Lived experience factors that support positive equitable food environments - case studies of infant feeding and Covid-19

16:00, Symposium 2: Eroding Nutritional Inequalities, Sheffield, UK

Nutrition Society Summer Conference 2022

Food and Nutrition: pathways to a sustainable future

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Centre for Food Policy

Shaping an effective food system

This is not…

Biofortification: a food-based strategy to address inequalities in health?

Dr Samantha Caton, University of Sheffield, UK

Please do check out Dr Samantha Caton's work! **@samanthacaton**

https://www.sheffield.ac.uk/scharr/people/staff/samantha-caton

- Kwansa AL, Akparibo R, Cecil JE, Infield Solar G & Caton SJ (2022) **Risk factors for overweight and obesity within the home environment of preschool children in Sub-Saharan Africa: a systematic review**. *Nutrients*, 14(9). **View this article in WRRO** RIS BIB
- Jackson P, Cameron D, Rolfe S, Dicks LV, Leake J, Caton S, Dye L, Young W, Choudhary S, Evans D , Adolphus K et al (2021) **Healthy soil, healthy food, healthy people: an outline of the H3 project**. *Nutrition Bulletin*, 46(4), 497-505. **View this article in WRRO** RIS BIB
- Marr C, Breeze P & Caton SJ (2021) **Examination of dietary intake of UK preschool children by varying carers : evidence from the 2008-2016 UK National Diet and Nutrition Survey**. *British Journal of Nutrition*. RIS BIB
- Akparibo R, Aryeetey RNO, Asamane EA, Osei-Kwasi HA, Ioannou E, Solar GI, Cormie V, Pereko KK, Amagloh FK, Caton SJ & Cecil JE (2021) **Food security in Ghanaian urban cities: a scoping review of the literature**. *Nutrients*, 13(10). **View this article in WRRO** RIS BIB

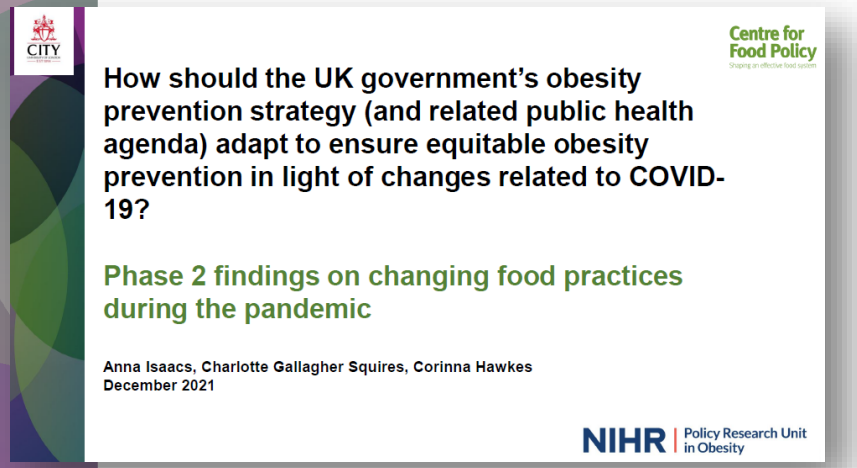
This is not… my research

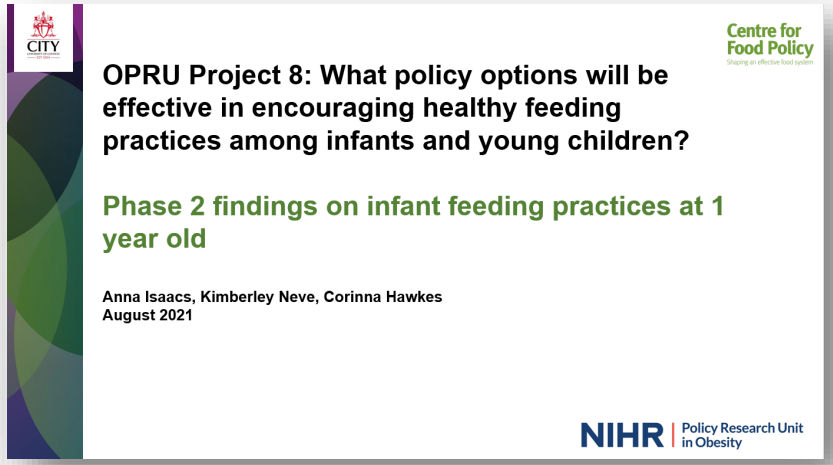
Findings in this presentation are based on outputs from the National Institute for Health Research (NIHR) Obesity Policy Research Unit. Authors include: Anna Isaacs, Kimberley Neve, Joel Halligan, Corinna Hawkes, Charlotte Gallagher Squires, and Paul Coleman.

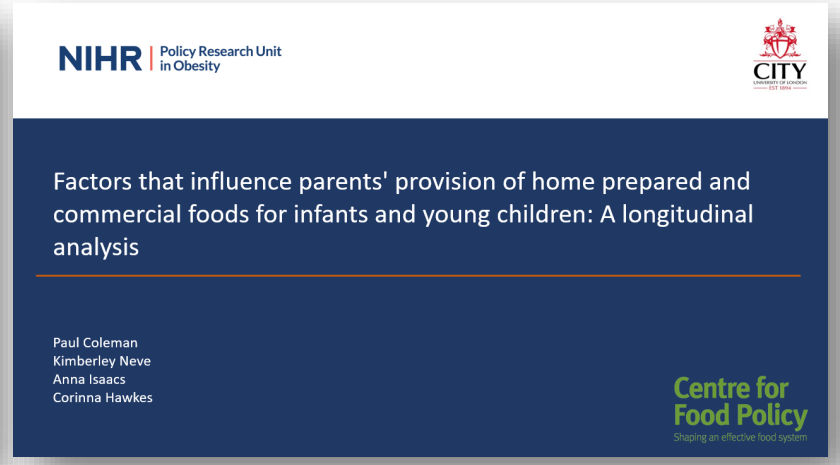
@anna_isaacs @KLNeve @joelotis @CorinnaHawkes @_charlotte_gs_ @Dr_PaulColeman

