁰⁶. For example, photo elicitation methods⁹⁵, which involve inserting photography and photographs into a research process in order to maximise the possibilities for empirical and ethnographic enquiry. The photograph can be a neutral third party¹⁰⁷ and can ‘evoke deeper elements of consciousness than words’¹⁰⁸. Similarly, participatory food events⁹⁶ can offer knowledge exchange and public engagement opportunities to build relationships and social connections. Collage (or visual mind mapping) is an important arts-based method for engagement and empowerment^{109, 110}, which utilises sought images and objects to foster the process of de-construction in the tearing, cutting and gluing of images and objects⁹⁶. Music/song communicates expressively as a deeply reflexive tool¹¹¹ and can, within food justice discourses, enhance political potency, “*providing meaning to express things we don’t know how to articulate in words*”¹¹². Finally, documentary film-making has a rich history in humanities research and successful documentary films use compelling stories to influence positive individual and environmental changes¹¹³. Powerful and authentic food stories can be relayed in this authentic manner, falling within the tradition of public sociology¹¹⁴ to generate new knowledge¹¹⁵. These methods (and others) are known to empower a wider range of individuals to share their ‘lived food experience’ narratives, building relationships and corroborating ‘co-production’ philosophies. The deeper understanding that emerges from close attention being paid to hearing and interpreting people’s food stories through such creative methods, can offer alternative ways to understand the lived experience of food insecurity¹¹⁶ and build a more collective voice that can democratise the food system⁸⁵.

Another participatory approach that is emerging within the food system transformation space is the use of *community food researchers* to support research endeavours. The remainder of this paper will critique this as *one example* of a model to achieve positive outcomes.

Situating the community food researcher model

Within participatory research methods, many researchers have attempted to quantify levels of public participation, for example with scoring systems^{117, 118}, and visualisation as a spectrum¹¹⁹ [figure 1] or citizen participation ladder¹²⁰. Questions are also asked on whether the participation is 'genuine'¹²¹ and who actually has rights within research decision-making processes¹⁰⁰. This is about how research processes are done and who does what within them.

Figure 1 here

The community researcher model attempts to sit within the parts of the spectrum where community members collaborate or are empowered⁸⁶. This is enacted by them taking researcher roles and co-delivering research [figure 1]. Community researchers are normally 'peers' to those being researched¹²³, usually due to geographical proximity or shared characteristics or experiences. For example, people who use drugs¹²⁴ or cancer survivors¹²⁵.

Across different disciplines and geographic regions, there are many models and terms used for participatory research¹²⁶. For example: Participatory Action Research (PAR)^{127, 128} as already discussed; Community-Based Participatory Research (CBPR)¹²⁶; Community-Based Research^{129, 130}, and Co-Production^{131, 132}. All of these models aim to engage non-academic stakeholders in knowledge production processes, but the roles given, and engagement methods vary widely. In fact, even those using the same terminologies may implement delivery very differently¹³²⁻¹³⁴. Thus, by instating the community members as 'researchers', projects make a statement of *intent* in terms of engagement. Other terms with similar intent include peer researchers^{124, 135}, and co-investigators¹³⁶.

Benefits of working with community researchers include the social capital brought to the project by their community knowledge and embeddedness¹³⁷. As they are insiders, they can gain the access and trust required to carry out effective research¹³⁸, and support in developing accessible language and culturally safe research practices¹³⁹. There are also benefits for those who take the role of community researcher, such as developing new skills and expanding their social network^{138, 140}; increased self-confidence and self-efficacy^{140, 141} and personal lifestyle changes or progression to further opportunities¹⁴¹.

Nonetheless, engaging community researchers brings novel practical and ethical challenges and considerations⁹⁶. Community Researcher relationships to the 'community' they are researching are variable¹²³. They may have personal relationships with those they are researching, creating potential for coercion and conflicts of interest¹⁴². Similarly, they may also be emotionally triggered by topics for which they have personal experience. These phenomena have been called 'cultural proximity'^{143, 144}. Challenges also arise when working in 'physical proximity' to domains controlled by the target research participants, including conflicts between keeping themselves safe, a sense of duty to help others (relational ethics) and research norms¹⁴⁵. During research delivery they must navigate shifting identities and competing priorities¹⁴⁶, and tensions can exist between different lines of accountability¹⁴⁷. Gaining increased knowledge about their community through research can also be experienced as a burden¹³⁸.

