National Institute for Health and Care Excellence

Draft for consultation

Maternal and child nutrition

[R] Evidence reviews for facilitators and barriers to increase the uptake of government advice on appropriate and timely introduction to solids and healthy eating and drinking in children

NICE guideline number tbc

Evidence reviews underpinning recommendations 1.5.1, 1.5.6 and 1.5.7 in the NICE guideline

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Draft for consultation

This evidence review was developed by NICE

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Facilitators and barriers to increase the uptake of government advice on appropriate and timely introduction to solids and healthy eating and drinking in children

Review question

What are the barriers and facilitators to increasing the uptake of government advice for women and families with children up to five years in the following areas:

- folic acid supplements (including before pregnancy)
- vitamin supplements (including Healthy Start vitamins)
- healthy eating and drinking in pregnant women
- appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months
- healthy eating and drinking in children from 12 months to 5 years?

This report focuses on the topics of appropriate and timely introduction to solids and healthy eating and drinking in children.

Introduction

Facilitators and barriers to increasing the uptake of government advice for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months

It is recommended that a variety of solid foods should be introduced from around the age of 6 months alongside breastmilk (or first infant formula) and that the foods offered should not contain added salt or sugar and should contain iron and potential allergens such as egg and peanut. It is also recommended that different flavours and textures are progressively added to the baby's diet as the child develops. Introduction of healthy foods is important in this period as tastes and preferences are likely to be formed early. Introducing a cup for drinking water from 6 months is also recommended.

It is known that many babies in the UK are still introduced to solids well before the age of 6 months and that the first foods offered are often highly processed and sweet. Until fairly recently parents were advised to avoid potential allergens in the period when solid foods are first introduced, so families may not be aware of the new guidance.

In order to improve and encourage appropriate and timely introduction to solids, it is important to know the subjective views of parents, carers and early years professionals. The aim of this review is to explore facilitators and barriers for increasing the uptake of government advice on appropriate and timely introduction to solids for babies from 6 to 12 months.

Facilitators and barriers to increasing the uptake of government advice for healthy eating and drinking in children from 12 months to 5 years

It is recommended that from 12 months of age children should be offered a wide range of healthy family foods prepared in an age-appropriate form and offered three meals and two snacks per day. Highly processed and sweet foods and drinks, and energy dense snacks should be avoided. By one year of age solid food should provide the majority of energy and nutrients, though breastmilk will still provide some energy, nutrients and protection from infection for as long as they are breastfed. Formula milks and bottle feeding are not recommended after 1 year of age. The main drinks to offer other than breastmilk should be limited to water and unmodified cow's milk.

However, many young children are given foods and drinks that are not appropriate for them, or they are given too much or too little healthy foods.

In order to improve and encourage healthy eating and drinking in children, it is important to know the subjective views of parents, carers and early years professionals. The aim of this review is to explore facilitators and barriers for increasing the uptake of government advice on healthy eating and drinking in children from 12 months to 5 years.

Summary of the protocol

See Table 1 for a summary of the Population, phenomenon of Interest, and Context (PICo) characteristics of this review.

The review question and protocol includes the facilitators and barriers for increasing in uptake of government advice in the following areas:

1. folic acid supplements (including before pregnancy)
2. vitamin supplements (including Healthy Start vitamins)
3. healthy eating and drinking in pregnant women
4. appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months (this review)
5. healthy eating and drinking in children from 12 months to 5 years (this review)

Number 1 and 2 are reported in evidence review P and number 3 is reported in evidence review Q.

Table 1: Summary of the protocol (PICo table)

Population	• Parents or carers of babies up to 12 months (in relation to introduction to solids) • Parents or carers of children between 12 months and 5 years (in relation to healthy eating and drinking)
Phenomenon of interest	Facilitators to, and barriers for increasing uptake of government advice. Themes will be identified by the available literature. The committee identified the following potential themes (however, they are aware that not all of these themes may be found in the literature and that additional themes may be identified): • thoughts, views and perceptions of women or parents/carers • issues relating to acceptability • issues relating to accessibility • issues relating to mis-information or a lack of information and communication of information, including food marketing and other commercial determinants • women/parent/carer thoughts on discourse, ethnic and cultural attitudes to vitamin supplementation and healthy eating • acceptability and misinformation • motivational factors, including child characteristics.
Context	Studies conducted in the United Kingdom

For further details see the review protocol in appendix A.

Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual. Methods specific to this review question are described in the review protocol in appendix A and the methods document (supplementary document 1).

Declarations of interest were recorded according to NICE's conflicts of interest policy.

Qualitative evidence

This evidence review includes the sections on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating and drinking in children from 12 months to 5 years parts of the review question.

Included studies

Overall, 28 studies were included in this review.

Appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months

Thirteen qualitative studies were included for this part of the review (Arden 2015, Brown 2013, Caton 2011, Cook 2021, Garcia 2019, Goldthorpe 2018, Lakhanpaul 2020, Lovelace 2015, Lucas 2013, Maslin 2015, McDougall 2003, McInnes 2013, Spyreli 2019). Three of these studies were also included in the part of the review on healthy eating in children 12 months to 5 years (Goldthorpe 2018, Lovelace 2015, Lucas 2013). One of the studies is also included in evidence review P as it also had themes relevant to that review (Lucas 2013).

The included studies are summarised in Table 2.

Eight studies reported on the views of parents (Cook 2021, Garcia 2019, Goldthorpe 2018, Lakhanpaul 2020, Lovelace 2015, Lucas 2013, McDougall 2003, McInnes 2013), and 5 studies reported on the views of mothers (Arden 2015, Brown 2013, Caton 2011, Maslin 2015, Spyreli 2019).

All studies except for one were general qualitative inquiries, one study was a phenomenological study (Lovelace 2015).

Two studies used focus groups to collect data (Cook 2021, Maslin 2015), 1 study used structured interviews (Garcia 2019), 6 studies used semi-structured interviews (Arden 2015, Brown 2013, Caton 2011, Goldthorpe 2018, Lovelace 2015, McInnes 2013), 1 study used in-depth interviews (McDougall 2003), 1 study used unspecified interviews (Lucas 2013), and 2 studies used both semi-structured interviews and focus groups (Lakhanpaul 2020, Spyreli 2019).

Data were identified for some of the themes listed in the protocol by the committee and 1 additional theme 'conflicts of opinions' was generated (please see section below 'the outcomes that matter most' for further details).

See the literature search strategy in appendix B and study selection flow chart in appendix C.

Healthy eating and drinking in children from 12 months to 5 years

Eighteen qualitative studies were included for this part of the review (Buttivant 2011, Carnell 2011, Condon 2017, Goldsborough 2016, Goldthorpe 2018, Hayter 2015, Isaacs 2022, Jolly 2018, Jones 2023, Khanom 2015, Lloyd-Williams 2011, Lovelace 2015, Lucas 2013, McFadden 2014, McSweeney 2016, Tang 2022, Williams 2022, Zhang 2019). Three of these studies were also included in the part of the review on healthy eating in children 12 months to 5 years (Goldthorpe 2018, Lovelace 2015, Lucas 2013).

The included studies are summarised in Table 2.

Thirteen studies reported on the views of parents (Carnell 2011, Condon 2017, Goldthorpe 2018, Hayter 2015, Isaacs 2022, Jolly 2018, Khanom 2015, Lloyd-Williams 2011, Lovelace 2015, Lucas 2013, McFadden 2014, McSweeney 2016, Williams 2022), 3 studies reported on the views of mothers (Jones 2023, Tang 2022, Zhang 2019) and 2 studies reported on the views of carers (Buttivant 2011, Goldsborough 2016).

Fourteen studies were general qualitative inquiries (Buttivant 2011, Carnell 2011, Condon 2017, Goldsborough 2016, Goldthorpe 2018, Hayter 2015, Jolly 2018, Jones 2023, Khanom 2015, Lucas 2013, McFadden 2014, Tang 2022, Williams 2022, Zhang 2019), 2 studies were ethnographic studies (Isaacs 2022, Lloyd-Williams 2011), 1 study was a phenomenological study (Lovelace 2015) and 1 study was a grounded theory study (McSweeney 2016).

One study used focus groups to collect data (Condon 2017), 1 study used focus groups and interviews (Hayter 2015), 1 study used focus groups and workshops (McFadden 2014), 1 study used a food map exercise (McSweeney 2016), 10 studies used semi-structured interviews (Buttivant 2011, Goldsborough 2016, Goldthorpe 2018, Jolly 2018, Khanom 2015, Lloyd-Williams 2011, Lovelace 2015, Tang 2022, Williams 2022, Zhang 2019), 1 study used unspecified interviews (Lucas 2013), 2 studies used semi-structured interviews with photo elicitation (Isaacs 2022, Jones 2023) and 1 study used semi-structured interviews with food diaries (Carnell 2011).

Data were identified for some of the themes listed in the protocol by the committee and 2 additional themes 'conflict of opinions' and 'adequate knowledge and information' were generated (please see section below 'the outcomes that matter most' for further details).

See the literature search strategy in appendix B and study selection flow chart in appendix C.

Excluded studies

Studies not included in this review are listed, and reasons for their exclusion are provided in appendix J.

Summary of included studies

Summaries of the studies that were included in this review are presented in Table 2 (appropriate and timely introduction of solids) and Table 3 (healthy eating in children from 12 months to 5 years).

Table 2: Summary of included studies: Appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months

Study	Population	Methods	Themes applied after thematic synthesis
Arden 2015 General qualitative inquiry United Kingdom **Study aim** To investigate the reported experiences of the mother and infant using a Baby Led Weaning (BLW) approach in order to better understand the benefits and challenges of the approach, and the beliefs that underpin these experiences. **Sources of funding** Not industry funded	N=15 mothers Mother's age in years, mean (SD): NR, but [range]: 29 - 39 (n=3 unknown age) Infant's age in months, mean (SD): NR, but [range]: 9 - 15	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Adequate Knowledge and information • Conflict of opinions • Motivational factors • Thoughts, views and perceptions of women or parents/carers
Brown 2013 General qualitative inquiry United Kingdom **Study aim** To explore the behaviours associated with use of a baby-led weaning approach in more depth (following a previous study), examining the attitudes and reasoning of mothers following the baby-led	N=36 mothers Mother's mean age (SD): 28.6 years (5.62)	**Data collection** Semi-structured interviews. **Data analysis** Content analysis.	• Adequate knowledge and information • Issues relating to accessibility • Issues relating to misinformation or lack of information • Motivational factors • Thoughts, views and perceptions of women or parents/carers

Study	Population	Methods	Themes applied after thematic synthesis
method including decisions to introduce complementary foods, progress through this period and balancing solid meals with milk feeds. To examine maternal experiences, both positive and negative of using the method and considers how the method may potentially have longer term outcomes for infant health. **Sources of funding** Not industry funded			
Caton 2011 General qualitative inquiry United Kingdom **Study aim** To explore parental feeding practices relative to official recommendations and to discover the ways by which parents encourage their children to like and to consume vegetables. **Sources of funding** NR	N=13 mothers Mother's age, mean (SD): NR, but mean range (SEM): 28.5 years (1.2)	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Factors relating to acceptability • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers
Cook 2021 General qualitative inquiry United Kingdom **Study aim** To examine parents' knowledge, beliefs and practices of complementary feeding, in particular exploring the initiation of complementary	N=110 parents Parent's age in years, mean (SD): NR, but [range]: 21 to 45 years	**Data collection** Focus groups. **Data analysis** Framework analysis.	• Conflict of opinions • Issues relating to accessibility • Issues relating to misinformation or lack of information • Motivational factors • Thoughts, views and perceptions of women or parents/carers • Parent/carer thoughts on discourse, ethnic

Study	Population	Methods	Themes applied after thematic synthesis
feeding, approach and types of foods offered during this phase and the factors that inform and underpin parental knowledge, beliefs and practices relating to this. **Sources of funding** Not industry funded			and cultural attitudes to healthy eating
Garcia 2019 General qualitative inquiry United Kingdom **Study aim** To explore complementary feeding practices of parents in North Lanarkshire, an area of high economic deprivation in the West of Scotland. To find out where parents sourced information on complementary feeding and what type of information they needed. **Sources of funding** NR	N=21 parents Mother's age in years [Mean (SD]: 30 (6) Father's age in years [Mean (SD)]: 33 (6) Parents' age in years [range]: 20 to 57 Infant's age in months [Mean (SD)]: 7.5 (2.5)	**Data collection** Structured interviews. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Issues relating to accessibility • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers
Goldthorpe 2018 General qualitative inquiry United Kingdom **Study aim** To explore parent's experiences of providing a healthy diet for children of pre-school age (under 5 years). **Sources of funding** Industry funded (TESCO PLC)	N=20 parents Parents'/caregivers' age in years, mean (SD): NR, but [range]: 23 - 44 (Ages unknown, n = 5) Childs' age, mean (SD): NR, but [range]: 9 months - 5 years	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating

Study	Population	Methods	Themes applied after thematic synthesis
Lakhanpaul 2020 General qualitative inquiry United Kingdom **Study aim** To explore common complementary feeding and care practices and their social and cultural influences within the British-Bangladeshi population of Tower Hamlets. **Sources of funding** Not industry funded	N=141 parents Parents' or carers' mean age (SD): NR	**Data collection** Semi-structured interviews and focus groups. **Data analysis** Framework analysis.	• Adequate knowledge and information • Issues relating to accessibility • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers • Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating
Lovelace 2015 Phenomenological United Kingdom **Study aim** To explore the food choices made by low-income families when feeding their pre-school children To understand the socio-economic and environmental influences and constraints these families experience To gain an insight into the reasons why the diet of young children in poverty are generally so poor, with a view to influence health education policy and practice with regard to nutrition in early years. **Sources of funding** Not industry funded	N=11 parents Mothers' age in years, mean (SD): NR, but [range]: 19-25 Child's age in months, mean (SD): NR, but [range]: 2-37	**Data collection** Semi-structured interviews. **Data analysis** Modified grounded theory approach.	• Adequate knowledge and information • Issues relating to misinformation or lack of information
Lucas 2013	N=107 parents	**Data collection** Semi-structured interviews.	• Adequate knowledge and information

Study	Population	Methods	Themes applied after thematic synthesis
General qualitative inquiry United Kingdom **Study aim** To examine the views of healthy start beneficiaries. **Sources of funding** Not industry funded	Parent or carer's age in years, mean (SD): 27 (NR)	**Data analysis** Thematic analysis.	• Issues relating to acceptability • Issues relating to accessibility • Issues relating to misinformation or lack of information
Maslin 2015 General qualitative inquiry United Kingdom **Study aim** To use focus group discussions to gain insight into parental perceptions of complementary feeding, specifically opinions on commercially produced baby food. **Sources of funding** Not industry funded	N=24 mothers Mother's mean age (SD): NR	**Data collection** Focus groups. **Data analysis** Thematic analysis.	• Issues relating to accessibility • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers
McDougall 2003 General qualitative inquiry United Kingdom **Study aim** To establish that early weaning was a problem in the area studied; To determine which factors or influences predispose to early weaning; To ascertain parents' perceptions of health visitors' advice related to weaning;	N=10 (first time parents of infants aged 7-9 months). Mean age (SD): NR Age [range]: 7-9 months. Age of parents NR.	**Data collection** In-depth interviews. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers

Study	Population	Methods	Themes applied after thematic synthesis
To find out what are the principle sources of advice on weaning used by parents. **Sources of funding** NR			
McInnes 2019 General qualitative inquiry United Kingdom **Study aim** To investigate how parents and their significant others influence feeding behaviour change. **Sources of funding** Not industry funded	N=73 parents Mean age (SD): NR	**Data collection** Semi-structured Interviews. **Data analysis** Thematic analysis.	• Thoughts, views and perceptions of women or parents/carers
Spyreli 2009 General qualitative inquiry United Kingdom **Study aim** To identify mothers' perceptions on acquisition of taste preferences and on the importance of food variety and their attitudes towards food exposure and shaping the feeding environment in weaning. **Sources of funding** Not industry funded	N=37 mothers Mother's age in years, mean (SD): 30.3 (6)	**Data collection** Semi-structured interviews and focus groups. **Data analysis** Thematic analysis.	• Conflict of opinions • Issues relating to acceptability • Issues relating to accessibility • Issues relating to misinformation or lack of information • Motivational factors • Thoughts, views and perceptions of women or parents/carers

1 *NR: not reported; SD: standard deviation; SEM: Standard Error of Mean.*

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Table 3: Summary of included studies: Healthy eating and drinking in children from 12 months to 5 years

Study	Population	Methods	Themes applied after thematic synthesis
Buttivant 2011 General qualitative inquiry United Kingdom **Study aim** To review national policy governing nutrition in child-care settings and explore policy translation at a regional and local level in the Southeast of England. **Sources of funding** Not industry funded	N=13 carers Carer age: NR	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Conflict of opinions • Issues relating to accessibility • Issues relating to misinformation or lack of information
Carnell 2011 General qualitative inquiry United Kingdom **Study aim** To generate a comprehensive picture of parents' perspectives on feeding behaviours and motivations that could potentially be used to inform the development of parent-friendly interventions. **Sources of funding** NR	N=14 parents Parent or carer's mean age (SD): NR	**Data collection** Semi-structured interviews with food diaries. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Conflict of opinions • Issues relating to acceptability • Thoughts, views and perceptions of women or parents/carers
Condon 2017 General qualitative inquiry United Kingdom **Study aim**	N=28 parents Parent or carer's mean age (SD): NR	**Data collection** Focus groups. **Data analysis** Thematic analysis.	• Issues relating to accessibility

Study	Population	Methods	Themes applied after thematic synthesis
To explore the barriers and facilitators to maintaining pre-school children's health in the UK. **Sources of funding** Not industry funded			
Goldsborough 2016 General qualitative inquiry United Kingdom **Study aim** To examine the factors impacting on current food practices of child-minders. **Sources of funding** NR	N=8 carers (childminders) Carer's age in years, mean (SD): NR	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Conflict of opinions • Issues relating to acceptability • Issues relating to accessibility • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers
Goldthorpe 2018 General qualitative inquiry United Kingdom **Study aim** To explore parent's experiences of providing a healthy diet for children of pre-school age (under 5 years). **Sources of funding** Industry funded (TESCO PLC)	N=20 parents Parent/caregiver's age in years, mean (SD): NR, but [range]: 23 - 44 (Ages unknown, n = 5) Child's age, mean (SD): NR, but [range]: 9 months - 5 years	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Factors relating to acceptability • Issues relating to acceptability • Thoughts, views and perceptions of women or parents/carers
Hayter 2015 General qualitative inquiry United Kingdom **Study aim** To explore, parents' perceptions of feeding their children in two	N=39 parents Parent or carer's mean age (SD): NR	**Data collection** Focus groups and interviews. **Data analysis** Framework analysis.	• Conflict of opinions • Issues relating to acceptability • Issues relating to accessibility • Issues relating to misinformation or lack of information • Motivational factors • Thoughts, views and perceptions of

Study	Population	Methods	Themes applied after thematic synthesis
low-income populations (one rural and one urban) in the UK. **Sources of funding** Not industry funded			women or parents/carers • Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating
Isaacs 2022 Ethnographic United Kingdom **Study aim** To understand how families in areas of low income experience their food provisioning environment (FPE) To understand how families' structural contexts (socio-cultural, economic) shape their use of the FPE To understand how FPEs shape food practices and vice versa? **Sources of funding** Not industry funded	N=60 parents Parent or carer's mean age (SD): NR	**Data collection** Semi-structured interviews and photo elicitation. **Data analysis** Thematic analysis.	• Issues relating to accessibility • Issues relating to misinformation or lack of information • Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating
Jolly 2018 General qualitative inquiry United Kingdom **Study aim** To understand the experiences of food poverty for families who were at risk of destitution because of their immigration status. To identify transferable learning for practitioners to improve social work and social care	N=7 parents Parent or carer's mean age (SD): NR	**Data collection** Semi-structured interviews. **Data analysis** Content analysis.	• Issues relating to acceptability • Issues relating to accessibility • Thoughts, views and perceptions of women or parents/carers