I will be focusing on 2 ongoing projects:

1) Infant feeding, and 2) Families changing food practices during the pandemic





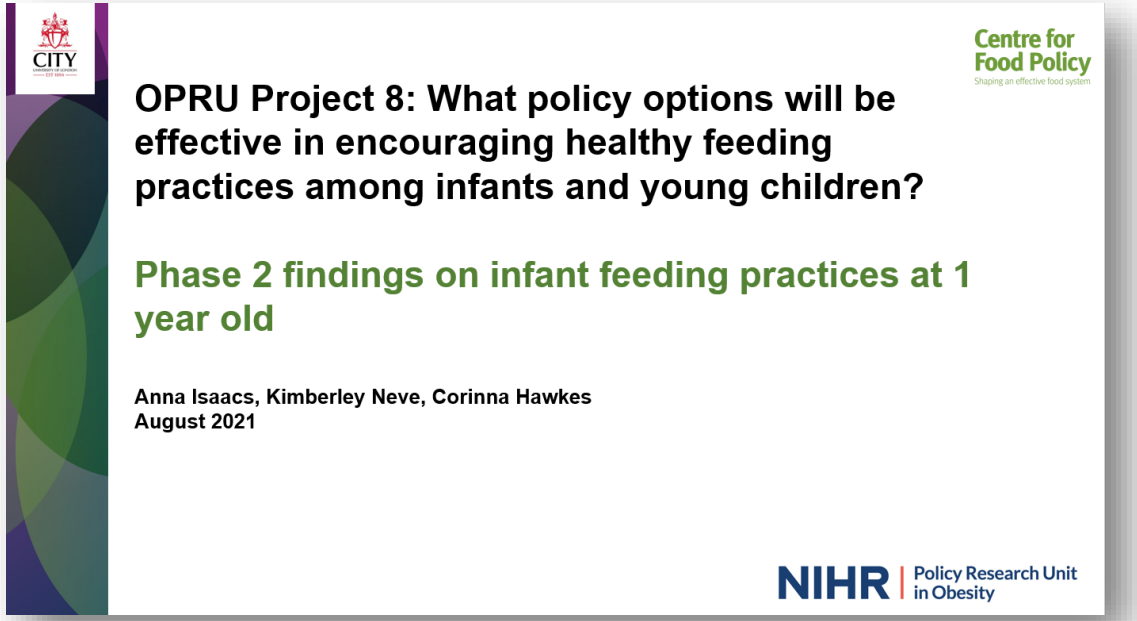


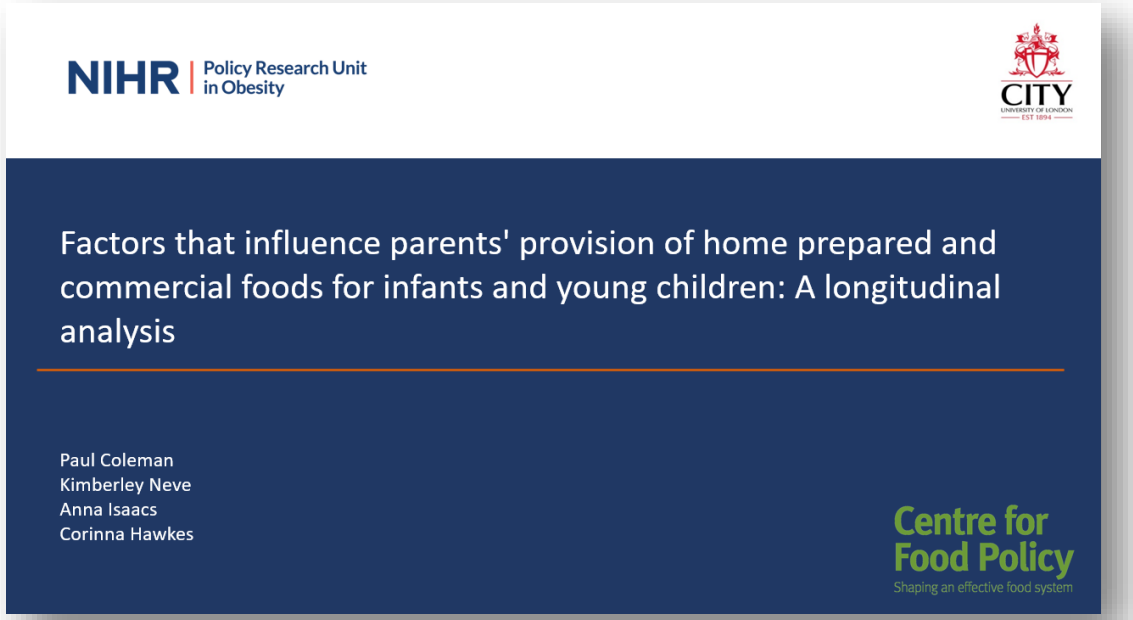
Both feature longditudial analysis and have a focus on dietary inequalities

https://www.ucl.ac.uk/obesity-policy-research-unit/publications

NIHR | Policy Research Unit in Obesity

Infant Feeding project





Infant Feeding project

Aim

The specific aim of this research is to identify the factors that drive parents towards provision of home cooked and commercial foods over the first 18 months of parenting

Objectives

- Identify the specific factors that influence provision of home prepared meals, commercial foods and snacks
- Identify how factors that shape infant feeding practices vary by socio-economic position
- Develop specific recommendations for DHSC that are supportive of healthier infant feeding practices

This research utilised a **longitudinal qualitative methodology**. This allowed for analysis over a period of transitions, as well as at specific points in time, and provides a unique opportunity to understand the facilitators and challenges experienced by parents in deciding what food and drink provisions to make for their children during the first 18 months of life.