Given these complexities and the known power asymmetries within the food system^{148, 149}, there is a need for careful consideration of community research design and process. For example, including appropriate emotional and peer support for community researchers¹²³ and 'wrap up' activities to create closure at the end of initiatives¹⁴². Role specific training is also essential to prepare peer researchers for group facilitation, for example counselling sessions¹⁵¹ and exploration of challenges and tensions of the 'insider research role', such as conflicts of interest and confidentiality¹⁴². Furthermore, it is important to remember Community Researchers have varied backgrounds and motivations^{147, 152}. To reflect these varied learning styles, training should offer different types of value, and the research design include next steps for the Community Researchers to progress with their new skills¹²³. Training can also be a space for power dynamics to be re-written, if intentionally delivered to facilitate this¹²³. For example, by demystifying academic terms, community researchers

can be enabled to have more input into the process¹²³. Existing inequalities can also be worsened if certain communities or stakeholders are excluded, so barriers to participation must be addressed, including social, logistical, financial, and cultural¹⁴⁷. As use of these techniques grows, giving research attention to aspects of process will be crucial, for example exploring outcomes for and experiences of participants¹⁵⁰.

It is clear that the community researcher model has powerful potential to support community centred action and perhaps also to tackle the identified food system problems. But this model has not been extensively explored to date in the context of food system transformation research. As well as the [disputed] 'levelling up' agenda, recent government led funding (UKRI Strategic Priorities Fund Transforming the UK Food Systems (TUKFS) programme of work) has been realized to create an active 'Community of Practice' across food system researchers to address the 'broken' food system¹⁵³.

Food Systems Equality (FoodSEqual) – a community food researcher model example of good practice

One of the funded consortium projects is the Food Systems Equality (FoodSEqual) project¹, which aims to 'co-produce healthy and sustainable food systems for disadvantaged communities'. The project focusses on innovating food products, food supply chains and food policies for a more sustainable food system. The most important aspect of the project, however, is putting 'community' at its heart, so that change can be catalysed by the communities themselves. The project has set up and run community food researcher models in four geographical urban areas in England to support the research project and adhere to its co-production philosophies. Co-production has core values relating to i) 'being human'; ii) inclusivity (participation) iii) transparency (sharing of power) and iv) challenging the status quo¹⁵⁴. Central to FoodSEqual's model of engagement and co-production are four local sites or research hubs hosting trans-disciplinary research teams comprising community researchers, academic researchers and community partners and practitioners^{1, 155}.

The following account critiques the set up and training of a group of community food researchers within an urban geographic community in the Southwest of England, with the

aim of facilitating the group to participate in research processes in their local community and within the wider FoodSEqual research team.

The potential benefits and complexities for individual community members participating in research have already been discussed above and include the development of personal and social capital⁸⁹, clear ‘insider, outsider’ positions¹⁵⁶, and recognition of power relations between community researchers and academic researchers as dynamic and contingent¹⁵⁶. The (co)development of a framework of training and support which can respond appropriately to the local context and the individual and collective needs of this group^{93, 123} is therefore a key focus for this group.

Project resources have created capacity within the community partner¹⁵⁵, a local food partnership and network, which acts as a community liaison, utilising existing knowledge and relationships to facilitate the engagement of community researchers at a local ‘Wellbeing Hub’ - a provider of low cost and emergency food, health services and a focal point for community activity in the area. Such organisations are identified as assets for community research endeavours: comprising physical and social and relational⁸⁵ spaces and knowledge of local issues, creating the potential to galvanise around shared values and goals⁸⁹ and as such are understood to play an important role in shaping determinants of health⁸¹.

A series of participatory recruitment events at the Wellbeing Hub were advertised using flyers and social media as invitations to informal (creative) discussions about local food issues in a relaxed and social environment^{109, 157}. These events provided the preliminary framework to introduce the idea of community (food) research and the aims of the FoodSEqual project to potential community researchers, many with existing roles and connections to local food and community action¹⁵⁵.