Study	Population	Methods	Themes applied after thematic synthesis
practice with this service user group. **Sources of funding** NR			
Jones 2023 General qualitative inquiry United Kingdom **Study aim** Our study aimed to explore vegan mothers' experiences and decision-making processes when feeding their children (up to 3 years old). **Sources of funding** Not industry funded	N=8 mothers Mother's mean age (SD): NR	**Data collection** Semi-structured interviews and photo elicitation. **Data analysis** Reflexive thematic analysis.	• Issues relating to accessibility • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers
Khanom 2015 General qualitative inquiry United Kingdom **Study aim** To elicit evidence on the main barriers and facilitators to dietary choice, and to inform the development of interventions that parents would like to see put in place to promote a healthier food environment for their children. **Sources of funding** Not industry funded	N=61 parents Mother's age in years, mean (SD): NR, but mean (range): 30 (20 to 42) Father's age in years, mean (SD); NR, but mean (range): 35 (21 to 52)	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Issues relating to acceptability • Issues relating to accessibility • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers • Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating
Lloyd-Williams 2011 Ethnographic United Kingdom **Study aim**	N=12 parents Parent or carer's mean age (SD): NR	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Issues relating to acceptability • Issues relating to accessibility

Study	Population	Methods	Themes applied after thematic synthesis
To explore nutrition and food provision in pre-school nurseries in order to develop interventions to promote healthy eating in early years settings, especially across deprived communities. **Sources of funding** Not industry funded			• Issues relating to misinformation or lack of information • Motivational factors • Thoughts, views and perceptions of women or parents/carers
Lovelace 2015 Phenomenological United Kingdom **Study aim** To explore the food choices made by low-income families when feeding their pre-school children To understand the socio-economic and environmental influences and constraints these families experience To gain an insight into the reasons why the diet of young children in poverty are generally so poor, with a view to influence health education policy and practice with regard to nutrition in early years. **Sources of funding** Not industry funded	N=11 parents Mother's age in years, mean (SD): NR, but [range]: 19-25 Child's age in months, mean (SD): NR, but [range]: 2-37	**Data collection** Semi-structured interviews. **Data analysis** Modified grounded theory approach.	• Factors relating to acceptability • Factors relating to accessibility • Issues relating to accessibility • Issues relating to misinformation or lack of information • Motivational factors
Lucas 2013 General qualitative inquiry United Kingdom **Study aim**	N=107 parents Parent or carer's age in years, mean (SD): 27 (NR)	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Issues relating to acceptability • Issues relating to accessibility • Issues relating to misinformation or lack of information

Study	Population	Methods	Themes applied after thematic synthesis
To examine the views of healthy start beneficiaries. **Sources of funding** Not industry funded			
McFadden 2014 General qualitative inquiry United Kingdom **Study aim** To evaluate the Healthy Start programme in England from the perspectives of beneficiaries, potential beneficiaries and health practitioners and to focus on whether food vouchers can contribute to reducing nutritional inequalities for women and young children. **Sources of funding** Not industry funded	N=109 parents Parent or carer's mean age (SD): NR	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Issues relating to accessibility • Issues relating to misinformation or lack of information
McSweeney 2016 Grounded theory United Kingdom **Study aim** To assess the knowledge, beliefs and practices of preschool staff and parents of young children attending a preschool centre about the value and need for healthy eating promotion in preschool settings and identify any issues which they feel need to be taken into consideration when developing interventions.	N=15 parents Parent or carer's mean age (SD): NR	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Conflict of opinions • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers

Study	Population	Methods	Themes applied after thematic synthesis
Sources of funding Not industry funded			
Tang 2022 General qualitative inquiry United Kingdom **Study aim** To observe in the home environment, the extent to which mothers use and need packaging to aid portion control of highly liked high-energy-dense foods for their children. **Sources of funding** Not industry funded	N=21 mothers Mother's age in years, mean (SD): 35.1 (NR)	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Issues relating to accessibility • Issues relating to misinformation or lack of information • Motivational factors • Thoughts, views and perceptions of women or parents/carers
Williams 2022 General qualitative inquiry United Kingdom **Study aim** To explore parents' drivers for choice of early years childcare settings (EYS), including the extent to which food practices and healthy eating played a part, how involved, or engaged parents were able or wanted to be in this, and how satisfied they were with the food and food practices within their EYS. **Sources of funding** Not industry funded	N=51 parents Parent or carer's mean age (SD): NR	**Data collection** Semi-structured interviews. **Data analysis** Thematic analysis.	• Adequate knowledge and information • Conflict of opinions • Issues relating to accessibility • Issues relating to misinformation or lack of information • Thoughts, views and perceptions of women or parents/carers
Zhang 2019 General qualitative inquiry	N=15 mothers Mother's age in years, mean (SD): 33.06 (5.39)	**Data collection** Semi-structured interviews. **Data analysis**	• Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating

Study	Population	Methods	Themes applied after thematic synthesis
United Kingdom **Study aim** To explore the association of acculturation and infant and young child feeding among new Chinese immigrant mothers. **Sources of funding** Not industry funded		Thematic analysis.	

EYS: early years childcare setting; FPE: food provisioning environment; NR: not reported; SD: standard deviation; UK: United Kingdom.

See the full evidence tables in appendix D. As this was a qualitative review, no meta-analysis was conducted (and so there are no forest plots in appendix E).

Summary of the evidence

The themes identified through analysis of all the included studies are summarised in Table 4 together with their CERQual quality rating and the number of studies contributing to each theme.

Table 4: Themes and sub-themes generated from analysis

Facilitators and barriers to increasing the uptake of government advice on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months		
Themes and subthemes	**CERQual quality**	**No. of studies**
Facilitators for increasing uptake of existing government advice on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months		
A1. Adequate knowledge and information		
A1.1 Knowledge of guidance around weaning, weaning signs and appropriate foods	Low	3
A1.2 Knowledge of healthy eating and its benefits	Moderate	2
A1.3 Information/advice from health care professionals and external sources	Low	5
A2. Factors relating to acceptability	Moderate	2
A3 Motivational factors including child characteristics		
A3.1 Trusting the infant to lead (Baby-led weaning)	Moderate	3
A3.2 Family meals and eating together to encourage healthy eating	High	2
A4 Thoughts, views, and perceptions of parents/carers		
A4.1 Feelings of responsibility	Moderate	5
A4.2 Views about food variety and fussy eating	High	2
A4.3 Perception of breastfeeding	Low	1
A4.4 Need for additional support	Moderate	1
A4.5 Dealing with challenges – tackling mess	Moderate	1
A5 Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating	Moderate	2
Barriers for increasing uptake of existing government advice on appropriate and timely introduction to solids (complementary feeding) in babies 6 to 12 months		
B 1 Conflicts of opinion		

B1.1 Child's feeding choices/decisions	Moderate	2
B1.2 Poor collaboration between parents and early years' professionals	Moderate	1
B1.3 Pressure from family and friends	Moderate	1
B2 Issues relating to accessibility		
B2.1 Cost of healthier foods	High	1
B2.2 Parental factors influencing diet	Moderate	1
B2.3 Accessibility to health professionals	Very low	1
B2.4 Time and convenience	Moderate	3
B3 Issues relating to misinformation or a lack of information and communication of information, including food marketing and other commercial determinants		
B3.1 Insufficient knowledge and information about weaning and healthy eating	Moderate	9
B3.2 Conflicting information and guidance around weaning	Low	4
B3.3 Misinformation from family	Low	2
B3.4 Marketing of commercial baby foods	Moderate	2
B4 Thoughts, views and perceptions of women or parents/carers		
B4.1 Feelings of lack of control	Low	2
B4.2 Feelings of worry and anxiety	Low	5
B4.3 Limitations around messy eating	Moderate	2
B4.4 Guidelines as a guide, not instruction	Low	1
B4.5 Perception of infant's needs around feeding	High	2
B4.6 Preferred timing for weaning	Low	3
B4.7 Force-feeding	Low	1
B5 Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating	Moderate	2
Facilitators and barriers to increasing the uptake of government advice on healthy eating and drinking in children 12 months to 5 years		
Themes and subthemes	**CERQual quality**	**No. of studies**
Facilitators for follow existing government advice on healthy eating and drinking in children 12 months to 5 years		
A1. Adequate knowledge and information		
A1.1 Educating children on healthy eating	Moderate	1
A1.2 Sources of information	Low	1
A1.3 Cooking knowledge and skill	Low	1
A1.4 Knowledge of healthy eating and benefits	Moderate	3
A2. Factors relating to acceptability		
A2.1 Positive strategies to encourage healthy eating	Moderate	5
A3 Factors relating to accessibility		
A3.1 Availability of cheaper options	Moderate	2
A3.2 Local initiatives	Moderate	1
A3.3 Availability of Healthy Start vouchers	Moderate	4
A3.4 Closeness to shops	Moderate	1
A3.5 Environmental/country factors	Low	1
A4 Motivational factors		
A4.1 External influences from early years professionals and peers	Moderate	4
A4.2 Attractive food packaging	Moderate	1
A4.3 Menu planning available to parents	Low	1
A5 Thoughts, views, and perceptions of parents/carers		
A5.1 Feelings of responsibility	Moderate	6
A6 Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating	Moderate	3
Barriers for follow existing government advice on healthy eating and drinking in children 12 months to 5 years		
B1 Conflicts of opinions		
B1.1 Poor collaboration between parents and early years professionals	Low	3
B1.2 Influence of family and friends	Moderate	2

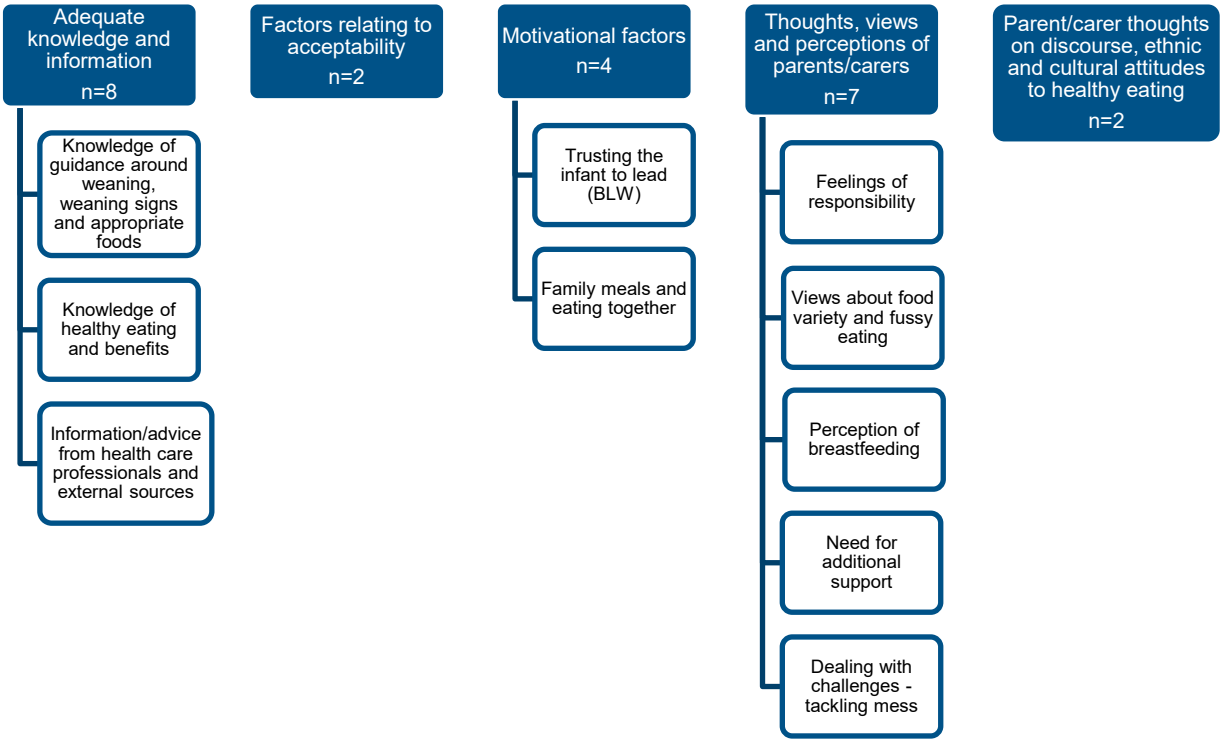
B2 Issues relating to acceptability		
B2.1 Child's food preferences	Moderate	5
B2.2 Special dietary requirements	Low	2
B2.3 Unfamiliar foods from food banks	Low	1
B3 Issues relating to accessibility		
B3.1 Reduced financial stability and cost of healthy food	Moderate	7
B3.2 Challenges with Healthy Start Vouchers	Moderate	2
B3.3 Access to appropriate services and facilities	Low	4
B3.4 Parental factors influencing diet	Low	5
B4 Issues relating to misinformation or lack of information		
B4.1 Suboptimal communication of information	Moderate	6
B4.2 Insufficient training and support for early years professionals	Low	2
B4.3 Lack of cooking knowledge and skills	Low	3
B4.4 Food marketing targeted at children	Moderate	3
B5 Thoughts, views and perceptions of women or parents/carers		
B5.1 Food as contingency or reward	High	3
B5.2 Concerns about perceptions of others	High	3
B5.3 Perception of inconsistent policies	Moderate	1
B6 Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating	High	3

See appendix F for full GRADE tables.

Facilitators for increasing the uptake of government advice on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months

- The evidence generated 5 themes and 10 subthemes (Figure 1).
- The evidence ranged from low to high quality, with majority of the evidence being moderate in quality.
- The main reasons that evidence was downgraded were minor or moderate concerns with methodological limitations, adequacy of evidence contributing to a theme, coherence of some findings, or relevance of evidence.

Figure 1: Thematic map for facilitators to increasing the uptake of government advice on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months



Theme A1. Adequate knowledge and information

There were 3 subthemes contributing to this theme.

Parents reported having knowledge of the guidance recommending that infants are introduced to solids at 6 months of age, as well as the signs of developmental readiness for weaning such as infant being able to sit up unsupported, grasp items and bring food to mouth. In addition, some parents referred to knowledge gained from weaning classes about the differences between commercial and homemade foods, and others discussed how they adapted family meals to reduce salt, sugar, and fat contents, while increasing variety and nutrient content to make meals suitable and balanced for infants. However, some participants were not aware of weaning classes.

Having some knowledge of healthy eating, its benefits and harms guided parents in making decisions around foods offered to infants during weaning. Foods with better nutritional values in terms of the salt and sugar levels, organic or 'natural' produce and home-cooked meals were preferred over commercially produced infant foods. Parents also highlighted the negative effect of sugary drinks on oral health as a decision-making factor in infant foods and drinks choices.

Parents reported seeking information from different sources including weaning classes, online groups, community groups, friends and family, health professionals and other published materials before making decisions on introducing solids to their infants. In particular, parents demonstrated high regard for advice received from health professionals and sometimes referred to health professionals as 'experts' delivering the official guidance information. Parents reported adhering to weaning guidance such as waiting until infant was 6 months of age before introducing solid because they had been advised to do so by their health professionals. They also verified information from other sources with their health professionals before acting on them, or simply combined the information. However, parents were not always fully trusting of advice from health professionals and sometimes sought

information from other sources for example online or verified information with peers or family members. Mothers who proactively sought information by knowing various sources of information and engaging with them reported feeling more relaxed and confident.

Theme A2. Factors relating to acceptability

Mothers reported a number of techniques used to encourage their infants to eat healthier foods such as vegetables. These techniques included modifying the texture of food by pureeing or chopping into bits, modifying taste by using dips and sauces or by masking them with more liked foods and offering foods to infants frequently and repeatedly to get them used to the food.

Theme A3. Motivational factors including child characteristics

There were 2 subthemes contributing to this theme.

Mothers adopting the baby-led weaning approach discussed the need to trust their infants to guide the weaning process. They discussed being guided by the infant in decision around when to start the weaning process, what to eat, how much to eat and self-feeding, explaining that this enabled infants to explore different flavours and textures of foods as well as giving infants the opportunity to further develop coordination skills and independence, learn food tastes and textures and develop their feeding habits and preferences at a pace that aligned with their nutritional needs such as there were instances of eating very little, playing with food and reduced appetite but mothers felt positive that their infants would eat as much or as little as their bodies required. Mothers adopting this approach expressed some aversion to the traditional spoon-feeding approach to weaning explaining that it often led to force-feeding, but maintained flexibility to incorporate spoon-feeding where necessary, based on the infant's needs and preferences, still referring to it as baby-led weaning. Parents believed that allowing the infant to guide their feeding may lead to longer term healthier eating habits.

Mothers discussed including infants in family meals and mealtimes and aligning mealtimes with infants natural hunger pattern to keep them included. They explained it could be cost and time saving, less stressful and more pleasurable for everyone, especially as infants could participate by self-feeding and did not need to be fed by someone else who also needed to eat. However, the mothers also noted the importance of maintaining flexibility as it may not always be possible for the family to eat together due to changing lifestyle schedules and changing hunger patterns of the infant.

Theme A4. Thoughts, views, and perceptions of parents/carers

There were 5 subthemes contributing to this theme.

Mothers showed awareness of playing a primary role in shaping their child's food and eating habits and preferences and described various ways they felt responsible. This included provision - making healthier foods available, restriction – controlling what their infants were exposed to, and role modelling – eating healthily for children to imitate. Mothers generally felt that the period of weaning was a crucial time to establish healthy eating habits in their children and felt the need to expose their children to a wide variety of foods and limit the unhealthy foods consumed. However, some mothers also expressed thoughts around instilling healthy eating habit prior to the weaning phase, during pregnancy and lactation, when infants get exposed to the flavours consumed by their mothers. Provision of healthy meals included preparing homemade foods for their infants, which parents expressed a preference for despite the effort required. Some mothers began the weaning phase with the enthusiasm of making home-made foods for their infants, mainly because they were unable to get single ingredient baby food to buy. But this was short-lived. On the contrary, some other parents cooked homemade foods later on during weaning, when the initial challenges had been overcome, and considered it worthwhile.

Generally, mothers believed that the more variety of food a child is exposed to during the weaning phase, the more balanced their diets and nutrition was, and the less fussy they were with eating, therefore developing healthier food habits as they grew.

Mothers discussed the importance of breastfeed milk as part of their infants weaning diet and phase, explaining that breastfeeding was not just a method of feeding but made up part of a parenting style. The mothers felt that breast milk should be offered to infants for the first year of life.

Mothers expressed a desire for additional support from their parents or significant others (anyone with the greatest influence on their infant feeding) in providing practical help during weaning such completing household chores and offering advice. However, mothers felt that some of this advice could be outdated and so were not necessarily adhered to. In addition, support from health professionals was sought after, where participants wanted health professionals to show more interest and make them feel important. While they acknowledged that this was possible, the participants felt that the support received was not consistent with all health professionals and it depended on the individual.

Whilst mess was considered a challenge during weaning, mothers developed effective strategies to mitigate this challenge by using large long-sleeved bibs, covering the floor underneath the infant's highchair, and learning foods that are messier to avoid offering infants when out and about. This ensured that infants could still be offered a wide range of foods and maintain their independent eating whether within the home or without.