Infant Feeding project

Participant recruitment

Participants were defined as any parent or caregiver in England with an infant aged 4 – 6 months at time of recruitment. The primary method of recruitment was via social media platforms. Researchers contacted potential participants until approximately 20 were recruited from low, medium and high SEPs (N = 62). Initial contact (via phone or video-conferencing) involved providing further study information, and the participant information sheet.

Data collection

Interview 1

All participants undertook an initial semi-structured interview when infants were 4 – 6 months. The interview elicited information on experiences and perspectives of infant feeding: why participants chose the foods and feeding methods they did, and what personal, social, cultural, and economic factors shaped these decisions. Following the interview, participants were asked to spend one week taking photographs of factors that influenced infant feeding decisions. In a second discussion, participants went through each photograph, describing what it represented and why they took it.

Interviews 2 and 3

This was followed by interviews when infants were 10 – 12 months and 16 – 18 months. Participants were asked to spend the week before interviews photographing factors that influence feeding practices. Interviews followed the same framework as outlined for the first interview.

Geographic distribution of study participants

Phase 1 (July – November 2020)
Infants 4 – 6 months
N=62 (100%)

→

Phase 2 (Jan – May 2021)
Infants 10 – 12 months
N=58 (93.5%)

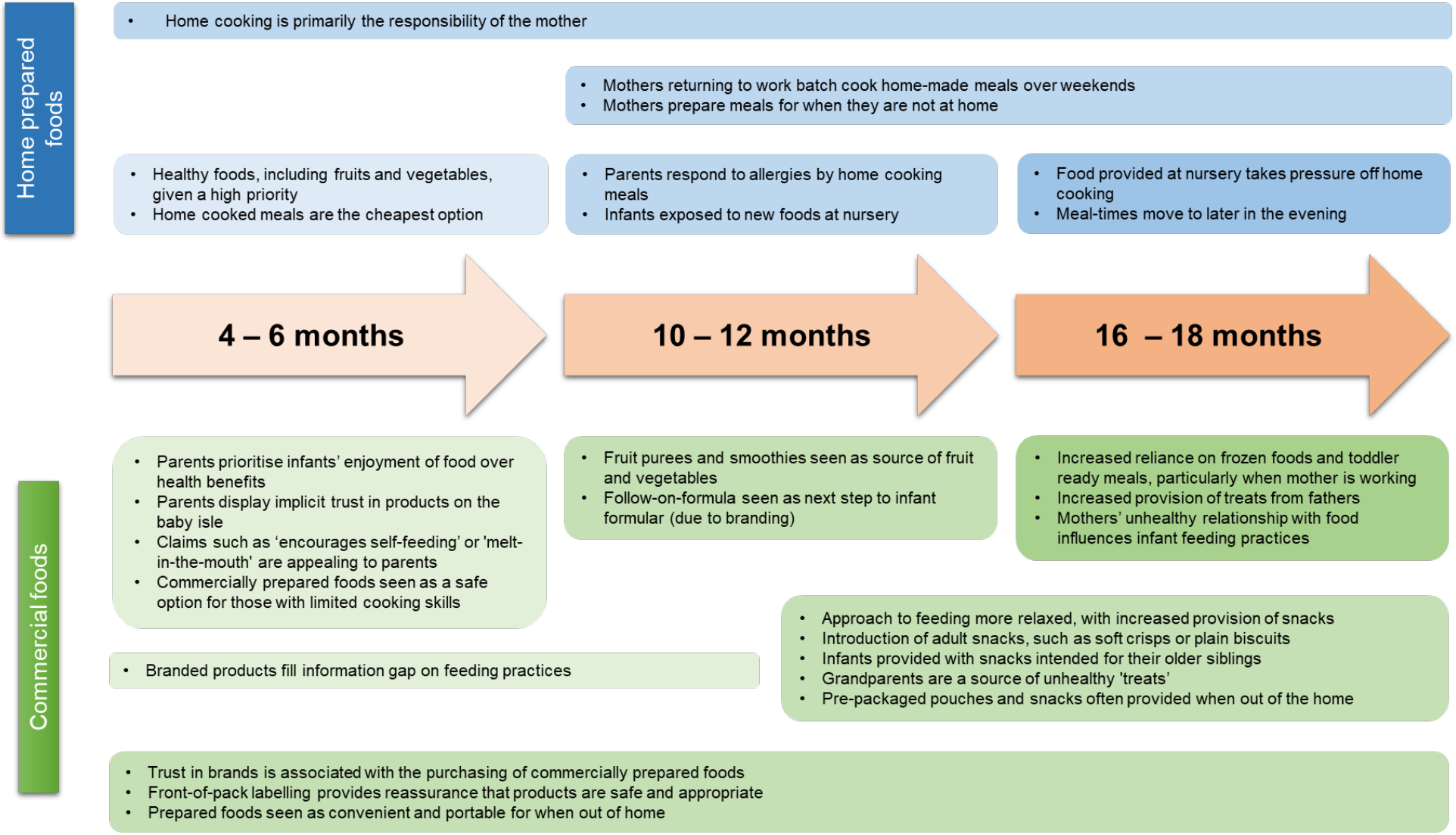
→

Phase 3 (July – November 2021)
Infants 16 – 18 months
N=47 (75.8)