Consideration of individual circumstances and potential challenges for community researchers gathering data within their community¹⁵⁶ informed a training package, which focused on professional research skills¹⁵⁸, the practicalities of community research up-skilling¹²³ and essential ethical practices¹⁵⁹ [informed consent, confidentiality safeguarding and managing data]. Training sessions facilitated discussion about motivations for taking part in research about the local food system and outlined fiscal support offered, an hourly

rate and expenses. Equitable compensation to remunerate community researchers is essential¹⁶⁰ to fairly acknowledge their input and expertise.

Conceptualising activity in three distinct and interlinked strands: 1) learning and personal development of community researchers; 2) actual research activities and 3) community-based creative events, has offered flexibility¹⁶¹. Indeed, this approach provides varied entry points into the co-research process supporting diverse interests, individual capacities and learning styles whilst maintaining an important dialogue with local context and priorities⁸⁹ all of which are essential drivers of FoodSEqual project processual deliverables.

Creating different 'spaces' to meet and learn^{109, 157} has enabled training sessions to be focussed - weekly 'catch ups' at the community base as well as more formal team meetings at the University support learning and social interaction in different settings, building relationships¹⁶² and confidence¹²³ across the team. Developing practice of ongoing debriefing, reflection, and reflexivity¹⁶³ will address emerging questions from community researchers¹⁵⁶ and provide depth of learning about the different skills and types of labour involved in supporting community researchers within this highly complex shared learning process^{138, 144}.

Training in research skills has supported the co-design of appropriate participatory research tools¹⁵⁷ and strategies for gathering data within local research workshops and for the meaningful participatory analysis¹⁶⁴ and presentation of that data¹⁶⁵. Foregrounding creative and participatory approaches throughout all aspects of the research process, by integrating drawing and making within research activities and analysis¹⁵⁷, diverse learning and communication preferences and inclusion in the research process are supported, for community researchers, workshop participants and potential audiences for research outputs¹⁶⁶.

Opportunities to co-design informal and social community-based activities are welcomed and prioritised by community researchers, in line with Blake⁸⁹. This includes programming monthly drop in *Breakfast Meet Ups*, foraging walks in the local woods, a *Cream Tea* event and creation of a *Community Cookbook*¹⁵⁵, facilitating local engagement with and mediation of the FoodSEqual project and its aims¹.

Applying the community food researcher model within food system transformation

Using the FoodSEqual project's development of the community food researcher model as an exemplar, the team have learnt and reflected on the benefits of this type of model to support its potential to facilitate food system transformation. We appreciate this is *one example* of good practice, and others also exist. Five key reflective learnings are appraised below, with practice insights and critical considerations offering recommendations for readers, researchers, and practitioners, enabling them to better understand and put into practice if/when using similar approaches. See table 1 for further details.

- 1) **'Knowledge'** matters and is crucial to societies¹⁶⁷. This is a well-known aspect of co-production whereby there exists shared learning and skills development. With the community food researcher model approach comes the opportunity to explore knowledge mobilisation to address the complex nature of contemporary sustainability challenges better than more traditional approaches¹⁶⁸ as well as power relations inherent in research practices^{86, 167}. Similarly, the sharing of knowledge and dialogue are essential expressions of the lived experience of poverty towards political change and transformation¹⁶⁹. This also links to related themes of capability, agency, and empowerment^{123, 156}, some of which have already been discussed. There is a known historical contextual definition that links poverty with 'capability deprivation'¹⁷⁰. What's more, engagement in an occupation (in this case a food system project) is important for the development of self-concept, self-identity health and well-being¹⁷¹. The community food researcher model, therefore, aligns with other inclusive models such as the 'social cooperative model'¹⁷² because it offers skills development (and potentially employability) opportunities which might address individual determinants of poverty (e.g. social abilities) as well as infrastructural factors⁵⁶. In this context, therefore, transfer of knowledge can more authentically support and facilitate relationship building.
- 2) **Relationship building** is a vital part of collaboration and connection and has been a visible ongoing outcome of the FoodSEqual community food researcher model to date. Relationships can be facilitated by shared identities, support, reciprocity and

trust¹⁷⁴. For the paradigm to be shifted towards more relational and transformative socially inclusive food (system) research, human connection¹⁰⁵ and community assets need to be placed at its heart¹⁶⁷. This chimes with the principles of Asset-based Community Development¹⁷⁵ and ‘human learning systems’¹⁷⁶ which appreciate and mobilise community talents, skills, and assets, rather than focussing on problems. This can more effectively serve to address health inequalities⁶⁵ and improve mental health outcomes¹⁷⁷. This not only applies to community relationships but also community-academic relationships¹⁶². The inherent issue of power dynamics is, therefore, a vital consideration within community food researcher practices^{86, 96, 152}. Training, reflection and reflexivity are also required to deliver such approaches equitably. By acknowledging and acting on these considerations can enable community capacity building and resilience⁸⁹.