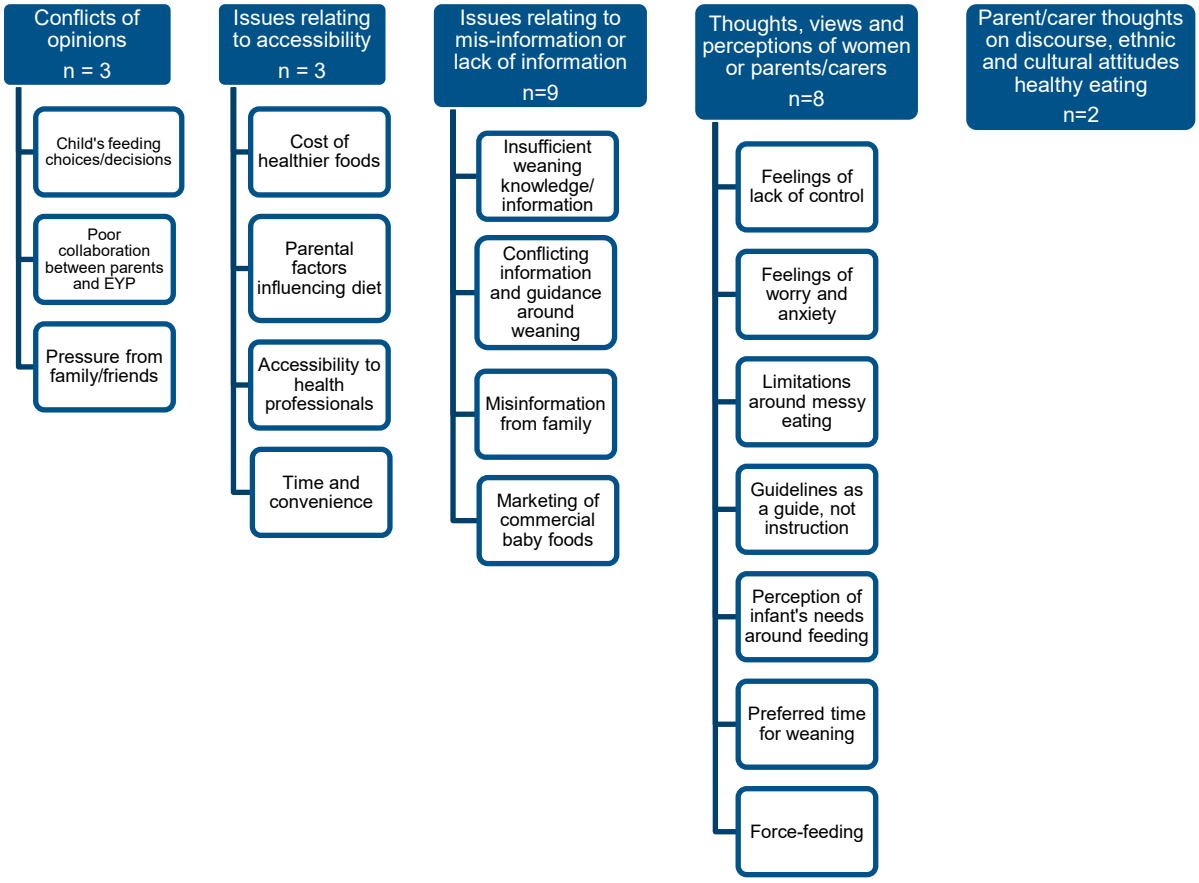
Theme A5. Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating

Parents and caregivers discussed their cultural and traditional practices that encouraged healthy eating and appropriate weaning practices. Generally, they considered weaning as a period to slowly transition infants from milk into the family's cultural diet. Therefore, efforts were either made to ensure that family meals were appropriate to the infant or that the infant got accustomed to the family meals as they were especially as it related to spices. Additionally, African mothers, according to their custom did not introduce solids to infants before 6 months as it was thought that the infants were not ready to swallow their traditional foods. Similarly, family traditions around making homemade meals from scratch were discussed as a preference.

Barriers to increasing the uptake of government advice on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months

- The evidence generated 5 themes and 18 subthemes (Figure 2).
- The evidence ranged from very low to high quality, with majority of the evidence being moderate or low in quality.
- The main reasons that evidence was downgraded were minor or moderate concerns with methodological limitations, adequacy of evidence contributing to a theme, or relevance of evidence.

Figure 2: Thematic map for barriers to increasing the uptake of government advice on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months



Theme B1. Conflicts of opinions

There were 3 subthemes contributing to this theme.

Parents described conflicts of opinions between their desire to follow best practice adhering to the complementary feeding guidance and their desire to trust the infant to guide the timing and process of weaning. Mothers reported taking a different line of action from what they had planned, and when solids were introduced earlier than 6 months, mothers validated this as "trusting the infant". Parents also reported that children develop their own preferences while young and they make the choices of what they like or dislike irrespective of external efforts.

Similarly, there were conflicts reported between parents and early years professionals where parents who took the baby-led weaning approach to weaning felt that they could not impose the same approach on the staff in a nursery setting due to the amount of food wasted and very little food eaten. Therefore, different approaches to weaning were followed in the home and in the nursery.

Parents also discussed conflicts between their views and practices of healthy eating and that of the older generation. They described feeling pressured by the older generation to offer infants traditional foods, which they sometimes felt were unhealthy, leading to confrontation. While some parents felt positive about the healthy eating practices of the older generation, other parents particularly younger parents from South Asia and Britain felt that the views of healthy eating from the older generations were outdated.

Theme B2. Issues relating to accessibility

There were 4 subthemes contributing to this theme.

Some mothers explained that although they desired to offer their infants a range of tastes and textures of foods, certain foods were considered expensive, especially as the child may end up not eating the food and wasting it. These mothers were therefore reluctant to offer such foods to their infants.

Parents reported that the foods offered to their infants was often limited by their own individual preferences, such that children were not offered foods that their parents disliked mainly because the parents wouldn't buy such foods. However, some parents made the effort to expose their children to foods they disliked.

Parents reported that health professionals were not as accessible, which resulted in them seeking advice from online groups and other sources because they found it easier and quicker than it was to access a health professional.

Participants across studies described the convenience of using pre-made commercial baby foods especially when outside the home. One study referred to parents using commercial foods mostly in the early stages of weaning when trying to transition the infant from breasts to solid foods, 1 study described instances when family meals was not suitable for the infant and 2 studies reported parents using them when there were time constraints.

Theme B3. Issues relating to misinformation or a lack of information and communication of information, including food marketing and other commercial determinants

There were 4 subthemes contributing to this theme.

Parents expressed concerns about the weaning information they received from health professionals being insufficient, causing them to turn to other sources of information, in particular online peers. Some parents also reported not being aware of available weaning classes. Mothers discussed feelings of worry and anxiety from lack of sufficient information, especially when they felt their child was a 'fussy eater', whereas mothers who were more proactive in seeking information were more relaxed and confident. Parents expressed a desire for more information possibly as part of the Healthy start vouchers, on websites or through health professionals. Discussions around appropriate weaning foods and infant's readiness for weaning showed that parents were unaware of the appropriate signs of infant's readiness for weaning, as well as age-appropriate weaning foods for the infant. Parents cited hunger, an interest in foods, putting fingers in mouth, chewing, finishing milk quickly, being irritable or lack of sleep as reasons to start weaning. Mothers in one study considered the mother's intuition as the most important factor in determining infant's readiness for solid foods. Parents reported adapting meal contents to make food suitable for infants but used herbs and spices as they usually would when preparing an adult's food. Additionally, parents offered high-energy foods, in particular rice-based foods, and sugary snacks to infants.

Two studies described the constantly changing information about weaning, explaining that health professionals may not always have the most current information to hand. Therefore, the parents were often verified information from other sources. Similarly, 2 studies reported health professionals providing women with conflicting information around the timing of introduction of solids.

The influence of friends and family in the decision-making process around introducing solids to infants and weaning was discussed. Mothers reported following advice from their own mothers, sisters or other relatives who had experience with weaning, a lot of which was misleading information. One study highlighted that mothers in the higher socioeconomic groups are more likely to seek information from health professionals, but mothers generally had varying sources of information including the internet, books, health professionals and relatives that they needed to navigate.

Parents reported that the marketing information of baby foods was confusing. They felt that 4 months was an ideal time to introduce solid foods because the baby foods were marketed as being suitable for infants aged 4 months and above. The availability of formula milk for hungrier babies also made parents believe that some infants need more food or energy-dense meals than others. Parents also reported giving no thoughts to the nutritional contents of foods marketed as being for baby as they assumed it had to have the right nutrients suitable for babies.

Theme B4. Thoughts, views and perceptions of women or parents/carers

There were 7 subthemes contributing to this theme.

Participants described an attempt to control or monitor their infants' eating during the weaning period but experienced difficulties achieving this. One study reported that the mum, the child themselves and the immediate environment were factors that prevented mothers from exercising such control.

Four studies discussed mothers expressing worry and anxiety about the process of weaning their infants. Two studies described the concerns of mothers around the amount of food their infants took and whether it met their nutritional needs, one of which involved mothers adopting the baby-led weaning approach. One study described the worries of mothers about the possibility of choking and 2 studies highlighted concerns about introducing new foods, one of which mentioned allergies as a concern. Mothers adopted strategies to manage their concerns about allergies, which involved either introducing new foods slowly or choosing to completely avoid allergenic foods. Some mothers in one study who expressed concerns about introducing new foods were however quick to get over their concern and offer their child commercially made foods. Mothers in one study were anxious about attending social events for fear of being judged or criticised about the skinny or chubby appearance of their infants, or of challenging social practices that they did not engage in, such as offering infants treats.

Mothers adopting the baby-led weaning approach considered the mess infants created during feeding as challenging, especially when they were outside the home where there was an expectation that babies should be neatly fed. This sometimes led parents to adopting spoon-feeding approaches as reported in one study.

Mothers expressed thoughts that guidelines are too structured and restrictive and instead should be flexible, taking into account individual child differences.

One study reported on mothers' perceptions of their infants' need for additional meals. Although parents reported having scheduled mealtimes, parents left an allowance for infants to be fed an additional meal, which could be milk or solid food at bedtime. Two studies discussed play at mealtimes and reported different attitudes to this. While some parents felt that playing while eating was beneficial in that it prevented messy eating and encouraged infants to be more receptive to food, others felt that it was a missed opportunity to interact with the infant.

Three studies reported that some parents made personal choices on when they wanted to begin weaning their infant, irrespective of their awareness of the guidance around weaning or information from health professionals.

Parents reported concerns around force-feeding expressing that it is a stressful and unpleasant process, that is associated with a risk of children becoming afraid of food.

Theme B5. Parent/carer thoughts on discourse, ethnic and cultural attitudes healthy eating

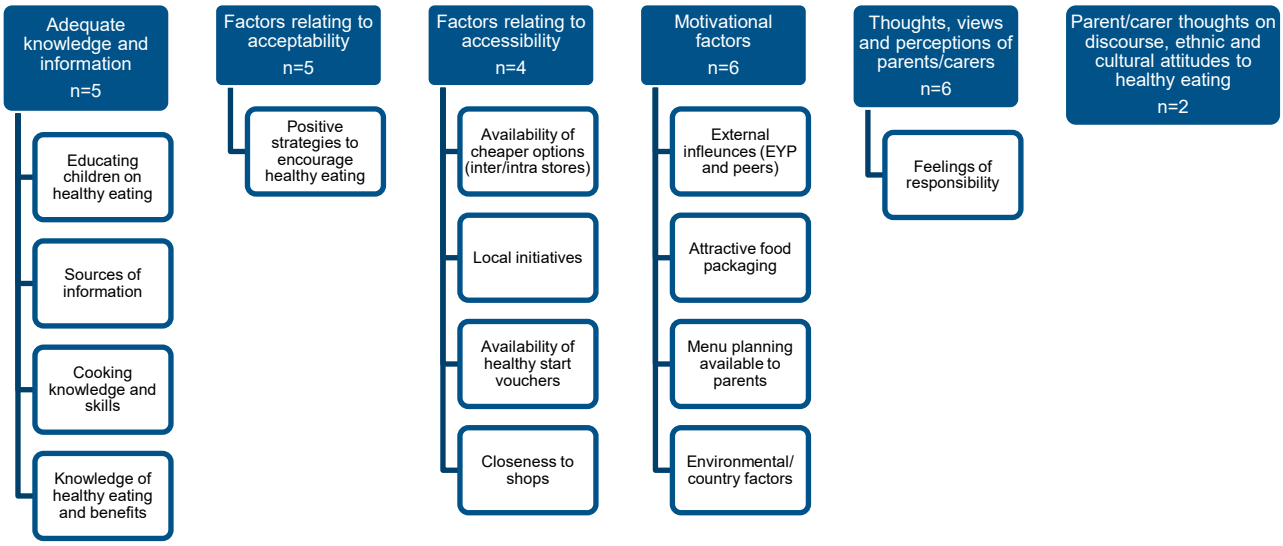
Two studies reported on parent's traditional values and beliefs that prevented them from taking up government advice regarding complementary feeding of infants. These values

were associated with South Asian cultures in both studies. These included conflicting personal views about infant's readiness being based on intuition, home country tradition of early weaning around 1 to 2 months, customary traditions of giving sugar to infants, customs around prolonged feeding of infants with hands or spoon, and quintessential societal image of a chubby baby equating to a healthy baby.

Facilitators to increasing the uptake of government advice on healthy eating and drinking in children from 12 months to 5 years

- The evidence generated 6 themes and 14 subthemes (Figure 3).
- The evidence ranged from low to moderate quality, with majority of the evidence being moderate quality.
- The main reasons that evidence was downgraded were minor to serious concerns with methodological limitations, adequacy of evidence contributing to a theme, or relevance of evidence.

Figure 3: Thematic map for facilitators to increasing the uptake of government advice on healthy eating and drinking in children 12 months to 5 years



Theme A1. Adequate knowledge and information

There were 4 subthemes contributing to this theme.

Early years professionals in nurseries implemented tasks and used characters to educate children about healthy eating and develop social skills. Tasks included setting tables, serving one another, preparing ingredients, and bringing food to the table.

Parents reported getting information about healthy start vouchers from different sources such as health professionals, friends and family, leaflets, health clinics, children's centres and the job centre. However, most participants received the information from health professionals.

Some families who had either attended community cookery classes or who belonged to families who cook were able to cook healthier foods for their children and were proud of this. This was more common amongst parents who reported learning cooking skills while at university.

Two studies reported on parents knowledge of a healthy balanced diet as a motivating factor for providing healthy foods to their children, one of which referred to 5 portions of fruits and vegetables a day and limiting foods high in fats and sugar. One study reported parents

knowledge of the health-related effects of healthy eating for example teeth protection and undesirable foods for children for example salt and preservatives. One study highlighted that parents determined whether foods are appropriate to children by whether they were prepared from fresh unprocessed ingredients or from processed ingredients.

Theme A2. Factors relating to acceptability

There was 1 subtheme contributing to this outcome.

Two studies reported on parents' approaches to encourage healthy eating habits in children. One study reported on strategies directed at the child's acceptance of the food offered such as modifying tastes and textures of foods by pureeing or mixing with other liked foods, more attractive presentations of the foods, arranging food into pictures, playing eating games, verbal and physical encouragement, repeated exposure and providing a structured feeding environment. One study reported on the parents attempt to ensure foods offered to the child are healthy, such as reducing salt and sugar in foods, replacing frying with grilling or baking, homemade alternatives to takeaways, disguising vegetables to ensure acceptability and methods to increase calories in underweight children. Exposure to foods was highlighted in 2 studies as a strategy parents adopted and this was based on parents' observation that their children consumed a wider variety of foods when in other children's settings such as toddler groups, nurseries, or children's centres. This led the parents to increase their children's exposure to the foods they had observed the child eat in other settings. Two studies discussed approaches taken by early years practitioners such as childminders and nurseries to improve acceptance of healthier foods in children. The studies discussed strategies such as hiding vegetables, creative presentations, verbal encouragements, using brightly coloured cutlery and cookery, using play and having themed weeks and activities around cooking.

Theme A3. Factors relating to accessibility

There were 5 subthemes contributing to this theme.

Parents, especially those of lower socioeconomic status reported that the cost of purchasing healthier foods such as fresh vegetables was high and found strategies to manage within their budgets and still have healthy meals. One study reported visiting multiple shops to find the cheapest prices for foods, and switching stores whenever an even cheaper option was found elsewhere. The study also reported parents frequenting discount shops and shopping together to split taxi fares back home. Another study reported mothers purchasing frozen vegetables rather than fresh as these were considered to be a cheaper alternative.

Parents reported local initiatives encouraging healthy eating behaviours delivered in some areas where fruits and vegetables were sold at affordable rates and could be delivered to residents or subsidised healthy meals were offered to families in church-run facilities.

Parents across the 3 studies reported how Healthy Start vouchers impacted positively on their healthy eating by improving their purchasing power for fruits and vegetables, thereby making it possible for them to offer their children an increased variety of fresh fruits and vegetables.

One study reported that parents did not highlight distance to shops as in issue possibly because all participants lived within 2 miles of the shops.

Parents discussed the possibility of an improved lifestyle in the UK for children and access to a wider range of facilities and care as positive factors that helped them to keep their children healthy in the UK, despite the difficulties of living away from their homes of origin. However, some parents expressed that some aspects of healthy eating were difficult to maintain in the UK when compared with their countries of origin, some participants believing that healthy foods were more accessible in their countries of origin.

Theme A4. Motivational factors

There were 3 subthemes contributing to this theme.

Three studies reported on the influence of peers on the eating habits of children, such that when children attended nurseries or other children's settings, they were encouraged to try new foods that they had observed their peers eat. One study reported that parents and childcare providers collaboration was essential to foster healthy eating habits in children by ensuring that what children had eaten at home and in a childcare setting was known to both parties. The study also reported that parents actively sought advice from the nursery staff and cooks on preparing different foods.

Mothers reported that children were motivated to eat healthy foods that had attractive packaging such as games or puzzles, even when it was not a preferred food.

One study reported about nurseries making menus available to parents which helped parents know what their children were eating at nursery. Some menus were more detailed than others for example menus showing age-specific meals or how balance is achieved from different food groups.

Theme A5. Thoughts, views, and perceptions of parents/carers

Parents and childcare providers expressed their views on the roles they play in ensuring children consume healthy foods and explained the approached they took to ensure this. Approaches reported include providing healthy foods, restricting unhealthy foods and role modelling. One study reported on parents' strong desire to provide healthy foods despite having limited financial access to such foods. Two studies reported on parents restricting unhealthy foods and sometimes, this was done in accordance with the child's appetite and weight status. One study reported on childminders restricting children's unhealthy food intake either by supervising intake of parent-provided foods or by discouraging parents from providing food to their children when attending the childcare setting. Two studies reported on parents' role in modelling healthy eating to their children. The parents expressed an awareness that children may be more encouraged to eat healthily if they observed their parents doing so and therefore parents should eat foods that they want their children to eat.

Theme A6. Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating

Two studies reported on how culture influenced healthy eating practices. For example, one study associated acquiring cooking skills with culture and upbringing as parents explained gaining knowledge of healthy foods and cooking skills from their childhood experiences.