Results: Key themes and factors

Theme	Factor	Description
Family environment	Factors that influence family mealtimes	The values that parents considered most important when deciding what and how to feed their infant / child during family meal times.
	Role of gender in shaping infant feeding practices	The role male and female partners had in buying, preparing, cooking and giving food to the infant / child.
	Grandparents' role in providing unhealthy treats	The foods and food routines that grandparents had control over and role of unhealthy 'treats' as a customary part of the grandparent / infant relationship.
	Older siblings influence on feeding	The influence that older siblings have on shaping what the infant / young child ate and drank.
Work routines	Work-related factors that influence parents' availability of time	The perception and / or availability of time depending on work patterns.
	Influence of childcare on infant feeding practices	When babies and infants were not looked after by either one of their parents.
Information and guidance	Role of information and guidance in creating uncertainty	Lack of clarity on best practices for starting solid foods with the infant / young child
	Role of product branding in influencing purchasing behaviour	A belief that baby brands were safe and appropriate because they were specialised in that age group.
Food environment	Role of the baby isle in generating trust	A belief that products sold on the aisle where all infant / baby food is grouped must be highly regulated and therefore safe and healthy.
	Role of front of pack labelling in generating trust	The design and information on the front of a product's packaging that make it look appropriate and attractive.
	Influence of cost on food purchasing behaviour	The prices of products, as well as parents' perceptions of affordability relative to other products.
	Influence of cafes and restaurants on dietary choices	Food consumed when not in the home environment, such as snacks or picnics made at home for consumption outside, or purchasing food or drink in a café or restaurant for the infant / young child to eat or drink

Timeline of factors that influence provision of home prepared and commercial foods



Factors that influence provision of home prepared and commercially prepared foods among high SEPs

Home prepared foods

- Fathers more likely to be involved in infant feeding, although feeding continues to be the primary responsibility of the mother
- Fathers more likely to work from home, or flexible hours, and support meal preparation

- Healthy foods, including fruits and vegetables, given a high priority
- Home cooked meals are the cheapest option

- Children exposed to new foods at nursery, which are then introduced into the home environment
- Mothers provide home prepared foods by batch cooking over the weekend
- Mothers prepare meals for partners to provide when they are not home

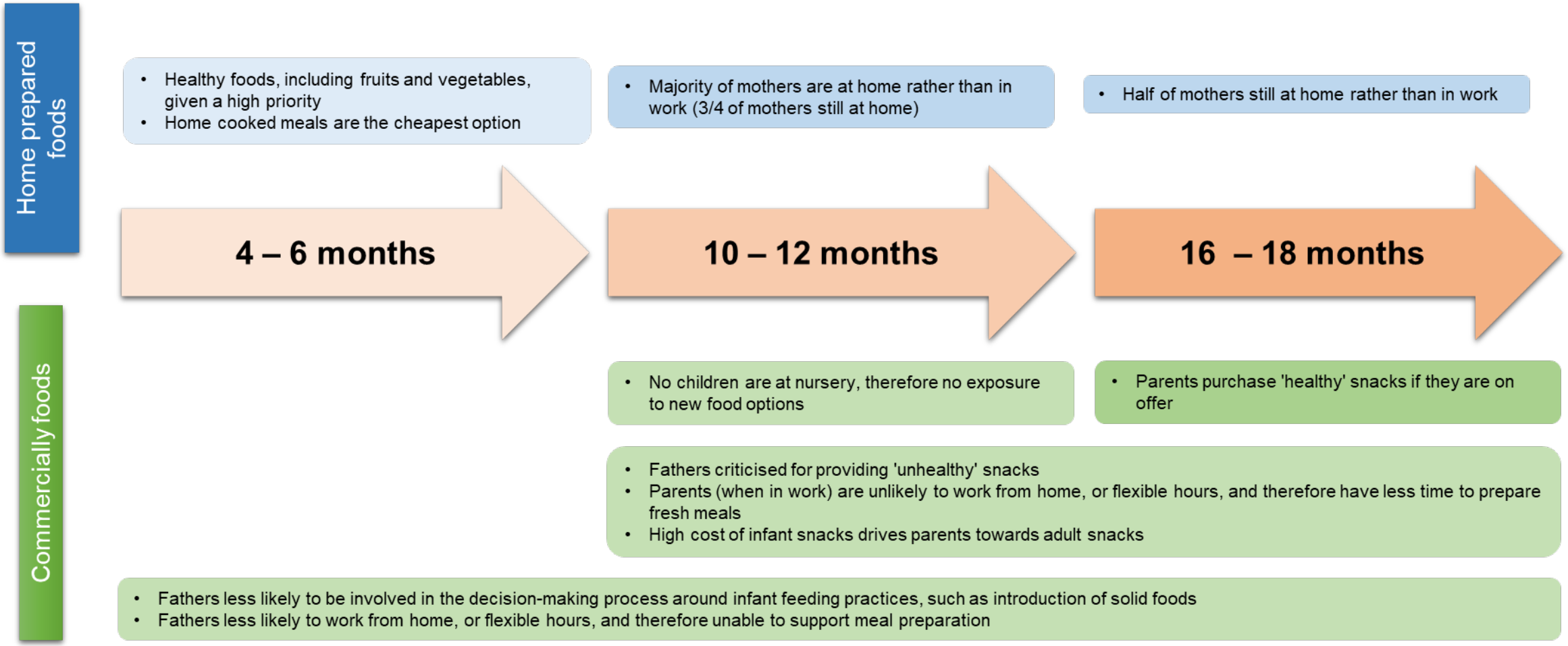
- Majority of parents either work from home, or flexible hours, providing more time to prepare meals
- Mealtimes move to later in the evening to give parents time to prepare food after work
- Provision of meals at nursery removes pressure to provide a substantial meal in the evening