- 3) **Community capacity building** is one of the intended outcomes of using an approach such as the community food researcher model. The capacity to self-organise is a vital community asset that is necessary for building resourcefulness and social sustainability⁸⁹. In this manner, new pathways can be forged to more self-sustaining communities⁸⁹, that can flourish and achieve their full potential as proposed by Marmot⁶⁵. Here we deliberately substitute ‘resilience’ for resourcefulness. This is because although the term ‘resilience’ has been widely used recently in response to the UK’s efforts to ‘build back better’ post-COVID^{180, 181}, it is critiqued as being defined by state agencies operating within capitalist social relations¹⁸². The concept of ‘resourcefulness’ is proposed as an alternative, which centres community agency. It is hoped that the FoodSEqual community approach will have a positive impact on this (although it is too early to say).
- 4) **Adding value to research process** is clearly recognized as a current emerging methodological push from funders¹³⁹. There is a requirement for academics to meet impact and public engagement outputs as part of their research. The National Coordinating Centre for Public Engagement¹⁵⁹ describes public engagement as ‘*the myriad ways in which the activity and benefits of higher education and research can be shared with the public*’. Engagement is, by definition, a two-way process, involving interaction and listening, with the goal of generating mutual benefit. Yet this has been critiqued as being often somewhat tokenistic¹⁸⁴ and that the research

community should be more intimately and proximally associated [or entwined] with 'the public'¹⁸⁵. The community food researcher model offers a legitimate, yet inclusive, way for researchers to achieve social impact. Investment is needed, however, to ensure that such methods are delivered effectively and with mutual benefits.

- 5) **The complexity of food system challenges** is well known¹⁸⁶. Although often seeming overwhelming for researchers and communities, with challenges relating to conceptual and definitional diversity, changing (socio-political) structures and seeming lack of individual control over these factors¹⁷⁶, food system research and action needs to acknowledge and embrace this complexity. Emerging food system research (such as FoodSEqual, using a community food researcher model) advocates more strongly for collaborative and co-production approaches with multiple stakeholder involvement. This goes some way to embrace the need for interdisciplinarity¹⁸⁷ or moreover transdisciplinary^{188, 189} and considers 'systems thinking'¹⁹⁰ and intersectionality to support knowledge mobilization¹⁹¹ within context specific interventions. In this manner, authentic social action can be facilitated, and social capital consolidated ensuring that public services can be more responsive to the needs of individuals and communities.

Table 1 here

Conclusions

This review has demonstrated the extent of the (wicked) 'problems' that need to be tackled in relation to food system transformation for less affluent communities. As part of proposed solutions, it critiques the utility of creative co-production methods, in particular the use of the community food researcher model (explored within the FoodSEqual¹ project), in advocating *with* rather than *for* less affluent communities. This progressive model serves to facilitate effective human relationships that can explore better understanding of people's food narratives, lives, and contexts. Therefore, it shows real promise for positive health and wellbeing outcomes, as well as building community capacity, thus leading to more equitable and lasting solutions for food system transformation.

We acknowledge that this is *one approach* that has potential to contribute to community-led food system transformation. Other approaches exist that may contradict or challenge some of our critique of this topic. Despite this, we offer reflective learning, practice insights and critical considerations for researchers and practitioners around the importance of building such approaches in an authentic and inclusive manner, acknowledging the time and resource required to do them justice. Many concepts are given critical consideration for this purpose, such as the appreciation of power dynamics and transparency. Similarly, knowledge exchange, mobilisation and training needs are critically reviewed as essential for effective application, as well as the importance of relationships and community capacity building as core components. When applying such approaches, it is essential to recognize the building blocks of good co-production practice and the need to embrace complexity and systems thinking. We advocate for these more collaborative ways of working (embedding inter/transdisciplinarity) which can lead to enhancement for both research *and* practice, whereby social and community action can build stronger and more resourceful communities that can tackle their own food system challenges.