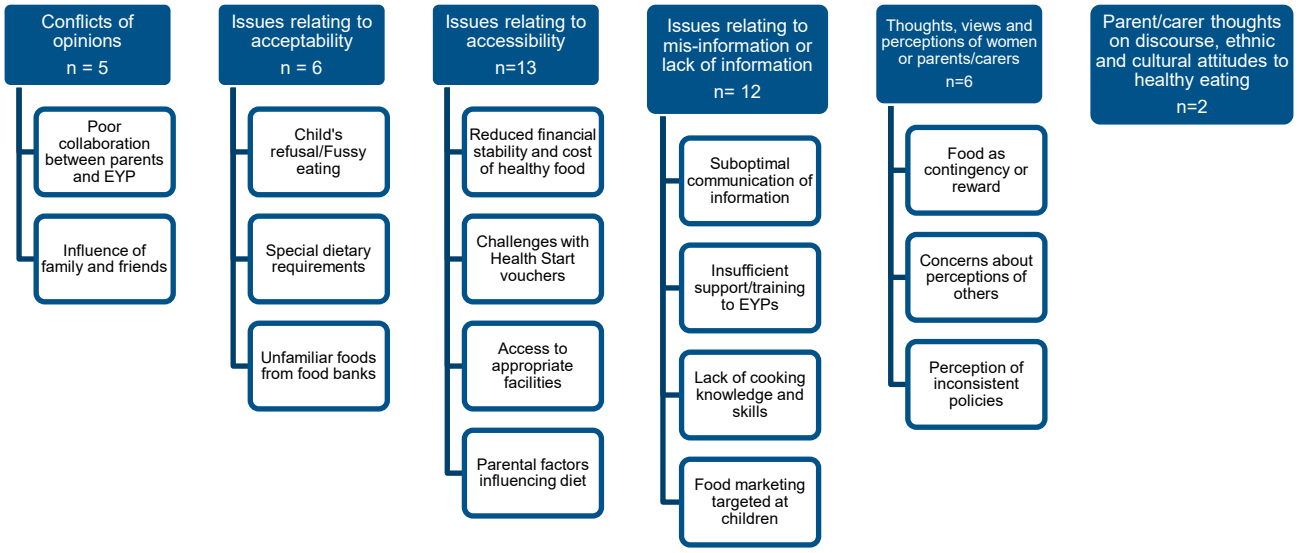
One study referred to the cultural value parents placed on certain foods which were considered of better value-for-money because they were thought of as being healthier in their culture.

One study on Chinese immigrants reported challenges adjusting to the British dietary practices due to beliefs that the Chinese physiology was different from the British physiology and that the Chinese diet is healthier and is preferable to eating unhealthy foods bought outside the home.

Barriers to increasing the uptake of government on healthy eating and drinking in children from 12 months to 5 years

- The evidence generated 6 themes and 16 subthemes (Figure 4).
- The evidence ranged from very low to moderate quality, with majority of the evidence being moderate quality.
- The main reasons that evidence was downgraded were minor to serious concerns with methodological limitations, adequacy of evidence contributing to a theme, or relevance of evidence.

Figure 4: Thematic map for barriers to increasing the uptake of government advice on healthy eating and drinking in children 12 months to 5 years



Theme B1. Conflicts of opinions

There were 2 subthemes contributing to this outcome.

Participants across studies expressed thoughts around parents and early years professionals working in collaboration but the views varied. While all studies discussed childcare providers working in partnership with parents to encourage healthy eating in children, one study presented concerns from childcare providers about their role in providing such support and education. This study highlighted the potential tension that may arise between childcare provider and parents, particularly in private-funded settings where parents were considered customers who hold the power to influence food decisions, and providers felt disempowered to influence parents' choices for fear of losing their customers. In public-funded settings, it was thought that parents appeared to be more willing to discuss with the childcare providers but still with some concerns. Similarly, one study reported parents' reactions to preschool centres providing healthy eating advice to them, which was mixed. Some parents thought it was a good idea, while others were not keen about being given instructions on what to do. One study reported that while childminders usually had inductions about food preferences and policies with parents, some held opinions that the parents had the ultimate authority and responsibility for providing healthy foods to their children and were therefore not as explicit in their discussions with parents.

Parents reported the influence of family and friends on their children's eating habits explaining that children get offered treats and unhealthy foods by family and friends even when they as parents are doing their best to restrict unhealthy eating in their children. One study reported parents adopting a flexible approach to this by letting their children have more treats when guest were present and sticking to the usual restrictions otherwise. One study discussed the frustrations parents feel about external parties offering treat to their children which interfered with their efforts to model healthy eating behaviours.

Theme B2. Issues relating to acceptability

There were 3 subthemes contributing to this outcome.

Four studies described children's food preferences in the light of children either refusing to eat healthier foods or preferring to eat unhealthy foods. One study reported a childminders perspective, suggesting that children's food preferences drive what they are offered in childcare settings. Two studies reported that parents responded to children's food

preferences by offering them what they were more likely to eat, which was usually foods high in fat, sugar, and salt, with one study highlighting that children's preference for unhealthy food was mostly observed in the home and they were more willing to eat some healthy foods when they were eating with other children. One study reported children pressuring their parents to buy food from fast food restaurants. Although the parents in this study considered it an unplanned additional expense, they often responded to this demand by considering some benefit that could come out of the purchase, such as the opportunity to enjoy an outing experience with limited funds. Two studies discussed child's preferences in the context of fussy eating, expressing concerns about children refusing to eat anything and food waste when on a limited budget. One study reported that parents approach to dealing with fussy eating was to stop offering foods that had been refused previously.

Studies discussed children who have special dietary needs which made it difficult to maintain a healthy balanced diet. One study reported that parents needed to adjust their preferences and be more accepting of different approaches to feeding the child. Another study referred to parents getting limited benefit from Healthy start vouchers because the products eligible under the vouchers did not align with the dietary needs of their children.

Parents, especially those of lower socioeconomic status reported relying on food banks to supplement their daily meals. However, the random selection of foods they got meant that sometimes they got food that they were not familiar with and had to accept them regardless.

Theme B3. Issues relating to accessibility

There were 4 subthemes contributing to this outcome.

One of the main issues raised as a limitation to accessing healthy foods for children was low financial resources. One study reported parents' concerns about providing nutritious meals for their children and expressed thoughts about a better diet if their finances were improved. In another study, healthy food was described as being too costly. Parents across all studies discussed the importance of improved finances to achieving a healthy diet for children in the UK and explained that parents on very low income or those receiving benefits found it challenging to afford food and needed to manage on a very limited budget. These families developed various strategies to cope with the challenges of limited finances. One study reported that parents prioritised unavoidable expenses such as nappies and rent. Another study indicated that some parents managed the financial pressure by looking out for deals and offers buy preferred foods, which they stored up until they had all the ingredients required to make the meal they wanted. Others supplemented their food with food from food banks and surplus food stores, especially towards the end of the month when resources were depleted. For parents receiving England benefits, the change to receiving them monthly further heightened their financial challenges. Three studies expressed views of parents feeling limited when they desired a social aspirational activity which proved unattainable. In such instances, they resorted to purchasing unhealthy foods and making use of the place of purchase as a route to getting an alternative for the desired social experience. One of the studies reported that some parents, although desiring to give their children the best, bought unhealthy foods as an affordable treat to prevent their children from being perceived as deprived by their peers.

Two studies reported parents choosing to skip meals so that their children could eat. One of these studies however indicated that some mothers were able to find more resourceful ways to make the little they had go a bit longer, and the other study reported that mothers opted for frozen foods to get more value for their money. Participants from one study explained how challenging it gets to keep food exciting for children when the options for food are limited and monotonous because that was what was affordable to them.

Only one study reported on the use of Healthy Start vouchers to mitigate the effect of their limited budget. Whilst some parents reported the vouchers as making a large difference to their budget for food, others felt that the difference was minimal.

Participants discussed various challenges with the healthy start vouchers from accessing the vouchers to using them. Challenges with accessing the Healthy Start vouchers included obtaining/accessing the forms, completing the forms especially among those who did not speak English and getting the forms signed by a health professional. Challenges with using the Healthy Start vouchers included finding stores that accept the vouchers, approaches of different stores with the use of the vouchers and the inability to get refunded on amounts of the voucher not spent. Participants suggested that the eligibility criteria for the vouchers should be extended to include children up to the age of 5, and value of vouchers should increase in tandem with the rising cost of living.

Two studies referred to accessibility to suitable shops as a challenge to accessing healthy foods. Participants in one study referred to the differences in foods accessible to them based on what was prevalent in the markets accessible to them. For some participants, their local markets were important to them because they were able their traditional foods from there, while others found that foods readily accessible in their local markets were snacks more popular with tourist.

Three studies reported challenges accessing the nearest full-service supermarket where fresher foods and cheaper alternatives could be purchased. This was because the supermarkets were not close enough to be accessed on foot, and participants were limited on funds to buy bus tickets.

One study described barriers to accessing healthcare services such as the lack of a regular address, official documents or utility bills, which led to inappropriate acute hospital admissions. Another study expressed parents' concerns about health professionals not responding to parents request or concerns in a timely manner, which left families with very minimal sustenance during the wait.

One study reported on the lack of appropriate facilities to encourage healthier eating such as living conditions (for example living in a single room) that did not encourage home-cooking or early years services lacking appropriate facilities to prepare and encourage healthy eating among children.

Two studies described parental food preferences that influence children's exposure to healthy foods. One study highlighted that parents who did not eat fruits or vegetables and therefore did not offer them to their children. The other study reported on parents who were not interested in changing their diets. Therefore, upon receipt of the Healthy Start vouchers, rather than purchase fruits and vegetables, they chose instead to purchase formula milk instead, leaving their diets unchanged. However, some parents were reported to prioritise healthy eating and cut costs in other areas.

Parents and childcare providers, in particular childminders discussed the time pressure they experienced working, caring for children and having to plan meals and cook foods.

One study reported that many childcare settings lacked the patience to introduce new foods to children and 1 study reported that childminders found it challenging to deal with the day-to-day pressures of routinely caring for children and planning meals ahead of time or cooking. They therefore resorted quick and easy foods such as fish fingers.

Two studies reported a similar challenge with working parents who were unable to find the time to cook from scratch because of their busy working schedules, and 1 study referred to parents having to make practical choices regarding their choice of foods, going for foods that were quick and easy but often unsuitable for to their preferred diet – vegan/vegetarian.

Theme B4. Issues relating to misinformation or lack of information

There were 4 subthemes contributing to this outcome.

One study reported that parents lacked sufficient information about healthy eating messages. For example, some parents were aware of the 'Eat 5 a day' message but did not seem aware of the Change4Life campaign.

Two studies reported that parents discussed not receiving sufficient information about Healthy Start vouchers and other benefits and suggested that the vouchers could be better promoted by health professionals. Additionally, parents reported misconceptions or confusing information about the vouchers such as thoughts that the vouchers were only for single mothers. Some parents in one study reported not being aware of the vouchers until their child was 2 years old.

Two studies alluded to parents not having a clear understanding of what foods and drinks were considered healthy for their children. One study reported parents increasing the value of vouchers to purchase formula milk. Another study reported that parents offered their children diluted juices because they thought it was good for them or a way to encourage children to drink. The study also reported that parents knew that children should avoid foods high in salt but did not know what foods were high in salt.

Similarly, among childcare providers, one study reported that nurseries offered children ready-made snacks from packets that were likely to be processed foods. The study also reported that nurseries lacked sufficient information on government guidance and policies relating to healthy eating in young children. One study reported on conflicting guidelines arising from preschool staff offering information to parents about healthy eating at home but not considering the same information within the preschool environment.

One study reported that teenage mothers were more likely to obtain information from parents, partners and carers and rarely referred to health professionals as a source of information.

Two studies reported on a lack of sufficient information and training for nursery staff to adequately plan the meals of children in their care. One study reported that although the nurseries attempted to plan their menus, they had little control over the planning either because a dedicated nursery cook had the autonomy or they relied on external catering providers. Two study reported the need for skill development and specialist training in relation to the role of food and eating within the context of early years' setting, but very minimal training opportunities existed. Early years' practitioners reported referring to childminding magazines, the internet, and parents as their sources of information.

Parents reported not having sufficient cooking skills and knowledge which resulted in them reverting to ready-made foods store bought foods, not buying fresh foods as they were unable to cook them and/or using premade sauces sold in jars in their home cooking. One study reported that when fathers did the cooking, it was mostly easy-make foods such as waffles, noodles, pizza, chips and curries made from jars of sauces.

Parents from 3 studies referred to the influence of food marketing and advertising on their children. The resulting effect was that the children made demands on their parents for the advertised, usually unhealthy foods and parents expressed concerns that such marketing are not usually targeted at fruits and vegetables. Parents from 1 study reported having to give into the demands of their children to avoid tantrums.

Theme B5. Thoughts, views and perceptions of women or parents/carers

There were 3 subthemes contributing to this outcome.

Parents across 3 studies reported using children's preferred usually unhealthy foods as a contingency to improve behaviour or as a reward for good behaviour or for eating a healthier food.

Parents reported feelings of worry about how others perceived them, their eating preferences or how they fed their children. One study reported feelings of unease among parents who accessed emergency food aid. Another study reported fear of judgement among parents who were vegan and offered their children a vegan diet.

One study reported that parents took strategies such as offering treats to avoid potential judgement or attention from strangers when children threw a tantrum or cried in public. One study discussed the Ofsted strategy of rolling snacks where snacks were provided throughout the day and explained parents' perception of this working against other healthy eating messages.

Theme B6. Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating

Two studies reported that parents felt it was the easier approach to follow family traditional practices and habits. One study referred to family norms, cultural backgrounds, and transmission of values as reasons for their food choices, which involved the use of pre-prepared meals and snacks along with home-cooked meals.

Economic evidence

This was a qualitative review question, therefore economic evidence was not relevant and thus no economic evidence searches were conducted.

The committee's discussion and interpretation of the evidence

The outcomes that matter most

To answer the question of factors that facilitates or impedes the uptake of government guidance on the appropriate and timely introduction to solids in children between 6 and 12 months of age and healthy eating and drinking in children from 12 months to 5 years of age, the review was designed to include qualitative data only and as a result the committee could not specify in advance the data that would be found. Instead, they identified the following main themes to guide the review, although the list was not exhaustive, and the committee were aware that additional themes may emerge from the studies included:

- Thoughts, views and perceptions of women or parents/carers
- Issues relating to acceptability
- Issues relating to accessibility
- Issues relating to misinformation or a lack of information and communication of information, including food marketing and other commercial determinants
- Parent/carer thoughts on discourse, ethnic and cultural attitudes to vitamin supplementation and healthy eating
- Acceptability and misinformation
- Motivational factors, including child characteristics.

Data was identified for the themes suggested by the committee in the protocol except for one theme: acceptability and misinformation. Some data was identified that created 2 additional themes generated from the evidence, which were 'conflicts of opinions' and 'adequate knowledge and information'.

The quality of the evidence

The quality of the evidence was assessed using GRADE-CERQual methodology and the overall confidence in the findings for the qualitative review ranged from high to very low, with most of the evidence being moderate quality. The overall confidence in the findings for the section on appropriate and timely introduction to solids ranged from high to very low, with most of the evidence being moderate. The overall confidence in the findings for the section on healthy eating and drinking in children ranged from high to low, with most of the evidence being moderate.

The main issues with the quality were due to risk of bias, adequacy of the data and relevance of evidence. Risk of bias was most commonly due to concerns about: the research aim and design, participant and researcher relationship, data saturation and data analysis. Evidence was downgraded for adequacy mainly because studies offered moderately rich or thin data. Evidence was downgraded for relevance due to studies including some populations that varied slightly from the protocol.

Benefits and harms

Appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months

The committee reviewed the broad range of themes and subthemes available from this evidence review on the facilitators and barriers of appropriate and timely introduction of solids in children 6 to 12 months. They noted that the themes generated from this review complemented the findings from the quantitative review on interventions to improve the uptake of government advice on appropriate and timely introduction to solids in babies from 6 months to 12 months, reported in evidence report N. The committee made recommendations on appropriate and timely introduction of solids based on both the qualitative and quantitative evidence reviews as well as their own expertise and the recommendations by the Scientific Advisory Committee on Nutrition (SACN) on feeding in the first year of life (SACN 2018).

The committee considered the evidence from subthemes B3.1 Insufficient knowledge and information about weaning and healthy eating (moderate confidence), B3.2 Conflicting information and guidance around weaning (low confidence) and A4.4 Need for additional support (moderate confidence), which showed that parents felt that information received from health professionals was sometimes insufficient and conflicting. Evidence from subtheme B3.4 Marketing of commercial baby foods (moderate confidence) showed that messages on food packets could be misleading or misinterpreted as being according to recommendations, as the evidence reported that parents paid no attention to the nutritional contents of foods marketed for babies as they assumed it had to have the right nutrients suitable for babies. The committee also noted there is often an assumption among parents that marketed foods are suitable and healthy as advertised thus influencing their food choices. The committee discussed that some of these marketing messages were conflicting with the UK guidance, for example packages might indicate that the food is appropriate to give from 4 months of age, whereas UK guidance is to introduce solids from around 6 months of age. The committee highlighted that behaviour change among individual families is important, but it is only one aspect of the issue. There are larger public health measures that the government could and should do to tackle inappropriate marketing of commercial baby and toddler foods but because this is outside the remit of this guideline, the committee did not make any specific recommendations on this. Further, the committee discussed that as the evidence suggests, sometimes healthcare professionals may give inconsistent advice on introduction to solids, which may not be based on evidence or current guidance. Based on the qualitative evidence, quantitative evidence from evidence review N and their experience, the committee agreed that commissioners and service providers should ensure that health professionals have independent and non-commercial, evidence-based, and consistent information about introducing solids to infants that is in line with the UK government advice.

Evidence from subtheme B2.1 Cost of healthier foods (high confidence), showed that cost was a barrier to following government advice on the appropriate and timely introduction of solids to infants. The committee agreed this to be a problem in practice where families are struggling to afford healthy foods. The committee also discussed, based on their experience, that some families live in conditions where they do not have access to a kitchen which can make it difficult to prepare healthy foods for their babies. For example, families who experience homelessness or asylum seeker families may be provided temporary accommodation in hotels without access to cooking facilities. The committee discussed that it was important for healthcare professionals to consider the circumstances of the individual family when discussing introduction of solid foods to know if they might be barriers to following the advice or barriers to accessing healthy food. This should be done in a culturally sensitive way as the evidence showed that cultural factors and wider family views and attitudes play a significant role in how parents follow guidance and introduce solid foods to their babies (themes and subthemes: A5 Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating [high confidence]; B1.3 Pressure from family and friends [low confidence]; B3.3 Misinformation from family [low confidence]; B5 Parent/carer thoughts on discourse, ethnic and cultural attitudes healthy eating [moderate confidence]).

As discussed, the evidence showed that parents sometimes felt they received conflicting or misleading information about introducing solids from healthcare professionals (subthemes B3.1 Insufficient knowledge and information about weaning and healthy eating [moderate confidence]; B3.2 Conflicting information and guidance around weaning [low confidence] and A4.4 Need for additional support [moderate confidence]). Subtheme B2.3 Accessibility of health professionals (very low confidence) also suggested that parents felt that health care professionals were not accessible to provide advice, so they sought advice elsewhere. At the same time, the qualitative evidence also showed that parents regarded advice from healthcare professionals highly but also sought information provided by the NHS such the NHS booklets and NHS websites (subtheme A1.3 Information/advice from health care professionals and external sources [low confidence]). The committee agreed that discussions about introducing solids, should be reinforced and complemented by other independent, evidence-based materials and resources. Based on the government guidance (including the recommendations by the SACN, SACN 2018) on appropriate introduction of solids and complementary feeding, their knowledge and experience, the committee identified topics which should be included in the discussion with parents at around 4-to-5-months, in time before solid foods should be introduced at around 6 months (see evidence review N for further discussion around the timings of information provision).

The committee agreed that the timing should be discussed as well as how solid foods should be introduced (in what forms, how often, how to gradually diversify foods offered etc.) alongside advice on what foods and drinks are appropriate and what should be avoided. In line with recommendations from the SACN, parents should be advised about offering foods with different textures and flavours, making sure that non-sweet-tasting foods are also offered. SACN also recommends not adding salt and sugar to foods for young children and recommends home-made foods, so the committee agreed that it is important to discuss the benefits of homemade foods where salt, sugar or other sweetening agents have not been added, as commercially made baby foods can contain salt and free sugars. These issues came up in the qualitative evidence as well in terms of parents recognising the importance of offering variety of foods (theme A2 Factors relating to acceptability [moderate confidence]; subtheme A4.2 Views about food variety and fussy eating [high confidence]) but also that parents' own preferences or dislikes sometimes limited the diversity of foods offered to babies (subtheme B2.2 Parental factors influencing diet [moderate confidence]) or the cost of food limited the range of foods offered, for example, some parents were reluctant to buy fruits that were considered expensive, particularly as the child may not eat it in the end and it was seen as a waste (subtheme B2.1 Cost of healthier foods [high confidence]). Importance of home-made foods was also highlighted in the qualitative evidence as something parents recognised (subthemes A1.1 Knowledge of guidance around weaning, weaning signs and

appropriate foods [low confidence]; A1.2 Knowledge of healthy eating and its benefits [moderate confidence]; A4.1 Feelings of responsibility [moderate confidence]). However, the evidence also showed that parents found commercially made baby foods convenient (subtheme B2.4 Time and convenience [moderate confidence]). The committee recognised this but agreed that parents may not realise that the content of such foods may not always be nutritionally adequate.