4 – 6 months → **10 – 12 months** → **16 – 18 months**

Commercially foods

- Majority of mothers returned to work, providing less time to make home prepared foods in the evening
- Fruit purees and fruit smoothies seen as valuable source of fruit intake

Factors that influence provision of home prepared and commercially prepared foods among low SEPs



Factors that influence provision of snacks

Snacking

4 – 6 months

- Parents predominantly chose snacks for developmental benefits, rather than nutritional reasons, and were unlikely to scrutinise packages for nutritional content
- Snacks branded as 'melt-in-the-mouth' were particularly popular, as they were choking risk-free and created limited mess

10 – 12 months

- Approach to feeding became more relaxed over time with an increase in the provision of snacks and 'treats' from 10 months onward
- Soft crisps and plain biscuits were seen as a way for the baby to be involved in family food culture
- Grandparents regularly provided foods that parents did not want their infants to consume, such as sugary yoghurts and chocolate

16 – 18 months

- Parents purchase 'healthy' snacks if they are on offer
- Fathers seen as having less confidence in infant feeding and are more likely to provide unhealthy treats, particularly among low SEPs
- While grandparents continue to provide unhealthy 'treats', parents are more relaxed about this

- High cost of infant snacks drives parents towards adult snacks (soft crisps and biscuits), particularly among lower SEPs
- Infants were likely to be eating at the same time as their older siblings and more likely to be eating less nutritious snacks when compared to infants without siblings

- When out of the home, packaged baby snacks were popular options across SEPs as they were portable and convenient. If families were having a treat such as an ice cream, infant snacks were offered as an infant-safe alternative. The convenience of these products justified their higher price.

Discussion

Impact of time

SEP differences in access to flexible working AND the offer of flexible working does not always result in an improved work-life balance.

Access to childcare exacerbates existing inequalities. Only 50% of UK nurseries provide an item of fruit or vegetables with the main meal every day.

Gender roles

Mothers had primary responsibility for childcare and infant feeding at all time points.
Over time, fathers were increasingly viewed as lacking confidence on preparing foods and dealing with dietary demands. “simple meals” only.
Grandparents’ role in providing unhealthy treats.

Access to information

Mothers reported inconsistent and contradictory information on infant feeding practices
Mixed messaging = mothers choosing advice best suited to them (often provided by commercial products)

Packaging and labelling

Parents displayed an implicit trust in branded products on the supermarket ‘baby isle’. Front of pack claims, such as ‘pure’, ‘encourages self feeding’ or ‘no nasties’ were particularly appealing. Some contradicting healthcare advice on pack.
Products on supermarket baby isles may not meet Food and Agriculture Organization (FAO) standards outlined in the Codex Alimentarius - “nutrition and health claims shall not be permitted for foods for infants and young children except where specifically provided for in relevant Codex standards or national legislation”

Actions that can be taken

Impact of time

Ensure all parents have equal access to children's nurseries. Reduce barriers for low SEP parents to access nursery.
Support nurseries in delivering interventions that promote physical activity alongside healthy eating.

Gender roles (and the role of grandparents)

Greater equity in provision of parental leave.
To increase fathers' involvement in infant care, particularly feeding: specific meal preparation guidance and training targeting fathers from all SEPs, (brief group educational interventions).

Access to information

Provision of clear and reliable information, from a trusted source, that supports mothers in all aspects of infant feeding is urgently required. (eg NHS Start 4 Life website - particular focus on practical advice and step-by-step guidance.)

Packaging and labelling

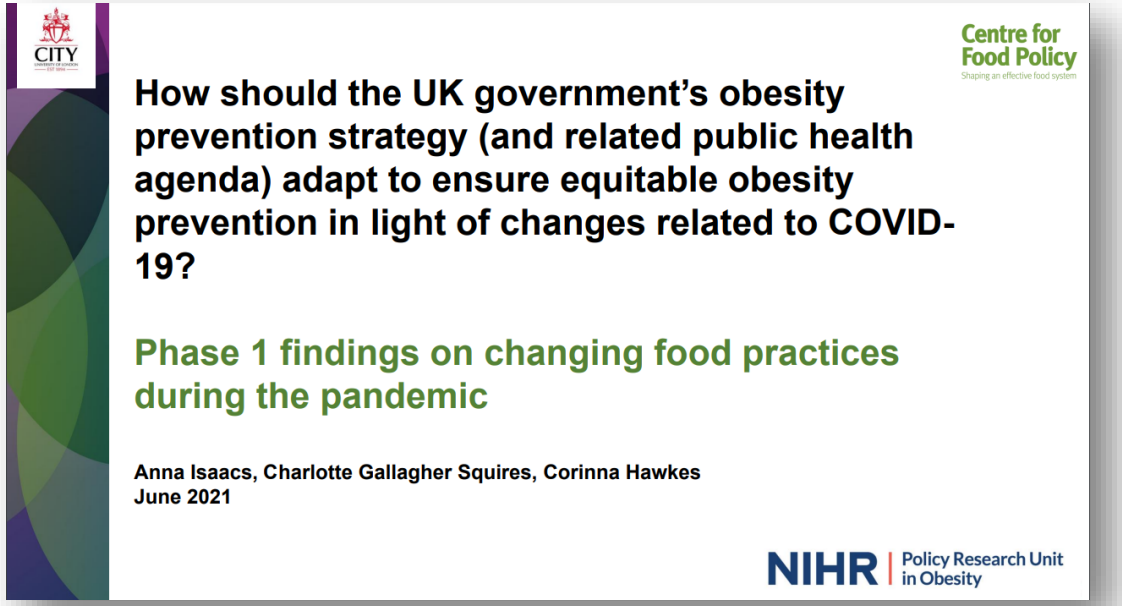
UK should work towards incorporating FAO/Codex Alimentarius recommendations into national legislation to ensure that front of pack product claims accurately reflect the health benefits and age-appropriateness of the products.