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Figure and table

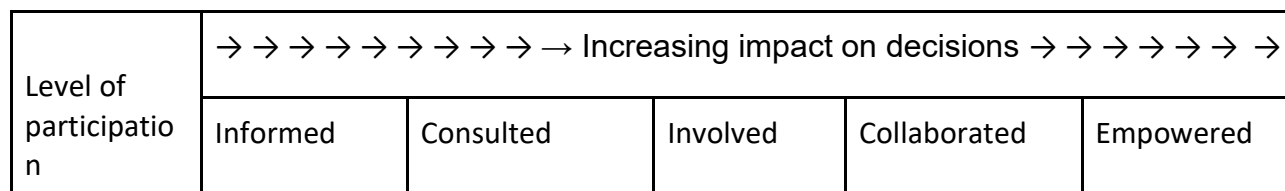


Figure 1: The spectrum of public participation from informed to empowered, taken from¹¹⁹. See also¹²² for an adapted version tailored towards research. Please note that use of such spectrums has been critiqued as allowing research which only consults with people in some way (e.g. through interviewing) to class itself as participatory¹⁰⁰.

Table 1. Reflective learning, practice insights and critical considerations for the community food researcher model to support food system transformation		
	Elements of reflective learning	Insights for practice and research
Knowledge	<p>There are multiple ways of knowing that can support shared learning and skills development</p> <p>Knowledge exchange and mobilisation, are key aspects of note for researchers and practitioners using this type of approach</p>	<p>Creative approaches can support two-way knowledge flow</p> <p>Appreciation needed of already existing community knowledge</p> <p>Public engagement skills are required</p>
Critical consideration	Creative, and arts-informed methods within research can facilitate shared learning and knowledge exchange	
Relationship building	<p>Vital part of collaboration and connection</p> <p>Built on trust and mutual respect</p> <p>Focus on already existing assets within communities</p>	<p>Need to be aware of and address unequal power dynamics</p> <p>Training might be required</p> <p>Ongoing reflexivity and continuous reflection on relationships is required</p>

		Creative approaches can support and maintain relationships
Critical consideration	<p>Within participatory research processes, it is essential to address inequitable power dynamics through relevant training [such as implicit bias training]¹⁷⁸</p> <p>There is a need for researchers and practitioners to engage in ongoing reflexivity¹⁶³</p> <p>Continuous reflection is required on relationships and power dynamics within these participatory research processes¹⁷⁹</p>	
Community Capacity	<p>Building on existing assets, facilitating strengths and capabilities</p> <p>Concepts of ‘resilience’ and ‘resourcefulness’ are important</p>	This is seen as a longer-term goal of this model and requires investment
Critical consideration	<p>Creative, and arts-informed methods within research can facilitate knowledge exchange and support capacity building¹⁷³</p> <p>Such approaches can shift the focus towards the strengths and capabilities of the community, to foster interdependence and autonomy, diversity, and inclusion¹⁸³</p>	
Adding value to research	<p>Needs to be authentic and inclusive and non-tokenistic</p> <p>Needs full investment</p> <p>Can deliver impact and inform public engagement activities</p>	<p>The ‘ethics of participation’ is called into question</p> <p>Such approaches take time and resource to deliver effectively</p> <p>Creative method development takes skill</p> <p>Funding implications</p>
Critical consideration	<p>The community food researcher model provides an authentic and inclusive way to engage communities in action</p> <p>Researchers and practitioners must be prepared to invest time and resource to ensure they fully understand the needs for adequate implementation of this approach</p>	
Complexity of food systems	Can be a barrier to engaging in food system transformation	Creative methods (eg visioning activities) can work well with communities

	Requires 'systems thinking' and consideration of intersectionality	Embracing complexity Delivery and application needs to be context specific
Critical consideration	<p>Taking an interdisciplinary¹⁸⁷ or moreover transdisciplinary^{188, 189} approach to these 'wicked real life' problems is essential.</p> <p>This should be based on 'systems thinking'¹⁹⁰ to support knowledge mobilization¹⁹¹ and also based on intersectional and context specific interventions</p>	