The committee also agreed that responsive feeding should be discussed. This came up in the qualitative evidence (subtheme A3.1 Trusting the infant to lead [moderate confidence], subtheme B1.1 Child's feeding choices/decisions [moderate confidence]). Parents felt that following the child's cues helped them but at the same time sometimes they felt conflicted between wanting to follow guidance and following cues from their child, for example when it came to the timing of starting solid foods. Parents also reported making their own choices about weaning with a perception that the guidance may be too structured and restrictive, how much food to feed infants and preferences for feeding approaches, for example concerns about force feeding (subthemes B4.4 Guidelines as a guide, not instruction [low confidence], B4.5 Perception of infant's needs around feeding [high confidence] , B4.6 Preferred timing for weaning [low confidence], B4.7 Force-feeding [low confidence]). The committee agreed that discussing responsive feeding will provide more clarity on how much food infants require, importance of not force-feeding and preferred timing of weaning.

The committee also discussed that in line with current advice, parents should be advised to introduce the use of cups and beakers alongside solid food so that the baby will gradually learn to drink from a cup, as baby bottles are no longer recommended from 1 year of age due to oral health concerns. The committee agreed that in line with SACN recommendations, parents should be advised about the continued contribution of breast milk and infant formula in diets in the first year of life, and breast milk up to 2 years and beyond, alongside complementary foods . This was something that also came up in the qualitative evidence as something some parents recognise (subtheme A4.3 Perception of breastfeeding [low confidence]).

The qualitative evidence showed that parents, particularly mothers, expressed worry and anxiety over the process of introducing solid foods, including worry about the amount of food their babies ate, whether it met their nutritional needs, the risk of choking or allergic reactions (subtheme B4.2 Feelings of worry and anxiety [low confidence]). The committee agreed parents may have various concerns and anxieties and these should be discussed and addressed. Specifically, they agreed about the importance of discussing introducing potentially allergenic foods, including eggs and peanut, to babies as soon as solids are started, and to keep offering them regularly thereafter in line with SACN recommendations. The committee thought it is important to explain to parents why this is important (because the deliberate exclusion of these foods may increase the risk of allergy to these foods) and what the signs of an allergic reaction are and what to do in that situation. They also agreed that parents should be advised about not leaving their child alone when eating or drinking so that danger of choking or other hazards are minimised.

The qualitative evidence also showed that parents sometimes struggled with common challenges such as mess and found ways to deal with them without compromising the quality of the food (subtheme A4.5 Dealing with challenges – tackling mess [moderate confidence]; subtheme B4.3 Limitations around messy eating [moderate confidence]). The committee agreed that there should be a chance to discuss these types of common challenges with parents. In their experience, some parents also have concerns over food waste, particularly if they are already experiencing food insecurity and this should be discussed too with advice offered as appropriate.

As discussed, the qualitative evidence showed that parents found marketing information from commercial baby food companies confusing, for example, the commercial baby foods showed that the food is appropriate from 4 months of age whereas the official guidance to

parents is that solid foods should only be introduced at around 6 months, or parents assumed that all baby foods are nutritionally healthy and appropriate for babies whereas in practice they may contain lot of free sugars, too much salt or be inappropriate in other ways (e.g. texture, flavour, packaging) (subtheme B3.4 Marketing of commercial baby foods [moderate confidence]). The committee agreed that parents should be advised to be aware of the potentially misleading information and marketing by baby food companies.

Finally, as mentioned, the qualitative evidence from subtheme B2.1 Cost of healthier foods (high confidence) showed that cost was a barrier to following government advice on the appropriate and timely introduction of solids. This corresponded with the committee's experience that many parents are struggling to feed their children and have to resort to unsafe or inappropriate practices such as diluting infant formula, or giving very young children foods and drinks that are cheap but not suitable for them, e.g. adult ready meals, crisps and snack foods.. Therefore, the committee agreed that the discussions should include any concerns about cost of healthy foods and how people might get support, including national or local food and income generation schemes.

The committee referred to the evidence from subtheme A3.2 Family meals and eating together to encourage healthy eating (low confidence), B1.2 poor collaboration between parents and early years' professionals and agreed that these subthemes are more relevant to children 1 to 5 years of age. Therefore, these were discussed in more detail in the section on healthy eating in children 1 to 5 years of this review.

Healthy eating and drinking in children 12 months to 5 years

The committee reviewed the broad range of themes and subthemes available from this review on the barriers and facilitators of healthy eating and drinking in children aged 1 to 5 years. They noted that the themes generated from this review complemented the findings from the quantitative review on interventions to improve the uptake of government advice on healthy eating and drinking in children aged 1 to 5 years, reported in evidence report O. The committee made recommendations on healthy eating and drinking in children based on both the qualitative and quantitative evidence reviews as well as their expertise and guidance by the SACN on feeding young children aged 1 to 5 years (SACN 2023).

From age 1 year onwards, there are very few routine contacts with healthcare professionals but many families will interact regularly with the early years professionals. The committee agreed that both healthcare professionals who see young children and their parents or carers and early years professionals play an important role in advising families about healthy eating and drinking in early childhood. The committee discussed the evidence from subtheme A2.1 Positive strategies to encourage healthy eating (moderate confidence), subtheme A4.1 External influences from early years professionals and peers (moderate confidence), subtheme B4.1 Suboptimal communication of information (moderate confidence) and subtheme B4.2 Insufficient training and support for early years professionals (moderate confidence). The evidence showed that early years' professionals can be effective in encouraging healthy eating practices in children but there can be gaps in knowledge in relation to government guidance and policies relating to healthy eating in young children. Lack of training for early years professionals on healthy eating in children aged 1 to 5 years was also reported. The committee agreed with the evidence and thought that healthcare professionals who see children aged 1 to 5 years, may also have gaps in knowledge in relation to the recommendations on healthy eating and drinking in early childhood. Therefore, they recommended that commissioners and service providers should ensure that healthcare professionals and professionals working in early years' settings have accurate, consistent and non-commercial information about healthy eating and drinking in children 1 to 5 years. Further discussion about the role of early years' settings is provided further below, on page 47.

The evidence showed that some of the barriers for following healthy eating and drinking guidance for children related to the challenging circumstances and situations that families lived in. For example, poor financial resources was reported as one of the main barriers for providing healthy foods to children and some parents resorted to skipping meals themselves to provide for their children (subtheme B3.1 Reduced financial stability and cost of healthy food [moderate confidence]). The high cost of healthy foods was reported and families reported relying on food banks, although this sometimes made it difficult to create healthy meals as food banks may provide unfamiliar items which parents found difficult to use (subtheme A3.1 Availability of cheaper options [moderate confidence], subtheme B2.3 Unfamiliar foods from foodbanks [low confidence]). Parents also reported feeling concerned about how others perceived them when they accessed food banks or when they followed a specific diet, which resulted in some parents adopting unhealthy eating practices to avoid potential judgement or embarrassment when in public (subtheme B5.2 Concerns about the perception of others [high confidence]). Parents reported on difficulty accessing larger supermarkets to buy more affordable foods and also reported on the lack of appropriate facilities and living conditions (for example living in a single room or not having a kitchen) that makes it difficult to provide healthy meals to children (subtheme A3.4 Closeness to shops [moderate confidence], subtheme B3.3 Access to appropriate services and facilities [moderate confidence]). Working parents also found it challenging to find time to plan and prepare meals (subtheme B3.4 Parental factors influencing diet [low confidence]). The evidence also showed how cultural factors play a role in what parents consider healthy (theme A6 Parent/carer thought on discourse, ethnic and cultural attitudes to healthy eating [moderate confidence]; B6 Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating [high confidence]). Some immigrant parents reported challenges in providing healthy food for their children in the UK context compared to the home countries (subtheme A3.5 Environmental/country factors [low confidence]). Based on the evidence and their expertise, the committee recommended when discussing healthy eating and drinking in children, family's circumstances should be taken into account and discussions tailored sensitively according to the individual needs, circumstances, preferences and understanding of the family. The committee agreed that this is particularly pertinent for children from low income or disadvantaged backgrounds as there is consistently a social gradient in health and nutrition outcomes and poor nutrition is particularly common among children from poor or disadvantaged backgrounds. These families may benefit from additional support, including longer or more frequent contacts with healthcare professionals, tailored or enhanced services, modified communication (including written materials) based on needs and referrals or signposting to local services in family hubs or charities.

Based on quantitative evidence from evidence review O, committee recommended that information on healthy eating in children is provided together with information about schemes that improve access to healthy foods (such as the Healthy Start, free school meals, income generation schemes or other local schemes) and interventions that improve families' skills and confidence to include healthy foods in their diet. The qualitative evidence, discussed above, about difficulty accessing healthy foods due to poverty supported this recommendation. There was evidence from subtheme A3.2 Local initiatives (moderate confidence), and subtheme A3.3 Availability of Healthy Start vouchers, which showed that schemes that improve access to healthy foods such as the Healthy Start schemes and local initiatives supporting healthy eating facilitated healthy eating in children and their families (moderate confidence). Subtheme B3.2 Challenges with Healthy Start Vouchers (moderate confidence) and subtheme B4.1 Suboptimal communication of information (moderate confidence) showed insufficient or conflicting information about these schemes could be a barrier for healthy eating and drinking in children. The committee noted that the evidence suggesting challenges finding the appropriate shops to use Healthy start vouchers may be outdated as the vouchers have been updated to electronic vouchers in recent years and they could be used in any shop accepting Mastercard. However, the committee acknowledged that there are a range of challenges including technical issues with the Healthy Start

schemes since digitisation, and that these issues need addressing to increase uptake of the scheme.

The qualitative evidence also showed that parents reported not having sufficient cooking skills and knowledge about healthy foods resulting in them resorting to ready-made foods (subtheme B4.3 Lack of cooking knowledge and skills) and parents reporting on experiences of learning skills in community cooking classes (subtheme A1.3 Cooking knowledge and skills [low confidence]). Based on the qualitative evidence and quantitative evidence in evidence review O, the committee recommended that in addition to providing information to parents, interventions to improve access to healthy foods and interventions to improve confidence and skills in including healthy foods to their diet should be promoted. The committee discussed that cooking classes highlighted in the qualitative evidence are available in many areas through community hubs, for example, but acknowledged that there may be geographical variation in their availability in current practice.

The committee discussed the evidence from subtheme A1.2 Sources of information (low confidence), subtheme A1.3 Cooking knowledge and skill (low confidence), subtheme A1.4 Knowledge of healthy eating and benefits (moderate confidence), and subtheme B4.1 Suboptimal communication of information (moderate confidence), which showed that adequate information facilitated healthy eating practices and with inadequate information on healthy eating, parents felt unequipped to adequately achieve a healthy balanced diet for their children. The committee agreed with this evidence although acknowledged that improved knowledge is only one aspect of improving healthy eating. The committee highlighted some important topics for discussion with parents and carers when providing information about healthy eating in children, based on the current advice and their expertise. This includes discussing the importance of a balanced and increasingly diverse diet from infancy so that children get used to different textures and flavours to get all necessary nutrients and to help avoid fussiness about food as the child grows. The NHS Start for Life advises that children aged 1 and above should have 3 meals per day and additionally 2 healthy snacks, and that milk and water should be their main drinks, as recommended by SACN. The committee discussed the evidence from subtheme A2.1 Positive strategies to encourage healthy eating (moderate confidence), which showed that parents adopted healthy eating habits by preferring homemade food as an alternative to takeaways. Referring to the SACN guidance which states that commercially manufactured foods and drinks marketed specifically for infants and young children are not needed, the committee agreed that the benefits of homemade foods should be discussed as highly processed or commercial foods may be high in salt and sugar and have lack of different textures and flavours, and that snacks that are offered should be based on whole foods, not commercial snack products. Adding salt to food for children up to 5 years is not recommended by the SACN. Furthermore, SACN recommends limiting offering foods and snacks that are energy dense and high in saturated fat, salt and free sugars.

The committee discussed the evidence from the section of this review on introducing solids and particularly its subtheme A3.2 Family meals and eating together to encourage healthy eating (low confidence), which showed that parents found eating together as a family facilitated healthier eating for them and their children. The committee expressed that this was an important factor to encourage healthy eating in children but agreed that this was particularly relevant to children 1 to 5 years of age. Additionally, evidence from the subtheme A5.1 Feelings of responsibility (moderate confidence) showed that parents felt responsible to model healthy eating behaviours to their children. However, evidence from subthemes B1.2 Influence of family and friends (moderate evidence), and B2.1 Child's food preferences (moderate confidence) showed that parents' efforts to encourage healthy eating can be negated by family and friends or the children's preferences. Based on the qualitative and quantitative evidence (see evidence report O) and their expertise, the committee made a recommendation on discussing with parents about the importance of eating together as a

family and how parents and carers can act as role models and examples through their own healthy food choices.

SACN recommends that milk (including breastmilk) or water should constitute most of drinks given to children aged 1 to 5 years and recommends against giving them sugar-sweetened drinks, that fruit juice intake should be limited, and that formula milk is not needed after 12 months of age. The committee agreed to highlight these in the recommendation as topics to discuss with parents or carers.

SACN recommends that children between 1 to 5 years should be presented with unfamiliar vegetables on many occasions (up to 10 times per vegetable) so that they will get used to the vegetable. Qualitative evidence from subtheme A2.1 Positive strategies to encourage healthy eating (moderate confidence) showed that parents found repeated exposure to healthy foods as a good strategy to improve their child's diet. The committee therefore recommended that parents and carers should be advised to repeatedly offer and encourage their children to repeatedly handle a wide range of fruits and vegetables.

The evidence from subtheme B5.1 Food as contingency or reward (high confidence) reported on parents using unhealthy foods as a reward for good behaviour or for eating healthier food. The committee considered this to be problematic and recommended advising parents to avoid using any food-based rewards and instead use non-food-based rewards, such as stickers.

The committee further discussed the evidence from subtheme B4.4 Food marketing targeted at children (moderate confidence), which showed that parents felt that food marketing information and advertising targeted at children acted as a barrier to healthy eating, as children made demands from their parents based on the marketing information, which parents found it difficult to refuse. No evidence was identified on marketing of children's foods aimed at parents. The committee explained that based on their knowledge and experience, marketing may also be targeted at parents to encourage them to purchase certain foods for their children and that parents may not be aware that some of the marketing messages are not in line with the UK government advice on healthy eating in children. For example, there are many commercial foods targeting pre-school aged children that are not subject to the same regulations as commercial infant and toddler foods and are high in free sugars and may contain high levels of salt or saturated fats. The evidence from subtheme A4.2 Attractive food packaging (moderate confidence) showed that food packaging encouraged children to eat more dried fruits. However, the committee agreed that dried fruits are not considered healthy options for children as they often have high added or free sugar content. Therefore, the committee agreed that it was important to discuss with parents about being aware of potentially misleading information and marketing from commercial food companies that may not align with dietary government guidance.

As discussed earlier, cost of healthy food was highlighted as an important barrier for healthy eating in children in the qualitative evidence, which corresponded with the committee's knowledge and experience of the circumstances many families are in. Therefore, they recommended that the concerns about cost of healthy foods should be discussed with parents and carers, including where to get support, such as the Healthy Start scheme, income support schemes or other schemes or initiatives than can help to access or buy healthy foods.

The qualitative evidence highlighted various facilitators and barriers in relation to early years professionals supporting healthy eating and drinking in young children. Subtheme A1.1 Educating children on healthy eating (moderate confidence) and subtheme A2.1 Positive strategies to encourage healthy eating (moderate confidence) reported on early years professionals using play and characters as way of teaching children about healthy food, involving children in preparing food or preparing the table before eating, using brightly coloured cutlery and cookery, having themed weeks and activities around cooking and so on.

Subtheme A5.1 Feelings of responsibility (moderate confidence) reported on using role modelling to encourage children to eat healthy foods. Subtheme A4.1 External influences from early years professionals and peers (moderate confidence) reported on how the influence of peers in early years education settings helped children to try new foods as they observed their peers eating them. The same subtheme also reported on how the collaboration between parents and the early years education setting was essential in fostering healthy eating habits in children, including parents seeking advice from nursery staff. However, subtheme B1.1 Poor collaboration between parents and early years professionals (low confidence) as well as subtheme B1.2 Poor collaboration between parents and early years' professionals from the section on appropriate and timely introduction of solids reported on the difficulties of parents and early years settings collaborating on this, for example, some parents were not keen on getting advice from early years professionals about their child's eating, or that the privately funded childcare settings felt disempowered to influence parents' choices for fear of losing customers. Subtheme A4.3 Menu planning available to parents (low confidence) also reported that providing menu planning to parents can help to encourage healthy eating. Evidence from subtheme B3.4 Parental factors influencing diet (low confidence) also reported on parents and childminders struggling to find the time to plan and prepare healthy meals for children and to introduce new foods to children which may also be rejected, so they resorted to familiar but less healthy foods instead. Evidence from subtheme B4.1 Suboptimal communication of information (moderate confidence) also showed how some early years settings offered children packaged and processed snack foods and lacked knowledge about the guidance on healthy eating for young children, including guidance on food provision in early years settings. The same subtheme reported that sometimes early years settings offered advice to parents about healthy eating at home but did not follow the advice within their own setting, sometimes constrained by the current food provision arrangements. Evidence from subtheme B5.3 Perception of inconsistent policies (moderate confidence) reported that parents were concerned that certain policies promoted within childcare settings could act as barriers to other healthy eating messages. Finally, subtheme B4.2 Insufficient training and support for early years professionals (low confidence) showed that there was a lack of knowledge and training among early years staff about healthy eating in children.

The committee considered the qualitative evidence and the quantitative evidence in evidence review O and concluded that because of the important role that early years settings play in providing, encouraging and improving healthy eating in children, they should ensure that healthy eating and drinking are prioritised taking a 'whole school food approach', which encompasses food provision and food education and activities. The committee agreed that a priority should be that settings should involve adhere to Early years foundation stage (EYFS) statutory framework in providing health foods and drinks in line with government guidance. The committee added that food would ideally prepared on site and where possible some sources on site. The government has provided early years settings with example menus so this was referred to in the recommendation. The committee also agreed that as recommended for parents and carers, early years setting should also repeatedly offer unfamiliar fruits and vegetables to children as well as use rode modelling to encourage healthy eating. They should also discuss healthy eating and foods with children and use play, themes weeks and other ways to educate children about healthy foods. The committee agreed that early years settings should involve families and carers so that children are exposed to and experience consistently healthy diets and feeding practices at home and in the early years setting.

The committee discussed the evidence from subthemes B2.2 special dietary requirements (low confidence) and agreed that this evidence is outside the remit of this guideline as this guideline focuses on healthy infants and children. Therefore, no recommendations were made based on this.

Cost effectiveness and resource use

This was a qualitative review question, therefore economic evidence was not relevant. The recommendations made broadly reflect current practice around discussions, information and advice to people with children up to five years of age on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating and drinking in children from 12 months to 5 years. Recommendations based on the evidence identified in this review question relate to approaches to communication of information and advice, as well as the content of information and advice provided, and therefore may have minor-to-moderate resource implications comprising health professionals' extra time to provide this information and advice, particularly if additional support (such as longer or more frequent contacts) are provided for families from low income or disadvantaged backgrounds. Some resource implications around formal or informal health professionals' training are expected, to ensure that healthcare professionals have independent and non-commercial, evidence-based, and consistent information about introduction of solid foods to babies, and healthy eating and drinking in children aged 1 to 5 years.