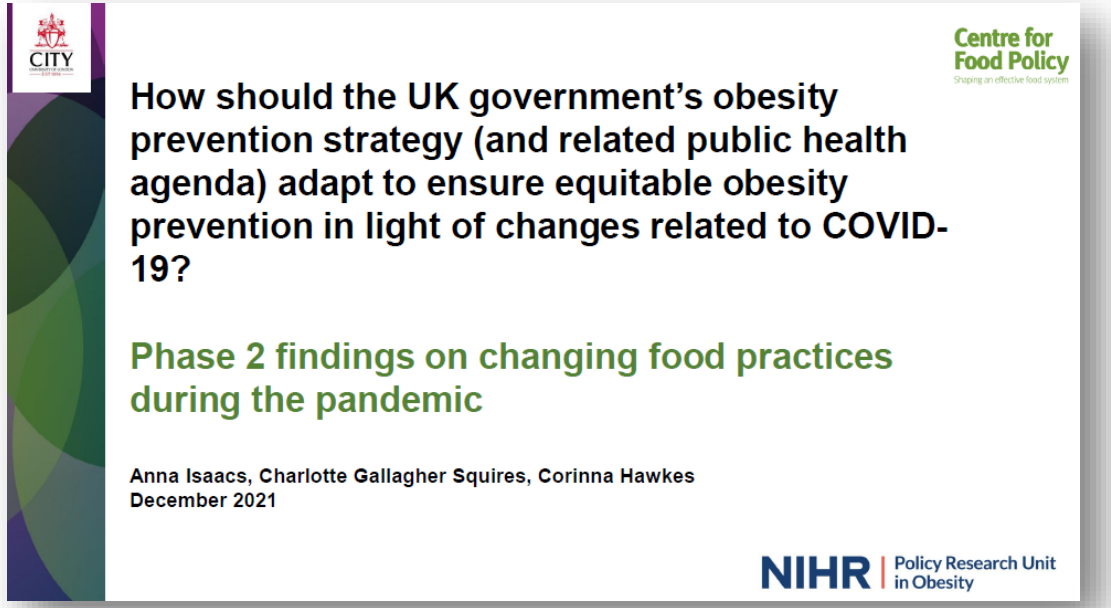
Take homes for Infant feeding.

- Despite a desire to provide infants and young children with healthy home prepared meals, parents regularly resort to providing commercial foods such as ready meals, snacks and treats.
- The factors underpinning these dietary decisions are multi-faceted, complex and influenced by historical and social norms, including a persisting gender imbalance in parenting.
- There are mechanisms, predominantly available to high SEP families, that facilitate provision of home prepared meals, including access to shared parental leave and access to formal childcare.
- There are also factors that direct all parents, regardless of SEP, towards provision of commercial foods, including inconsistent and contradictory information on infant feeding practices and an implicit trust in potentially misleading claims on products available on supermarket baby isles.
- There are tangible steps that can be taken by the government to improve infant dietary behaviour, such as changes in eligibility criteria for accessing shared parental leave and incorporation of FAO guidance on health claims on infant and children food products into UK legislation.

My reading of this: commercial foods (snacks) have a role in many parents infant feeding routine/practices… Is reformulation is a further necessary action?

Families changing food practices during the pandemic





Families changing food practices during the pandemic

This report presents findings related to: (i) experiences of and engagement with the food environment; (ii) changing food practices; (iii) how COVID-19 and the response to it shaped changes; and (iv) wider factors important in shaping these changes.

Research Questions:

In what ways have families' experiences of, engagement with, and feelings about food changed since the onset of COVID-19, and how do they continue to change?

How are families' food practices changing, and how do they continue to change?

What aspects of COVID-19 & the response to it are shaping these changes and how is this happening?

In light of these changes, how should public health policies aiming to prevent and reduce childhood obesity be adapted or augmented?

	Phase 1	Phase 2
No. of participants	62 took part in Phase 1	→ 46 continued to Phase 2
Gender	60 female 2 male	→ 45 female 2 male
Family composition	18 single parents 44 2-parent families	→ 11 single parents 35 2-parent families
Ethnic makeup	58% White British	→ 52.17% White British

- Other ethnicities include: Pakistani, Black African, Black Caribbean, Asian British, Albanian & Hungarian.

Bradford (21 participants)
Brent (20 participants)
Folkestone & Hythe (21 participants)

Shifts in snacking practices over time

Lockdowns

Working from home

Parent snacking increases

- Shopping less frequently to avoid COVID-19 transmission from supermarkets, many households stocked up snacks to ensure they had a supply at home if needed.
- Unlike in offices, those WFH spend their working day in proximity to fridges and cupboards and find it difficult to resist temptation of snacks despite feeling that this is an unhealthy practice.

School closures

Child snacking increases

- Boredom, lack of routine and being at home all day increases child snack requests.
- Snacks become a useful tool to structure the day and provide reward when home schooling.

Limits on social & leisure activities

Whole family snacking increases

- Snacks provide an emotional pick-me-up in times of low mood.
- Snacks provide a substitute treat for kids when other leisure activities are inaccessible .
- These tend to be HFSS type snacks as these are appealing to children and adults.
- The role of snacks as comfort, treats and entertainment was particularly prominent in winter lockdowns when outdoor activities are less possible.

Re-opening

Schools reopen

- Daytime snacking **decreases** by proxy of schools reopening & providing routine.
- The after school snack tides children over until dinner time is ready.

Social & leisure activities reopen

- The function of snacking as a treat and emotional pick-me-up became less prominent in households able to resume participation in social and leisure activities.

Financial security enables parents to reshape snacking tastes towards healthier options

- While snacking in school hours decreased, children's requests for and expectations of snacks persisted.
- **Financially secure** households describe striving to source healthier versions of snacks to offer children and reshape snacking tastes towards healthier options, following a lull in the prioritisation of nutrition during lockdowns when enjoyment from food was most important.
- These include things like packets of pre-cut vegetables, berries or snack bars advertised as healthier but still enjoyed by children.

March 2020
Lockdown 1

September
School year begins

December

March 2021
Re-opening begins

May

Lockdown | Lockdown | Lockdown | Reopening

Shifts in mealtime practices over time

Lockdowns

More time for food

Cooking from scratch increases

- Something many families had always seen as healthier and aspired to, lockdowns provided more time to cook from scratch.
- Less time in the office and commuting meant parents could start preparing dinner earlier.

Restrictions on activity

Cooking from scratch and experimenting increases

- Cooking became an enjoyable way to pass time and seek new experiences in a context of limited activity.
- This enabled parents to expand recipe repertoires and cooking competences.
- Parents with the **time** and **financial security** to risk foods not being eaten experimented with new recipes and sought to widen their cooking skills and children's preferences (e.g. introducing new fruit or vegetables).

Re-opening

Re-opening and constraints on schedules

Less cooking for pleasure and a shift to easier to prepare meals and 'fitting food in'

- Part or full-time return to the office, school/club drop-offs and social activities meant parents had less time for food.
- As well as less time to cook meals, this also meant less time to plan meals and sit with children and ensure meals are finished.
- We saw a group of higher income parents seek to cut procurement, planning, preparation and feeding times by using meal boxes (e.g. Gusto). These provide a convenient way to maintain from scratch cooking and dietary diversity, as pre-cut ingredients cut preparation times and recipes are seen as reliably resulting in tasty meals.
- Others shifted to ready-made foods (oven pizza, microwave meals), takeaways, quick recipes (e.g. pasta pesto) and/or stuck to tried-and-tested recipes that children reliably enjoy and will eat. This has potentially adverse implications for both dietary diversity and increased consumption of HFSS foods.

"original lockdown there wasn't much else on, it would be spending more time I don't know, just going for a walk or something and thinking about oh, what shall we have for dinner? And thinking about it a few days in advance, whereas now I feel like I'm… Every day I think what can I do that will be easy? What can I do that's quick? Or what can we have that will fit in between doing this thing and that thing"

- Laura, LSES, Brent

March 2020
Lockdown 1

September
School year begins

December

March 2021
Re-opening begins

May

Lockdown | Lockdown | Lockdown | Reopening

Shifts in food procurement practices over time

Lockdowns

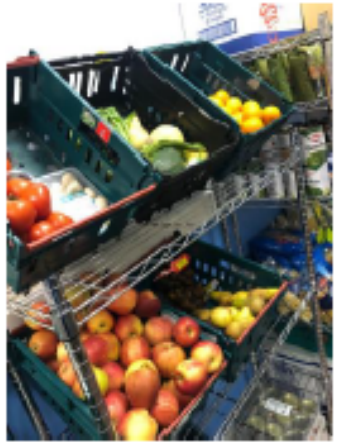
Supermarkets as key site of COVID-19 transmission and supply disruption

Avoiding supermarkets

- In the first lockdown, food shortages and unsafe shopping environments presented barriers to sourcing fresh foods such as vegetables. People limited their transmission risk by shopping less frequently.
- Those who could not afford or access alternative food sources continued to shop at supermarkets with less frequency. This meant a shift to more long-life foods.
- This also led to shopping becoming more functional- with less time spent browsing and a greater need for planning.
- **Low income households** faced barriers to employing strategies usually used to keep food costs low, such as shopping at multiple stores.

Shifting to alternative food sources

- For those who could afford to shift their procurement practices, access to vendors such as veg boxes, online shopping and smaller local stores (seen as safer) helped people maintain access to fresh foods.



Re-opening

Reduction in COVID-19 transmission risk in supermarkets

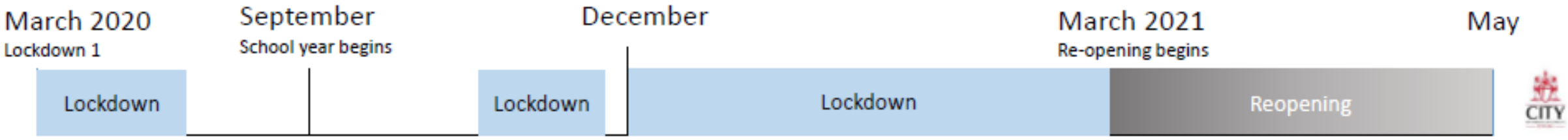
General return to shopping more frequently

- As more people became vaccinated and cases reduced, supermarkets were generally experienced as safer and people felt more able to shop more frequently.
- Low SEP households resumed pre-lockdown practices of visiting multiple stores to find the cheapest deals (e.g. supermarkets, cash and carry, convenience stores).