Recommendations supported by this evidence review

This evidence review supports recommendations 1.5.1, 1.5.6 and 1.5.7 on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and the recommendations 1.5.9 to 1.5.13 on healthy eating and drinking in children from 12 months to 5 years. Other evidence supporting these recommendations can be found in the evidence review N on interventions to promote appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and O on interventions to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years.

References – included studies

Qualitative

Arden 2015

Arden MA and Abbott RL. (2015) Experiences of baby-led weaning: trust, control and renegotiation. Maternal & Child Nutrition 11(4): 829-844

Brown 2013

Brown, Amy and Lee, Michelle (2013) An exploration of experiences of mothers following a baby-led weaning style: developmental readiness for complementary foods. Maternal & child nutrition 9(2): 233-43

Buttivant 2012

Buttivant, Helen and Knai, Cecile (2012) Improving food provision in child care in England: a stakeholder analysis. Public health nutrition 15(3): 554-60

Carnell 2011

Carnell S, Cooke L, Cheng R et al. (2011) Parental feeding behaviours and motivations. A qualitative study in mothers of UK pre-schoolers. Appetite 57: 665-73

Caton 2011

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Condon 2017

Condon, L. J. and McClean, S. (2017) Maintaining pre-school children's health and wellbeing in the UK: a qualitative study of the views of migrant parents. Journal of Public Health 39(3): 455-463

Cook 2021

Cook, Erica Jane, Powell, Faye Caroline, Ali, Nasreen et al. (2021) Parents' experiences of complementary feeding among a United Kingdom culturally diverse and deprived community. Maternal & child nutrition 17(2): e13108

Garcia 2019

Garcia AL, Looby S, McLean-Guthrie K et al. (2019) An exploration of complementary feeding practices, information needs and sources. Int J Environ Res Public Health 16: 4311

Goldsborough 2016

Goldsborough, N., Homer, C., Atchinson, R. et al. (2016) Healthy eating in the early years: A qualitative exploration of food provision in the childminder setting. British Food Journal 118(4): 992-1002

Goldthorpe 2018

Goldthorpe, Joanna; Ali, Nazneen; Calam, Rachel (2018) Providing healthy diets for young children: the experience of parents in a UK inner city. International journal of qualitative studies on health and well-being 13(1): 1490623

Hayter 2015

Hayter AKM, Draper AK, Ohly HR et al. (2015) A qualitative study exploring parental accounts of feeding pre-school children in two low-income populations in the UK. Maternal and Child Nutrition 11: 371-84

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Isaacs, Anna, Halligan, Joel, Neve, Kimberley et al. (2022) From healthy food environments to healthy wellbeing environments: Policy insights from a focused ethnography with low-income parents' in England. Health & place 77: 102862

Jolly 2018

Jolly A (2018) ‘You Just Have to Work with What You’ve Got’ Practitioner Research with Precarious Migrant Families. Practice 30(2): 99-116

Jones 2023

Jones, Eliza and Burton, Amy E (2023) Exploring Vegan Mothers' Experiences of Making Food Choices for Infants and Young Children. Journal of nutrition education and behavior 55(9): 624-633

Khanom 2015

Khanom, Ashrafunnesa, Hill, Rebecca A, Morgan, Kelly et al. (2015) Parental recommendations for population level interventions to support infant and family dietary choices: a qualitative study from the Growing Up in Wales, Environments for Healthy Living (EHL) study. BMC public health 15: 234

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Lakhanpaul, Monica, Benton, Lorna, Lloyd-Houldey, Oliver et al. (2020) Nurture Early for Optimal Nutrition (NEON) programme: qualitative study of drivers of infant feeding and care practices in a British-Bangladeshi population. BMJ open 10(6): e035347

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Lloyd-Williams, Ffion, Bristow, Katie, Capewell, Simon et al. (2011) Young children's food in Liverpool day-care settings: a qualitative study of pre-school nutrition policy and practice. Public health nutrition 14(10): 1858-66

Lovelace 2015

Lovelace S and Rabiee-Khan F. (2015) Food choices made by low-income households when feeding their pre-school children: a qualitative study. Maternal and Child Nutrition 11(4): 870-81

Lucas 2013

Lucas P, Jessiman T, Cameron A et al. (2013) Healthy start vouchers study: the views and experiences of parents, professionals and small retailers in England.

Maslin 2015

Maslin K, Dunn Galvin A, Sheperd S et al. (2015) Qualitative Study of Mothers' Perceptions of Weaning and the Use of Commercial Infant Food in the United Kingdom. Maternal and Paediatric Nutrition 1(1): 1-8

McDougall 2003

McDougall P. (2003) Weaning: parents' perceptions and practices. Community Practitioner 76(1): 25-8

McFadden 2014

McFadden, Alison, Green, Josephine M, Williams, Victoria et al. (2014) Can food vouchers improve nutrition and reduce health inequalities in low-income mothers and young children: a multi-method evaluation of the experiences of beneficiaries and practitioners of the Healthy Start programme in England. BMC public health 14: 148

McInnes 2013

McInnes, Rhona J, Hoddinott, Pat, Britten, Jane et al. (2013) Significant others, situations and infant feeding behaviour change processes: a serial qualitative interview study. BMC pregnancy and childbirth 13: 114

McSweeney 2016

McSweeney, Lorraine A, Rapley, Tim, Summerbell, Carolyn D et al. (2016) Perceptions of nursery staff and parent views of healthy eating promotion in preschool settings: an exploratory qualitative study. BMC public health 16(1): 841

Spyreli 2019

Spyreli E, McKinley MC, Allen-Walker V et al. (2019) "The one time you have control over what they eat": a qualitative exploration of mothers' practices to establish healthy eating behaviours during weaning. Nutrients 11: 562

Tang 2022

Tang, Tang, Wang, Wenmeng, Vazirian, Marjan et al. (2022) Designing for downsizing: Home-based barriers and facilitators to reduce portion sizes for children. Frontiers in psychology 13: 915228

Williams 2022

Williams, Lorraine; Warren, Emily; Knai, Cecile (2022) How involved are parents in their child's early years setting's food decisions and practices?. SSM. Qualitative research in health 2: 100142

Zhang 2019

Zhang X and Benton L (2019) The Association of Acculturation and Complementary Infant and Young Child Feeding Practices Among New Chinese Immigrant Mothers in England: A Mixed Methods Study. International Journal of Environmental Research and Public Health 16: 471-79

Other

SACN 2018

Scientific Advisory committee on Nutrition (SACN) Feeding in the first year of life: SACN report. Available from: https://www.gov.uk/government/publications/feeding-in-the-first-year-of-life-sacn-report (accessed 3 April 2024)

SACN 2023

Scientific Advisory committee on Nutrition (SACN) Feeding young children aged 1 to 5 years. Available from: https://www.gov.uk/government/publications/sacn-report-feeding-young-children-aged-1-to-5-years (accessed 3 April 2024)

1

Appendices

Appendix A Review protocols

Review protocol for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years in the following areas:
-folic acid supplements (including before pregnancy)
-vitamin supplements (including Healthy Start vitamins)
-healthy eating and drinking in pregnant women
-appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months
-healthy eating and drinking in children from 12 months to 5 years

Table 5: Review protocol

ID	Field	Content
0.	PROSPERO registration number	Not applicable
1.	Review title	Barriers and facilitators to increase the uptake of government advice
2.	Review question	What are the barriers and facilitators to increasing the uptake of government advice for women and families with children up to five years in the following areas: • folic acid supplements (including before pregnancy) (evidence review C) • vitamin supplements (including Healthy Start vitamins) (evidence review E) • healthy eating and drinking in pregnant women (evidence review I) • appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months (evidence review N) • healthy eating and drinking in children from 12 months to 5 years (evidence review O).
3.	Objective	To identify the barriers and facilitators to uptake of government advice in the following areas: • folic acid supplements (including before pregnancy) (evidence review C) • vitamin supplements (including Healthy Start vitamins) (evidence review E) • healthy eating and drinking in pregnant women (evidence review I) • appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months (evidence review N)

ID	Field	Content
		• healthy eating and drinking in children from 12 months to 5 years (evidence review O).
4.	Searches	The following databases will be searched: • MEDLINE • Embase • Emcare • CINAHL • PsycINFO Searches will be restricted by: • The same restrictions as in equivalent intervention reviews will be used: ○ none (C) ○ none (E) ○ 1970 (rationale: after 1970 there was an increase in the prevalence of obesity and substantial lifestyle and socio-economic changes) (I) ○ none (N) ○ none (O) • English language only • Human studies only Other searches: • Inclusion lists of systematic reviews The full search strategies for MEDLINE database will be published in the final review. For each search, the principal database search strategy is quality assured by a second information scientist using an adaptation of the PRESS 2015 Guideline Evidence-Based Checklist.
5.	Condition or domain being studied	Facilitators and barriers to increase government advice for families with children up to five years in the following areas: • **folic acid supplements (including before pregnancy) (C) :** ○ Uptake of low-dose (<1 mg daily); medium-dose folic (≥1 to <5 mg daily); high-dose (≥5 mg daily) folic acid supplementation in line with government advice https://www.nhs.uk/medicines/folic-acid/how-and-when-to-take-folic-acid/

ID	Field	Content
		• **vitamin supplements in pregnant and breastfeeding women (E) :** ○ Healthy start vitamins for pregnant and breastfeeding women (https://www.healthystart.nhs.uk/healthcare-professionals/ https://www.healthystart.nhs.uk/): ▪ The daily dose is 1 tablet, which contains: • 70 milligrams of vitamin C • 10 micrograms of vitamin D • 400 micrograms of folic acid ○ Vitamin A (https://www.nhs.uk/pregnancy/keeping-well/vitamins-supplements-and-nutrition/) ▪ Vitamin A (or retinol): Do not take cod liver oil or any supplements containing vitamin A (retinol) when you're pregnant. Too much vitamin A could harm your baby. Always check the label. ○ Vitamin C (https://www.nhs.uk/pregnancy/keeping-well/vitamins-supplements-and-nutrition/) ▪ Found in fruit and vegetables, a balanced diet can provide all the vitamin C pregnant women need ○ Vitamin D (https://www.nhs.uk/pregnancy/keeping-well/vitamins-supplements-and-nutrition/ https://www.nhs.uk/start4life/pregnancy/vitamins-and-supplements-pregnancy/) ▪ 10 mcg vitamin D daily during the winter months (October until the end of March). ○ those at higher risk of not getting enough vitamin D (not outdoors often, live in an institution like a care home, usually wear clothes that cover most of their skin when outdoors) should take daily 10 mcg vitamin D daily throughout the year. ○ people with black or brown skin may also not make enough vitamin D from sunlight, so should consider taking 10 mcg of vitamin D daily throughout the year. • **vitamin supplementation for babies and children up to 5 years in line with government advice (E):** ○ Healthy Start children's vitamins drops (from birth to 4 years) (https://www.healthystart.nhs.uk/) ▪ The daily dose is 5 drops, which contain: • vitamin A (233µg) • vitamin C (20mg)

ID	Field	Content
		• vitamin D (10µg) ○ vitamins for children (A, C, D) Vitamin D - NHS (www.nhs.uk) https://www.nhs.uk/start4life/baby/baby-vitamins/ https://www.nhs.uk/conditions/baby/weaning-and-feeding/vitamins-for-children/ ○ babies from birth to 1 year should have a daily supplement containing 8.5 to 10mcg of vitamin D throughout the year if they are: ▪ Breastfed ▪ Formula-fed and having <500 mls of formula a day, as infant formula is already fortified with vitamin D ○ all children aged 6 months to 5 years should be given vitamin supplements containing vitamins A, C and D every day (unless they are being formula fed with >500mls). • **healthy eating and drinking in pregnant women (I):** https://www.nhs.uk/start4life/pregnancy/healthy-eating-pregnancy/ • **appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months:** ○ introduce solid foods at around 6 months, alongside their usual breast milk or first infant formula. Weaning teaches the baby to move solid foods around their mouth, chew and swallow solid foods. Offer a variety of foods, allow plenty of time, go at the baby's pace and stop when they show signs they've had enough. (https://www.nhs.uk/start4life/weaning/ https://www.nhs.uk/conditions/baby/weaning-and-feeding/ SACN_report_on_Feeding_in_the_First_Year_of_Life.pdf (publishing.service.gov.uk) • **healthy eating and drinking in children from 12 months to years:** ○ should be having 3 meals a day, also may need 2 heathy weaning snacks in between. No need salt or sugar added to their food or cooking water. https://www.nhs.uk/start4life/weaning/what-to-feed-your-baby/12-months/
6.	Population	Inclusion: • women during the preconception period and first 12 weeks of a single or multiple pregnancy (in relation to folic acid supplementation only • breastfeeding women (in relation to uptake of vitamins only

ID	Field	Content
		• women during a single or multiple pregnancy (in relation to uptake of vitamins and healthy eating a drinking in pregnancy women only) • parents or carers of babies and children up to 5 (in relation to uptake of vitamins only) • parent or carers of babies up to 12 months (in relation to introduction to solids (complementary feeding only)) • parents or carers of children between 12 months and 5 years (in relation to healthy eating and drinking only)
7.	Phenomenon of interest	Barriers to, and facilitators for increasing uptake of government advice. Themes will be identified by the available literature. The committee identified the following potential themes (however, they are aware that not all of these themes may be found in the literature and that additional themes may be identified): • thoughts, views and perceptions of women or parents/carers • issues relating to acceptability • issues relating to accessibility • issues relating to mis-information or a lack of information and communication of information, including food marketing and other commercial determinants • women/parent/carer thoughts on discourse, ethnic and cultural attitudes to vitamin supplementation and healthy eating • acceptability and misinformation • motivational factors, including child characteristics.
8.	Comparator	Not applicable as this is a qualitative review
9.	Types of study to be included	• Systematic reviews of qualitative studies • Studies reporting data gathered through semi-structured and structured interviews, focus groups, observations. Note: Mixed methods studies will be included but only qualitative data will be extracted and risk of bias assessed.
10.	Other exclusion criteria	Population:

ID	Field	Content
		• preterm and low-birth-weight babies (defined by the World Health Organization as a birth weight less than 2,500 g). *If any study or systematic review includes <1/3 of the excluded population, it will be considered for inclusion but, if included, the evidence will be downgraded for applicability.* <u>Setting:</u> • studies other than those conducted in the United Kingdom as the government advice in other countries might not be representative of that in the UK and attitudes in other countries may also differ significantly. *Systematic reviews or studies that include evidence from both the United Kingdom and non-United Kingdom, will only be included if the source of themes and evidence from the United Kingdom can be clearly established. Studies mixing cohorts from the United Kingdom and other countries will be excluded.* <u>Methodological details and language:</u> • studies that do not include methodological details will not be included as they do not provide sufficient information to evaluate risk of bias/ study quality • studies using quantitative methods only (including surveys that report only quantitative data). • conference abstracts will not be included because these do not typically have sufficient information to allow full critical appraisal. • non-English language studies.
11.	Context	The population of this guideline may overlap with the population of women included in other NICE guidelines (such as postnatal care, antenatal care, intrapartum care, pregnancy and complex social factors or obesity prevention).
12.	Primary outcomes (critical outcomes)	Outcomes, not applicable as this is a qualitative review. For anticipated themes, see row 7 above. 'Phenomenon of interest'.
13.	Secondary outcomes (important outcomes)	Outcomes, not applicable as this is a qualitative review. For anticipated themes, see row 7 above. 'Phenomenon of interest'.
14.	Data extraction (selection and coding)	• All references identified by the searches and from other sources will be uploaded into EPPI and de-duplicated. Titles and abstracts of the retrieved citations will be screened to identify studies that potentially meet the inclusion criteria outlined in the review protocol. • Duplicate screening will not be undertaken for this question.

ID	Field	Content
		• Full versions of the selected studies will be obtained for assessment. Studies that fail to meet the inclusion criteria once the full version has been checked will be excluded at this stage. Each study excluded after checking the full version will be listed, along with the reason for its exclusion. • A standardised form will be used to extract data from studies, including study reference, research question, theoretical approach, data collection and analysis methods used, participant characteristics, second-order themes, and relevant first-order themes (such as supporting quotes). One reviewer will extract relevant data into a standardised form, and this will be quality assessed by a senior reviewer.
15.	Risk of bias (quality) assessment	Quality assessment of individual studies will be performed using the following checklists: • CASP for systematic reviews of qualitative studies • CASP checklist for qualitative studies The quality assessment will be performed by one reviewer and this will be quality assessed by a senior reviewer.
16.	Strategy for data synthesis	**Qualitative review:** The GRADE-CERQual (Confidence in the Evidence from Reviews of Qualitative research; Lewin 2015) approach will be used to summarise the confidence in qualitative evidence. The overall confidence in evidence about each theme or sub-theme will be rated on four dimensions: methodological limitations, applicability, coherence and adequacy of data. Methodological limitations refer to the extent to which there were problems in the design or conduct of the studies and will be assessed with the Critical Appraisal Skills Programme (CASP) checklist for qualitative studies or systematic reviews of qualitative studies. Applicability of evidence will be assessed by determining the extent to which the body of evidence from the primary studies are applicable to the context of the review question. Coherence of findings will be assessed by examining the clarity of the data. Adequacy of data will be assessed by looking at the degree of richness and quantity of findings.
17.	Analysis of subgroups	Facilitators and barriers to increasing the uptake of government advice for women and children up to five in the following areas will be reviewed and analysed separately: • folic acid supplements (including before pregnancy) (C) • vitamin supplements (including Healthy Start vitamins) (E) • healthy eating and drinking in pregnant women (I) • appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months (N) • healthy eating and drinking in children from 12 months to 5 years (O). Within each of the areas identified above, the views and experiences of the following groups will be reviewed and analysed separately: • women

ID	Field	Content	
		• men • parents • carers	
18.	Type and method of review	☐	Intervention
		☐	Diagnostic
		☐	Prognostic
		☒	Qualitative
		☐	Epidemiologic
		☐	Service Delivery
		☐	Other (please specify)
19.	Language	English	
20.	Country	England	
21.	Anticipated or actual start date	Not applicable	
22.	Anticipated completion date	Not applicable	
23.	Stage of review at time of this submission	**Review stage**	**Started** / **Completed**
		Preliminary searches	☐ / ☑
		Piloting of the study selection process	☐ / ☑
		Formal screening of search results against eligibility criteria	☐ / ☑
		Data extraction	☐ / ☑
		Risk of bias (quality) assessment	☐ / ☑
		Data analysis	☐ / ☑
24.	Named contact	**5a. Named contact** National Institute for Health and Care Excellence **5b. Named contact e-mail** mandcnutrition@nice.org.uk	

ID	Field	Content
		5c. Organisational affiliation of the review National Institute for Health and Care Excellence (NICE)
25.	Review team members	From the National Institute for Health and Care Excellence: • NGA Senior Systematic Reviewer • NGA Systematic Reviewer
26.	Funding sources/sponsor	This systematic review is being completed by the National Guideline Alliance which receives funding from NICE.
27.	Conflicts of interest	All guideline committee members and anyone who has direct input into NICE guidelines (including the evidence review team and expert witnesses) must declare any potential conflicts of interest in line with NICE's code of practice for declaring and dealing with conflicts of interest. Any relevant interests, or changes to interests, will also be declared publicly at the start of each guideline committee meeting. Before each meeting, any potential conflicts of interest will be considered by the guideline committee Chair and a senior member of the development team. Any decisions to exclude a person from all or part of a meeting will be documented. Any changes to a member's declaration of interests will be recorded in the minutes of the meeting. Declarations of interests will be published with the final guideline.
28.	Collaborators	Development of this systematic review will be overseen by an advisory committee who will use the review to inform the development of evidence-based recommendations in line with section 3 of Developing NICE guidelines: the manual. Members of the guideline committee are available on the NICE website: https://www.nice.org.uk/guidance/indevelopment/gid-ng10191
29.	Other registration details	None
30.	Reference/URL for published protocol	Not applicable
31.	Dissemination plans	NICE may use a range of different methods to raise awareness of the guideline. These include standard approaches such as: • notifying registered stakeholders of publication • publicising the guideline through NICE's newsletter and alerts • issuing a press release or briefing as appropriate, posting news articles on the NICE website, using social media channels, and publicising the guideline within NICE.
32.	Keywords	
33.	Details of existing review of same topic by same authors	Not applicable
34.	Current review status	☐ Ongoing