Re-opening and constraints on schedules

Shift to time-efficient food procurement methods

- In March-May, time pressures of pre-covid life became a prominent factor in shaping food procurement practices. People coped by trying to reduce the time spent procuring and preparing food.
- Meal boxes, online deliveries or click & collect offered a more time-efficient way to procure food. All of the parents who shifted their food procurement to these methods were in the middle or high socioeconomic households.
- Parents also felt these methods enabled them to procure healthier foods as they were able to avoid in-store promotions on HFSS foods which can be hard to resist.



Factors shaping food practices during COVID-19

Financial security allows healthy solutions less accessible to low-income households

Challenge 1: Responding to children's snack requests
Challenge 2: Introducing foods that may not be eaten
Challenge 3: Providing healthy meals in the context of time pressures

Adverse mental health and wellbeing leads to de-prioritisation of diet quality

Food as treats and comfort
Mental health difficulties and healthy eating
Food work falling mostly on one parent

Time and support from institutional food are important resources which support healthy eating

When given the opportunity and time, families enjoy spending time preparing and eating healthy food
However, as time went on this became difficult to sustain
This period of home cooking had lasting effects on family's tastes and competences

The factors keeping families afloat (or sinking)

While COVID-19 has exposed the many sources of vulnerability that lead families to struggle when circumstances change, it has also helped to reveal the factors that help to keep people afloat.

These support mechanisms are inconsistently available to families

These factors are interconnected and intersect, with limitations in one area of support (e.g. social networks) over time weakening other supportive resources (e.g. mental health) with adverse implications for dietary practices.

The factors keeping families afloat (or sinking)

Good mental health

✓ Helped parents manage unforeseen challenges

Good, consistent pay and/or timely furlough

✓ Provides people with the psychological space and access needed to plan, purchase, prepare and feed their children healthier foods

More equal division of labour

✓ Families where parents shared home chores or children helped with food work found it easier to maintain healthier eating practices despite time pressures during reopening.

Able to access alternative food sources in addition to supermarkets

✓ Meal boxes/online deliveries helped families source healthy food in time-efficient ways whilst avoiding the lure of promotions on HFSS foods in supermarkets.

Opportunities for familial support and food sharing

✓ When allowed, families who needed it were provided respite through support with food sharing and childcare.

Affordable and healthy food at childcare

✓ Food at breakfast clubs, school, nurseries and after school clubs provide one (ideally) healthy meal a day and take pressure of parents.

The factors keeping families afloat (or sinking)

Good mental health

✓ Helped parents manage unforeseen challenges

✗ Financial insecurity had adverse impacts on mental health.

✗ The relentlessness of care work in lockdown left mothers with little time to focus on their own health and wellbeing needs.

Good, consistent pay and/or timely furlough

✓ Provides people with the psychological space and access needed to plan, purchase, prepare and feed their children healthier foods

✗ Low-paid self-employed 'precarious' workers aren't protected by shocks to income such as illness or lockdowns.

✗ Households on the lowest incomes lack the financial buffer needed to adapt and stay afloat through times of turbulence.

More equal division of labour

✓ Families where parents shared home chores or children helped with food work found it easier to maintain healthier eating practices despite time pressures during reopening.

✗ Prevailing gender norms mean that children's diets and nutrition is often seen as the sole responsibility of mothers.

Opportunities for familial support and food sharing

✓ When allowed, families who needed it were provided respite through support with food sharing and childcare.

✗ Those living far away from relatives and family often do not have these networks to rely on.

Able to access alternative food sources in addition to supermarkets

✓ Meal boxes/online deliveries helped families source healthy food in time-efficient ways whilst avoiding the lure of promotions on HFSS foods in supermarkets.

✗ Meal boxes and online deliveries are unaffordable for most low income families. Products which are simultaneously time-efficient, low-cost and healthy are limited.

Affordable and healthy food at childcare

✓ Food at breakfast clubs, school, nurseries and after school clubs provide one (ideally) healthy meal a day and take pressure of parents.

✗ The cost of school meals in addition to inconsistencies in the quality of school meals mean that some parents don't see school meals as value for money.

These factors are interconnected and intersect between these two studies…

- Food environments (Affordable and healthy food, and childcare)
- Social networks and family environments (equity and labour)
- Information and guidance

These longitudinal qualitative studies give very rich data to unpack. Please do refer to the full reports.

My reading of this: Can we find actions/policy to further support these factors?

Cheeky shout out – PhD funding available

City, University of London has multiple funding streams open to clinical Nutritionists, Dietitians (and other healthcare professionals) to complete a PhD in food, diet and equity – **please do get in touch if you are interested!**

- **UK Food Systems Centre for Doctoral Training (UKFS-CDT)**

https://foodsystems-cdt.ac.uk/

- **HARP PhD Programme**

https://harpphd.org/

Health Advances in Underrepresented Populations and Diseases

- **BARTS Healthcare Professional Clinical Research Training Fellowships**

https://www.bartscharity.org.uk/apply-for-funding/healthcare-professional-clinical-research-training-fellowships/

- **Internal City, University of London Scholarships**

UK FOOD SYSTEMS
CENTRE FOR DOCTORAL TRAINING

HARP

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Many thanks to all my colleagues and NIHR OPRU

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