ID	Field	Content	
		☐	Completed but not published
		☒	Completed and published
		☐	Completed, published and being updated
		☐	Discontinued
35.	Additional information	None	
36.	Details of final publication	www.nice.org.uk	

CDSR: Cochrane Database of Systematic Reviews; CENTRAL: Cochrane Central Register of Controlled Trials; DARE: Database of Abstracts of Reviews of Effects; GRADE-CERQual: Grading of Recommendations Assessment, Development and Evaluation ((Confidence in the Evidence from Reviews of Qualitative research); HTA: Health Technology Assessment; NGA: National Guideline Alliance; NHS: National health service; NICE: National Institute for Health and Care Excellence

Appendix B Literature search strategies

Literature search strategies for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

Database: Medline

Date of last search: 06/10/2023

#	Searches
1	exp Parents/
2	family relations/ or exp maternal behavior/ or exp parent-child relations/ or parenting/ or paternal behavior/ or Infant Care/
3	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).tw,kf.
4	exp Child/ or exp Infant/ or Minors/ or exp Pediatrics/ or pediatric nursing/
5	(child* or baby or babies or boy? or girl? or infan* or juvenile? or kid? or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? or toddler*).tw,kf.
6	(child* or baby or babies or infan* or juvenile? or kindergar* or p?ediatric* or schoolchild* or school age?).jw,nw.
7	or/1-6
8	Weaning/ or Infant Food/
9	Child Nutritional Physiological Phenomena/ or Maternal Nutritional Physiological Phenomena/ or Infant Nutritional Physiological Phenomena/
10	((complementary or supplement* or introduc*) adj2 (feed* or food*)).tw,kf.
11	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).tw,kf.
12	wean*.tw,kf.
13	or/8-12
14	Diet/ or Diet, Healthy/
15	Feeding Behavior/
16	Nutritive Value/ or Nutritional Requirements/ or Energy Intake/
17	fruit/ or vegetables/
18	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).tw,kf.
19	((food* or nutriti* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calor* or fruit? or vegetable?) adj4 (intake or consum* or requir* or value* or measur* or pattern* or track*)).tw,kf.
20	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).tw,kf.
21	family food*.tw,kf.
22	sodium, dietary/ or sodium chloride, dietary/
23	artificially sweetened beverages/ or sugar-sweetened beverages/ or carbonated beverages/
24	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*).tw,kf.
25	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).tw,kf.
26	or/14-25
27	13 or 26
28	7 and 27
29	"treatment adherence and compliance"/ or Guideline Adherence/
30	exp "Patient Acceptance of Health Care"/
31	exp Nutrition Policy/
32	(treatment* or guid* or nutriti* or diet* or supplement* or recommend* or policy or policies or requir* or allow* or protocol*).ti.

#	Searches
33	(guid* or recommend* or policy* or policies* or protocol*).ab. /freq=2
34	or/29-33
35	28 and 34
36	(barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact* or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or non comply* or noncomplian* or non complian* or ignor* or inconvenien*).ti.
37	(barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact* or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or non comply* or noncomplian* or non complian* or ignor* or inconvenien*).ab. /freq=2
38	(facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*).ti.
39	(facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*).ab. /freq=2
40	*Stress, Psychological/ or *Financial Stress/
41	*Adaptation, Psychological/
42	*Emotions/
43	*Anxiety/
44	*Fear/
45	*Motivation/ or *Intention/
46	*attitude to health/ or *health knowledge, attitudes, practice/ or exp *patient satisfaction/ or *treatment refusal/
47	(prefer* or experience* or value* or perspective* or perception* or perceiv* or expectation* or choice* or choos* or willingness or attitud* or know* or belief* or believ* or opinion* or understand* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or aware* or priorit*).ti.
48	*Consumer Behavior/
49	exp *Communication/
50	*education/ or *teaching/
51	*health education/ or exp *consumer health information/ or exp *health promotion/ or exp *patient education as topic/
52	*Health Behavior/
53	*decision making/ or *choice behavior/
54	(advis* or advice* or counsel* or educat* or communicat* or inform* or miscommunicat* or misinform* or learn* or lesson* or material* or resource* or teach* or tool* or train* or tutorial* or knowledg*).ti.
55	exp *Commerce/
56	*capitalism/
57	(commerc* or capitalis* or market* or telemarket* or advertis* or corporate* or corporation* or consumer*).ti.
58	exp *Population Groups/
59	exp *Culture/
60	(race* or racial* or ethnic* or cultur* or religio* or custom* or ancest* or minorit* or multiracial* or multiethnic* or multicultural*).ti.
61	*"ethnic and racial minorities"/ or *minority groups/ or *Minority Health/ or exp *social environment/ or exp *socioeconomic factors/
62	exp *"Health Disparate, Minority and Vulnerable Populations"/
63	*"Social Determinants of Health"/
64	(communit* or environment* or social* or socioeconom* or econom* or demograph* or sociodemograph* or neighbo?rhood* or poverty or impoverish* or hardship* or privation* or income* or depriv* or financ*).ti.
65	*Developmental Disabilities/
66	*Child Development/
67	*Growth Disorders/

#	Searches
68	*Failure to Thrive/
69	*feeding behavior/ or *food fussiness/ or *food preferences/
70	((food or feed* or diet* or eat*) adj2 (behav* or prefer* or fuss* or habit* or picky or refus* or avers*)).ti.
71	((growth or grow* or develop*) adj2 (disorder* or deviat* or disabilit* or delay* or retard* or stunt* or faltering or substandard or diminish* or promot* or catchup or "catch* up" or syndrom* or problem* or milestone*)).ti.
72	"failure to thrive".ti.
73	*Premature Birth/
74	((premature* or preterm) adj2 (child* or baby or babies or infan* or neonat* or newborn? or p?ediatric*)).ti.
75	or/36-74
76	35 and 75
77	animals/ not humans/
78	exp Animals, Laboratory/
79	exp Animal Experimentation/
80	exp Models, Animal/
81	exp Rodentia/
82	(rat or rats or rodent* or mouse or mice).ti.
83	or/77-82
84	76 not 83
85	limit 84 to English language
86	ANTHROPOLOGY, CULTURAL/ or CLUSTER ANALYSIS/ or FOCUS GROUPS/ or GROUNDED THEORY/ or HEALTH CARE SURVEYS/ or interview.pt. or "INTERVIEWS AS TOPIC"/ or NARRATION/ or NURSING METHODOLOGY RESEARCH/ or OBSERVATION/ or "PERSONAL NARRATIVES AS TOPIC"/ or PERSONAL NARRATIVE/ or QUALITATIVE RESEARCH/ or "SURVEYS AND QUESTIONNAIRES"/ or SAMPLING STUDIES/ or TAPE RECORDING/ or VIDEODISC RECORDING/
87	(qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes).tw.
88	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
89	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
90	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
91	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.
92	or/86-91
93	85 and 92
94	exp United Kingdom/
95	(national health service* or nhs*).ti,ab,in.
96	(english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab.
97	(gb or "g.b." or britain* or (british* not "british columbia") or uk or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or ((wales or "south wales") not "new south wales") or welsh*).ti,ab,jw,in.
98	(bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambridge not (massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or ely or "ely's" or exeter or "exeter's" or gloucester or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or leeds* or leicester or "leicester's" or (lincoln not nebraska*) or ("lincoln's" not nebraska*) or (liverpool not (new south wales* or nsw)) or ("liverpool's" not (new south wales* or nsw)) or ((london not (ontario* or ont or toronto*)) or ("london's" not (ontario* or ont or toronto*)) or manchester or "manchester's" or (newcastle not (new south wales* or nsw)) or ("newcastle's" not (new south wales* or nsw)) or norwich or "norwich's" or nottingham or "nottingham's" or oxford or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston or "preston's" or ripon or "ripon's" or salford or "salford's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton or "southampton's" or st albans or stoke or "stoke's" or sunderland or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or wells or westminster or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts* or boston* or harvard*)) or ("worcester's" not (massachusetts* or boston* or harvard*)) or (york not

#	Searches
	("new york*" or ny or ontario* or ont or toronto*)) or ("york's" not ("new york*" or ny or ontario* or ont or toronto*))))).ti,ab,in.
99	(bangor or "bangor's" or cardiff or "cardiff's" or newport or "newport's" or st asaph or "st asaph's" or st davids or swansea or "swansea's").ti,ab,in.
100	(aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or (perth not australia*) or ("perth's" not australia*) or stirling or "stirling's").ti,ab,in.
101	(armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or derry or "derry's" or newry or "newry's").ti,ab,in.
102	or/94-101
103	(exp africa/ or exp americas/ or exp antarctic regions/ or exp arctic regions/ or exp asia/ or exp australia/ or exp oceania/) not (exp United Kingdom/ or europe/)
104	102 not 103
105	93 and 104
106	limit 105 to ed=20120101-20231031
107	limit 105 to dt=20120101-20231031
108	106 or 107

Database: Embase

Date of last search: 06/10/2023

#	Searches
1	exp parent/
2	family relation/ or exp child parent relation/ or infant care/
3	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).tw,kf.
4	child/ or exp infant/ or preschool child/ or school child/ or toddler/ or "minor (person)"/
5	pediatrics/ or child psychiatry/ or pediatric emergency medicine/ or pediatric nursing/
6	(child* or baby or babies or boy? or girl? or infan* or juvenile? or kid? or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? or toddler*).tw,kf.
7	(child* or baby or babies or infan* or juvenile? or kindergar* or p?ediatric* or schoolchild* or school age?).jw.
8	or/1-7
9	weaning/ or infant feeding/ or baby food/
10	complementary feeding/
11	child nutrition/ or maternal nutrition/ or infant nutrition/
12	((complementary or supplement* or introduc*) adj2 (feed* or food*)).tw,kf.
13	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).tw,kf.
14	wean*.tw,kf.
15	or/9-14
16	diet/ or healthy diet/
17	feeding behavior/ or eating habit/ or dietary pattern/
18	nutritional value/
19	nutritional requirement/
20	food intake/ or energy consumption/
21	dietary intake/ or caloric intake/ or exp nutrient intake/
22	fruit/ or vegetable/
23	vegetable consumption/
24	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).tw,kf.
25	((food* or nutriti* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calor* or fruit? or vegetable?) adj4 (intake or consum* or requir* or value* or measur* or pattern* or track*)).tw,kf.
26	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).tw,kf.
27	family food*.tw,kf.
28	sodium intake/ or salt intake/ or sodium restriction/ or high sodium intake/

#	Searches
29	artificially sweetened beverage/ or sweetened beverage/ or sugar-sweetened beverage/ or sweetening agent/
30	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*).tw,kf.
31	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).tw,kf.
32	or/16-31
33	15 or 32
34	8 and 33
35	patient attitude/ or exp patient compliance/ or patient engagement/ or patient participation/
36	protocol compliance/
37	nutrition policy/
38	(treatment* or guid* or nutriti* or diet* or supplement* or recommend* or policy or policies or requir* or allow* or protocol*).ti.
39	(guid* or recommend* or policy* or policies* or protocol*).ab. /freq=2
40	or/35-39
41	34 and 40
42	(barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact* or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or non comply* or noncomplian* or non complian* or ignor* or inconvenien*).ti.
43	(barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact* or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or non comply* or noncomplian* or non complian* or ignor* or inconvenien*).ab. /freq=2
44	(facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*).ti.
45	(facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*).ab. /freq=2
46	*mental stress/
47	*financial stress/
48	*psychological adjustment/
49	*emotion/
50	*anxiety/
51	*fear/
52	*motivation/
53	*behavior/
54	*attitude to health/
55	*patient preference/ or *patient satisfaction/ or *treatment refusal/
56	(prefer* or experience* or value* or perspective* or perception* or perceiv* or expectation* or choice* or choos* or willingness or attitud* or know* or belief* or believ* or opinion* or understand* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or aware* or priorit*).ti.
57	*consumer attitude/
58	exp *interpersonal communication/
59	*education/
60	*teaching/
61	*health education/ or exp *health literacy/ or exp *health promotion/ or *parenting education/ or *patient education/
62	*consumer health information/
63	*health behavior/
64	*decision making/ or *patient decision making/

#	Searches
65	(advis* or advice* or counsel* or educat* or communicat* or inform* or miscommunicat* or misinform* or learn* or lesson* or material* or resource* or teach* or tool* or train* or tutorial* or knowledg*).ti.
66	*commercial phenomena/
67	*capitalism/
68	(commerc* or capitalis* or market* or telemarket* or advertis* or corporate* or corporation* or consumer*).ti.
69	exp *population group/
70	*cultural anthropology/
71	(race* or racial* or ethnic* or cultur* or religio* or custom* or ancest* or minorit* or multiracial* or multiethnic* or multicultural*).ti.
72	*minority health/
73	exp *social environment/
74	exp *socioeconomics/
75	exp *vulnerable population/
76	*"social determinants of health"/
77	(communit* or environment* or social* or socioeconom* or econom* or demograph* or sociodemograph* or neighbo?rhood* or poverty or impoverish* or hardship* or privation* or income* or depriv* or financ*).ti.
78	*developmental disorder/ or *developmental delay/
79	*child development/
80	*growth disorder/ or *failure to thrive/
81	*feeding behavior/ or *food fussiness/ or *food preference/
82	((food or feed* or diet* or eat*) adj2 (behav* or prefer* or fuss* or habit* or picky or refus* or avers*)).ti.
83	((growth or grow* or develop*) adj2 (disorder* or deviat* or disabilit* or delay* or retard* or stunt* or faltering or substandard or diminish* or promot* or catchup or "catch* up" or syndrom* or problem* or milestone*)).ti.
84	"failure to thrive".ti.
85	*prematurity/
86	((premature* or preterm) adj2 (child* or baby or babies or infan* or neonat* or newborn? or p?ediatric*)).ti.
87	or/42-86
88	41 and 87
89	animal/ not human/
90	nonhuman/
91	exp Animal Experiment/
92	exp Experimental Animal/
93	animal model/
94	exp Rodent/
95	(rat or rats or rodent* or mouse or mice).ti.
96	or/89-95
97	88 not 96
98	(conference abstract* or conference review or conference paper or conference proceeding).db,pt,su.
99	97 not 98
100	limit 99 to English language
101	CLUSTER ANALYSIS/ or CONTENT ANALYSIS/ or DISCOURSE ANALYSIS/ or ETHNOGRAPHY/ or GROUNDED THEORY/ or HEALTH CARE SURVEY/ or exp INTERVIEWS/ or NARRATIVE/ or NURSING METHODOLOGY RESEARCH/ or OBSERVATION/ or PERSONAL EXPERIENCE/ or PHENOMENOLOGY/ or QUALITATIVE RESEARCH/ or QUESTIONNAIRE/ or exp RECORDING/
102	(qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes).tw.
103	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
104	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
105	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
106	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.

#	Searches
107	or/101-106
108	100 and 107
109	exp United Kingdom/
110	(national health service* or nhs*).ti,ab,in,ad.
111	(english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab.
112	(gb or "g.b." or britain* or (british* not "british columbia") or uk or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or ((wales or "south wales") not "new south wales") or welsh*).ti,ab,jx,in,ad.
113	(bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambridge not (massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or ely or "ely's" or exeter or "exeter's" or gloucester or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or leeds* or leicester or "leicester's" or (lincoln not nebraska*) or ("lincoln's" not nebraska*) or (liverpool not (new south wales* or nsw)) or ("liverpool's" not (new south wales* or nsw)) or ((london not (ontario* or ont or toronto*)) or ("london's" not (ontario* or ont or toronto*)) or manchester or "manchester's" or (newcastle not (new south wales* or nsw)) or ("newcastle's" not (new south wales* or nsw)) or norwich or "norwich's" or nottingham or "nottingham's" or oxford or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston or "preston's" or ripon or "ripon's" or salford or "salford's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton or "southampton's" or st albans or stoke or "stoke's" or sunderland or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or wells or westminster or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts* or boston* or harvard*)) or ("worcester's" not (massachusetts* or boston* or harvard*)) or (york not ("new york*" or ny or ontario* or ont or toronto*)) or ("york's" not ("new york*" or ny or ontario* or ont or toronto*))))).ti,ab,in,ad.
114	(bangor or "bangor's" or cardiff or "cardiff's" or newport or "newport's" or st asaph or "st asaph's" or st davids or swansea or "swansea's").ti,ab,in,ad.
115	(aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or (perth not australia*) or ("perth's" not australia*) or stirling or "stirling's").ti,ab,in,ad.
116	(armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or derry or "derry's" or newry or "newry's").ti,ab,in,ad.
117	or/109-116
118	(exp "arctic and antarctic"/ or exp oceanic regions/ or exp western hemisphere/ or exp africa/ or exp asia/) not (exp united kingdom/ or europe/)
119	117 not 118
120	108 and 119
121	limit 120 to dc=20120101-20231031

Database: Emcare

Date of last search: 06/10/2023

#	Searches
1	exp parent/
2	family relation/ or exp child parent relation/ or infant care/
3	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).tw,kf.
4	child/ or exp infant/ or preschool child/ or school child/ or toddler/ or "minor (person)"/
5	pediatrics/ or child psychiatry/ or pediatric emergency medicine/ or pediatric nursing/
6	(child* or baby or babies or boy? or girl? or infan* or juvenile? or kid? or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? or toddler*).tw,kf.
7	(child* or baby or babies or infan* or juvenile? or kindergar* or p?ediatric* or schoolchild* or school age?).jw.
8	or/1-7
9	weaning/ or infant feeding/ or baby food/
10	complementary feeding/
11	child nutrition/ or maternal nutrition/ or infant nutrition/
12	((complementary or supplement* or introduc*) adj2 (feed* or food*)).tw,kf.

#	Searches
13	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).tw,kf.
14	wean*.tw,kf.
15	or/9-14
16	diet/ or healthy diet/
17	feeding behavior/ or eating habit/ or dietary pattern/
18	nutritional value/
19	nutritional requirement/
20	food intake/ or energy consumption/
21	dietary intake/ or caloric intake/ or exp nutrient intake/
22	fruit/ or vegetable/
23	vegetable consumption/
24	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).tw,kf.
25	((food* or nutriti* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calor* or fruit? or vegetable?) adj4 (intake or consum* or requir* or value* or measur* or pattern* or track*)).tw,kf.
26	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).tw,kf.
27	family food*.tw,kf.
28	sodium intake/ or salt intake/ or sodium restriction/ or high sodium intake/
29	artificially sweetened beverage/ or sweetened beverage/ or sugar-sweetened beverage/ or sweetening agent/
30	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*).tw,kf.
31	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).tw,kf.
32	or/16-31
33	15 or 32
34	8 and 33
35	patient attitude/ or exp patient compliance/ or patient engagement/ or patient participation/
36	protocol compliance/
37	nutrition policy/
38	(treatment* or guid* or nutriti* or diet* or supplement* or recommend* or policy or policies or requir* or allow* or protocol*).ti.
39	(guid* or recommend* or policy* or policies* or protocol*).ab. /freq=2
40	or/35-39
41	34 and 40
42	(barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact* or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or non comply* or noncomplian* or non complian* or ignor* or inconvenien*).ti.
43	(barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact* or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or non comply* or noncomplian* or non complian* or ignor* or inconvenien*).ab. /freq=2
44	(facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*).ti.
45	(facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*).ab. /freq=2
46	*mental stress/
47	*financial stress/
48	*psychological adjustment/

#	Searches
49	*emotion/
50	*anxiety/
51	*fear/
52	*motivation/
53	*behavior/
54	*attitude to health/
55	*patient preference/ or *patient satisfaction/ or *treatment refusal/
56	(prefer* or experience* or value* or perspective* or perception* or perceiv* or expectation* or choice* or choos* or willingness or attitud* or know* or belief* or believ* or opinion* or understand* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or aware* or priorit*).ti.
57	*consumer attitude/
58	exp *interpersonal communication/
59	*education/
60	*teaching/
61	*health education/ or exp *health literacy/ or exp *health promotion/ or *parenting education/ or *patient education/
62	*consumer health information/
63	*health behavior/
64	*decision making/ or *patient decision making/
65	(advis* or advice* or counsel* or educat* or communicat* or inform* or miscommunicat* or misinform* or learn* or lesson* or material* or resource* or teach* or tool* or train* or tutorial* or knowledg*).ti.
66	*commercial phenomena/
67	*capitalism/
68	(commerc* or capitalis* or market* or telemarket* or advertis* or corporate* or corporation* or consumer*).ti.
69	exp *population group/
70	*cultural anthropology/
71	(race* or racial* or ethnic* or cultur* or religio* or custom* or ancest* or minorit* or multiracial* or multiethnic* or multicultural*).ti.
72	*minority health/
73	exp *social environment/
74	exp *socioeconomics/
75	exp *vulnerable population/
76	*"social determinants of health"/
77	(communit* or environment* or social* or socioeconom* or econom* or demograph* or sociodemograph* or neighbo?rhood* or poverty or impoverish* or hardship* or privation* or income* or depriv* or financ*).ti.
78	*developmental disorder/ or *developmental delay/
79	*child development/
80	*growth disorder/ or *failure to thrive/
81	*feeding behavior/ or *food fussiness/ or *food preference/
82	((food or feed* or diet* or eat*) adj2 (behav* or prefer* or fuss* or habit* or picky or refus* or avers*)).ti.
83	((growth or grow* or develop*) adj2 (disorder* or deviat* or disabilit* or delay* or retard* or stunt* or faltering or substandard or diminish* or promot* or catchup or "catch* up" or syndrom* or problem* or milestone*)).ti.
84	"failure to thrive".ti.
85	*prematurity/
86	((premature* or preterm) adj2 (child* or baby or babies or infan* or neonat* or newborn? or p?ediatric*)).ti.
87	or/42-86
88	41 and 87
89	animal/ not human/
90	nonhuman/
91	exp Animal Experiment/
92	exp Experimental Animal/
93	animal model/
94	exp Rodent/

#	Searches
95	(rat or rats or rodent* or mouse or mice).ti.
96	or/89-95
97	88 not 96
98	(conference abstract* or conference review or conference paper or conference proceeding).db,pt,su.
99	97 not 98
100	limit 99 to English language
101	CLUSTER ANALYSIS/ or CONTENT ANALYSIS/ or DISCOURSE ANALYSIS/ or ETHNOGRAPHY/ or GROUNDED THEORY/ or HEALTH CARE SURVEY/ or exp INTERVIEWS/ or NARRATIVE/ or NURSING METHODOLOGY RESEARCH/ or OBSERVATION/ or PERSONAL EXPERIENCE/ or PHENOMENOLOGY/ or QUALITATIVE RESEARCH/ or QUESTIONNAIRE/ or exp RECORDING/
102	(qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes).tw.
103	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
104	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
105	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
106	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.
107	or/101-106
108	100 and 107
109	exp United Kingdom/
110	(national health service* or nhs*).ti,ab,in,ad.
111	(english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab.
112	(gb or "g.b." or britain* or (british* not "british columbia") or uk or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or ((wales or "south wales") not "new south wales") or welsh*).ti,ab,jx,in,ad.
113	(bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambridge not (massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or ely or "ely's" or exeter or "exeter's" or gloucester or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or leeds* or leicester or "leicester's" or (lincoln not nebraska*) or ("lincoln's" not nebraska*) or (liverpool not (new south wales* or nsw)) or ("liverpool's" not (new south wales* or nsw)) or ((london not (ontario* or ont or toronto*)) or ("london's" not (ontario* or ont or toronto*)) or manchester or "manchester's" or (newcastle not (new south wales* or nsw)) or ("newcastle's" not (new south wales* or nsw)) or norwich or "norwich's" or nottingham or "nottingham's" or oxford or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston or "preston's" or ripon or "ripon's" or salford or "salford's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton or "southampton's" or st albans or stoke or "stoke's" or sunderland or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or wells or westminster or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts* or boston* or harvard*)) or ("worcester's" not (massachusetts* or boston* or harvard*)) or (york not ("new york*" or ny or ontario* or ont or toronto*)) or ("york's" not ("new york*" or ny or ontario* or ont or toronto*))))).ti,ab,in,ad.
114	(bangor or "bangor's" or cardiff or "cardiff's" or newport or "newport's" or st asaph or "st asaph's" or st davids or swansea or "swansea's").ti,ab,in,ad.
115	(aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or (perth not australia*) or ("perth's" not australia*) or stirling or "stirling's").ti,ab,in,ad.
116	(armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or derry or "derry's" or newry or "newry's").ti,ab,in,ad.
117	or/109-116
118	(exp "arctic and antarctic"/ or exp oceanic regions/ or exp western hemisphere/ or exp africa/ or exp asia/) not (exp united kingdom/ or europe/)
119	117 not 118
120	108 and 119
121	limit 120 to dc=20120101-20231031

Database: PsycINFO

Date of last search: 06/10/2023

#	Searches
1	parents/
2	Family Relations/
3	exp parent child relations/
4	exp parenting/
5	child care/
6	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).ti,ab,id.
7	pediatrics/
8	(child* or baby or babies or boy? or girl? or infan* or juvenile? or kid? or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? or toddler*).ti,ab,id.
9	(child* or baby or babies or infan* or juvenile? or kindergar* or p?ediatric* or schoolchild* or school age?).jx.
10	or/1-9
11	weaning/
12	physiological processes/
13	((complementary or supplement* or introduc*) adj2 (feed* or food*)).ti,ab,id.
14	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).ti,ab,id.
15	wean*.ti,ab,id.
16	or/11-15
17	exp diets/ or healthy eating/
18	exp eating behavior/
19	Nutrition/
20	Ingestion/
21	Food/
22	((food* or feed* or diet* or nutrition* or nutritive or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).ti,ab,id.
23	((food* or nutriti* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calor* or fruit? or vegetable?) adj4 (intake or consum* or requir* or value* or measur* or pattern* or track*)).ti,ab,id.
24	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).ti,ab,id.
25	family food*.ti,ab,id.
26	Sodium/
27	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or candies or chocolate* or sweet* or confection*).ti,ab,id.
28	exp "beverages (nonalcoholic)"/
29	water intake/
30	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).ti,ab,id.
31	or/17-30
32	16 or 31
33	10 and 32
34	exp Compliance/
35	health care policy/
36	Client Attitudes/
37	(treatment* or guid* or nutriti* or diet* or supplement* or recommend* or policy or policies or requir* or allow* or protocol*).ti.
38	(guid* or recommend* or policy* or policies* or protocol*).ab. /freq=2
39	or/34-38
40	33 and 39
41	(barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact*

#	Searches
	or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or non comply* or noncomplian* or non complian* or ignor* or inconvenien*).ti.
42	(barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact* or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or non comply* or noncomplian* or non complian* or ignor* or inconvenien*).ab. /freq=2
43	(facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*).ti.
44	(facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*).ab. /freq=2
45	*psychological stress/
46	*financial strain/
47	*coping behavior/
48	*Emotions/
49	*Anxiety/
50	*Fear/
51	*Motivation/ or *intention/
52	*childrearing attitudes/ or *health attitudes/ or exp *parental attitudes/
53	*health knowledge/ or *health awareness/ or *health behavior/
54	*client satisfaction/
55	*treatment barriers/ or exp *health care utilization/ or *treatment refusal/
56	(prefer* or experience* or value* or perspective* or perception* or perceiv* or expectation* or choice* or choos* or willingness or attitud* or know* or belief* or believ* or opinion* or understand* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or aware* or priorit*).ti.
57	*Consumer Behavior/
58	exp *communication/
59	*Education/
60	*Teaching/
61	*health education/ or *health literacy/ or *health promotion/
62	*health information/
63	*client education/
64	*decision making/ or *choice behavior/
65	(advis* or advice* or counsel* or educat* or communicat* or inform* or miscommunicat* or misinform* or learn* or lesson* or material* or resource* or teach* or tool* or train* or tutorial* or knowledg*).ti.
66	exp *commerce/
67	*capitalism/
68	(commerc* or capitalis* or market* or telemarket* or advertis* or corporate* or corporation* or consumer*).ti.
69	exp *"racial and ethnic groups"/
70	exp *sociocultural factors/
71	*psychosocial factors/
72	(race* or racial* or ethnic* or cultur* or religio* or custom* or ancest* or minorit* or multiracial* or multiethnic* or multicultural*).ti.
73	*minority groups/
74	*health disparities/ or *cross cultural differences/
75	*racial disparities/ or *"racial and ethnic differences"/
76	exp *social environments/
77	exp *socioeconomic factors/
78	*at risk populations/

#	Searches
79	(communit* or environment* or social* or socioeconom* or econom* or demograph* or sociodemograph* or neighbo?rhood* or poverty or impoverish* or hardship* or privation* or income* or depriv* or financ*).ti.
80	*developmental disabilities/
81	exp *childhood development/
82	exp *Delayed Development/
83	*food intake/ or *eating behavior/ or *dietary restraint/ or *emotional eating/ or *food refusal/ or *healthy eating/
84	*food preferences/
85	*eating attitudes/
86	((food or feed* or diet* or eat*) adj2 (behav* or prefer* or fuss* or habit* or picky or refus* or avers*)).ti.
87	((growth or grow* or develop*) adj2 (disorder* or deviat* or disabilit* or delay* or retard* or stunt* or faltering or substandard or diminish* or promot* or catchup or "catch* up" or syndrom* or problem* or milestone*)).ti.
88	"failure to thrive".ti.
89	*premature birth/
90	((premature* or preterm) adj2 (child* or baby or babies or infan* or neonat* or newborn? or p?ediatric*)).ti.
91	or/41-90
92	40 and 91
93	animal.po.
94	(rat or rats or rodent* or mouse or mice).ti.
95	or/93-94
96	92 not 95
97	limit 96 to English language
98	"EXPERIENCES (EVENTS)"/ or CLUSTER ANALYSIS/ or FOCUS GROUP/ or CONTENT ANALYSIS/ or DISCOURSE ANALYSIS/ or ETHNOGRAPHY/ or GROUNDED THEORY/ or INTERVIEWERS/ or INTERVIEWING/ or INTERVIEWS/ or NARRATIVES/ or OBSERVATION METHODS/ or PHENOMENOLOGY/ or QUALITATIVE METHODS/ or QUESTIONNAIRES/ or QUESTIONING/ or exp SURVEYS/ or TAPE RECORDERS/
99	(qualitative* or interview* or focus or questionnaire* or narrative* or narration* or survey* or experience* or themes).tw.
100	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
101	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
102	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
103	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.
104	or/98-103
105	97 and 104
106	(national health service* or nhs*).ti,ab,in,cq.
107	(english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab.
108	(gb or "g.b." or britain* or (british* not "british columbia") or uk or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or ((wales or "south wales") not "new south wales") or welsh*).ti,ab,jx,in,cq.
109	(bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambridge not (massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or ely or "ely's" or exeter or "exeter's" or gloucester or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or leeds* or leicester or "leicester's" or (lincoln not nebraska*) or ("lincoln's" not nebraska*) or (liverpool not (new south wales* or nsw)) or ("liverpool's" not (new south wales* or nsw)) or ((london not (ontario* or ont or toronto*)) or ("london's" not (ontario* or ont or toronto*)) or manchester or "manchester's" or (newcastle not (new south wales* or nsw)) or ("newcastle's" not (new south wales* or nsw)) or norwich or "norwich's" or nottingham or "nottingham's" or oxford or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston or "preston's" or ripon or "ripon's" or salford or "salford's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton or "southampton's" or st albans or stoke or "stoke's" or sunderland or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or wells or westminster or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts* or boston* or harvard*)) or ("worcester's" not (massachusetts* or boston* or harvard*)) or (york not

#	Searches
	("new york*" or ny or ontario* or ont or toronto*)) or ("york's" not ("new york*" or ny or ontario* or ont or toronto*))))).ti,ab,in,cq.
110	(bangor or "bangor's" or cardiff or "cardiff's" or newport or "newport's" or st asaph or "st asaph's" or st davids or swansea or "swansea's").ti,ab,in,cq.
111	(aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or (perth not australia*) or ("perth's" not australia*) or stirling or "stirling's").ti,ab,in,cq.
112	(armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or derry or "derry's" or newry or "newry's").ti,ab,in,cq.
113	or/106-112
114	105 and 113
115	limit 114 to up=20120101-20231031

Database: CINAHL (Cumulated Index to Nursing and Allied Health Literature)

Date of last search: 06/10/23

#	Searches
S95	S52 AND S93 Limiters - Published Date: 20120101-20231031; English Language; Exclude MEDLINE records; Human; Clinical Queries: Qualitative - High Sensitivity; Geographic Subset: UK & Ireland
S94	S52 AND S93
S93	S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72 OR S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82 OR S83 OR S84 OR S85 OR S86 OR S87 OR S88 OR S89 OR S90 OR S91 OR S92
S92	TI (((premature* or preterm) N2 (child* or baby or babies or infan* or neonat* or newborn? or p?ediatric*))
S91	(MM "Childbirth, Premature")
S90	TI "failure to thrive" OR AB "failure to thrive"
S89	TI (((growth or grow* or develop*) N2 (disorder* or deviat* or disabilit* or delay* or retard* or stunt* or faltering or substandard or diminish* or promot* or catchup or "catch* up" or syndrom* or problem* or milestone*)))
S88	TI (((food or feed* or diet* or eat*) N2 (behav* or prefer* or fuss* or habit* or picky or refus* or avers*)))
S87	(MM "Eating Behavior") OR (MM "Food Fussiness") OR (MM "Food Habits") OR (MM "Food Preferences")
S86	(MM "Growth Disorders") OR (MM "Failure to Thrive")
S85	(MM "Child Development")
S84	(MM "Developmental Disabilities")
S83	TI ((communit* or environment* or social* or socioeconom* or econom* or demograph* or sociodemograph* or neighbo?rhood* or poverty or impoverish* or hardship* or privation* or income* or depriv* or financ*))
S82	(MM "Social Determinants of Health")
S81	(MM "Health Inequities") OR (MM "Health Status Disparities+")
S80	(MM "Socioeconomic Factors+")
S79	(MM "Social Environment+")
S78	(MM "Health Services for the Indigent") OR (MM "Health Services, Indigenous")
S77	(MM "Minority Groups")
S76	TI ((race* or racial* or ethnic* or cultur* or religio* or custom* or ancest* or minorit* or multiracial* or multiethnic* or multicultural*))
S75	(MM "Culture+")
S74	TI ((commerc* or capitalis* or market* or telemarket* or advertis* or corporate* or corporation* or consumer*))
S73	(MM "Economic Competition")
S72	(MM "Business") OR (MM "Electronic Commerce")
S71	TI ((advis* or advice* or counsel* or educat* or communicat* or inform* or miscommunicat* or misinform* or learn* or lesson* or material* or resource* or teach* or tool* or train* or tutorial* or knowledg*))
S70	(MM "Decision Making") OR (MM "Decision Making, Patient")
S69	(MM "Health Behavior")
S68	(MM "Health Education") OR (MM "Patient Education") OR (MM "Parenting Education") OR (MM "Nutrition Education") OR (MM "Childbirth Education")
S67	(MM "Health Promotion+")
S66	(MM "Consumer Health Information") OR (MM "Access to Information+")

#	Searches
S65	(MM "Education") OR (MM "Teaching")
S64	(MM "Communication+")
S63	(MM "Consumer Attitudes")
S62	TI ((prefer* or experience* or value* or perspective* or perception* or perceiv* or expectation* or choice* or choos* or willingness or attitud* or know* or belief* or believ* or opinion* or understand* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or aware* or priorit*))
S61	(MM "Motivation") OR (MM "Intention") OR (MM "Attitude to Health") OR (MM "Patient Attitudes") OR (MM "Patient Satisfaction+") OR (MM "Health Knowledge") OR (MM "Treatment Refusal")
S60	(MM "Fear")
S59	(MM "Anxiety")
S58	(MM "Emotions")
S57	(MM "Adaptation, Psychological")
S56	(MM "Financial Stress")
S55	(MM "Stress, Psychological")
S54	TI ((facilitat* or uptak* or up-tak* or takeup* or tak*-up* or awar* or increas* or impact* or effect* or improv* or enhanc* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisf* or complian* or comply* or complie* or adopt* or implement* or availab* or provision or provid* or convenience or convenient or offer or incentiv* or start* or attend* or utiliz* or utilis* or sustain* or maintain* or deter* or identif* or adequa* or persuad* or persuasion or help* or enabl* or eligib* or decid* or decision* or afford* or deliver* or equalit* or behav* or influenc*))
S53	TI ((barrier* or hinder* or block* or obstacle* or limit* or restrict* or restrain* or obstruct* or inhibit* or imped* or delay* or constrain* or hindrance* or refus* or decreas* or reduc* or discourag* or prevent* or disparit* or challeng* or impact* or inequalit* or deter* or inaccessib* or prohibit* or unaffordab* or unavailab* or dissatisf* or nonadher* or noncomply* or "non comply*" or noncomplian* or "non complian*" or ignor* or inconvenien*))
S52	S44 AND S51
S51	S45 OR S46 OR S47 OR S48 OR S49 OR S50
S50	AB (guid* or recommend* or policy* or policies*)
S49	TI (treatment* or guid* or nutriti* or diet* or supplement* or recommend* or policy or policies or requir* or allow* or protocol*)
S48	(MH "Nutrition Policy+")
S47	(MH "Attitude to Medical Treatment")
S46	(MH "Guideline Adherence")
S45	(MH "Patient Compliance+")
S44	S15 AND S43
S43	S24 OR S42
S42	S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41
S41	TI (((soft or fizzy or sugar*) N1 (drink* or beverage*))) OR AB (((soft or fizzy or sugar*) N1 (drink* or beverage*)))
S40	TI ((((salt* or sugar* or sodium) N2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*)) OR AB ((((salt* or sugar* or sodium) N2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*))
S39	(MH "Carbonated Beverages")
S38	(MH "Sweetened Beverages")
S37	(MH "Sodium Chloride, Dietary")
S36	(MH "Sodium, Dietary")
S35	TI family food* OR AB family food*
S34	TI (((health* or balance* or nutrition*) N4 (food* or eat* or diet*))) OR AB (((health* or balance* or nutrition*) N4 (food* or eat* or diet*)))
S33	TI ((((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? or vegetable?) N4 (intake or consum* or requirement* or value*))) OR AB ((((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? or vegetable?) N4 (intake or consum* or requirement* or value*)))
S32	TI (((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) N4 (habit* or behavio* or attitude* or belief* or practice*))) OR AB (((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) N4 (habit* or behavio* or attitude* or belief* or practice*)))
S31	(MH "Vegetables")
S30	(MH "Fruit")

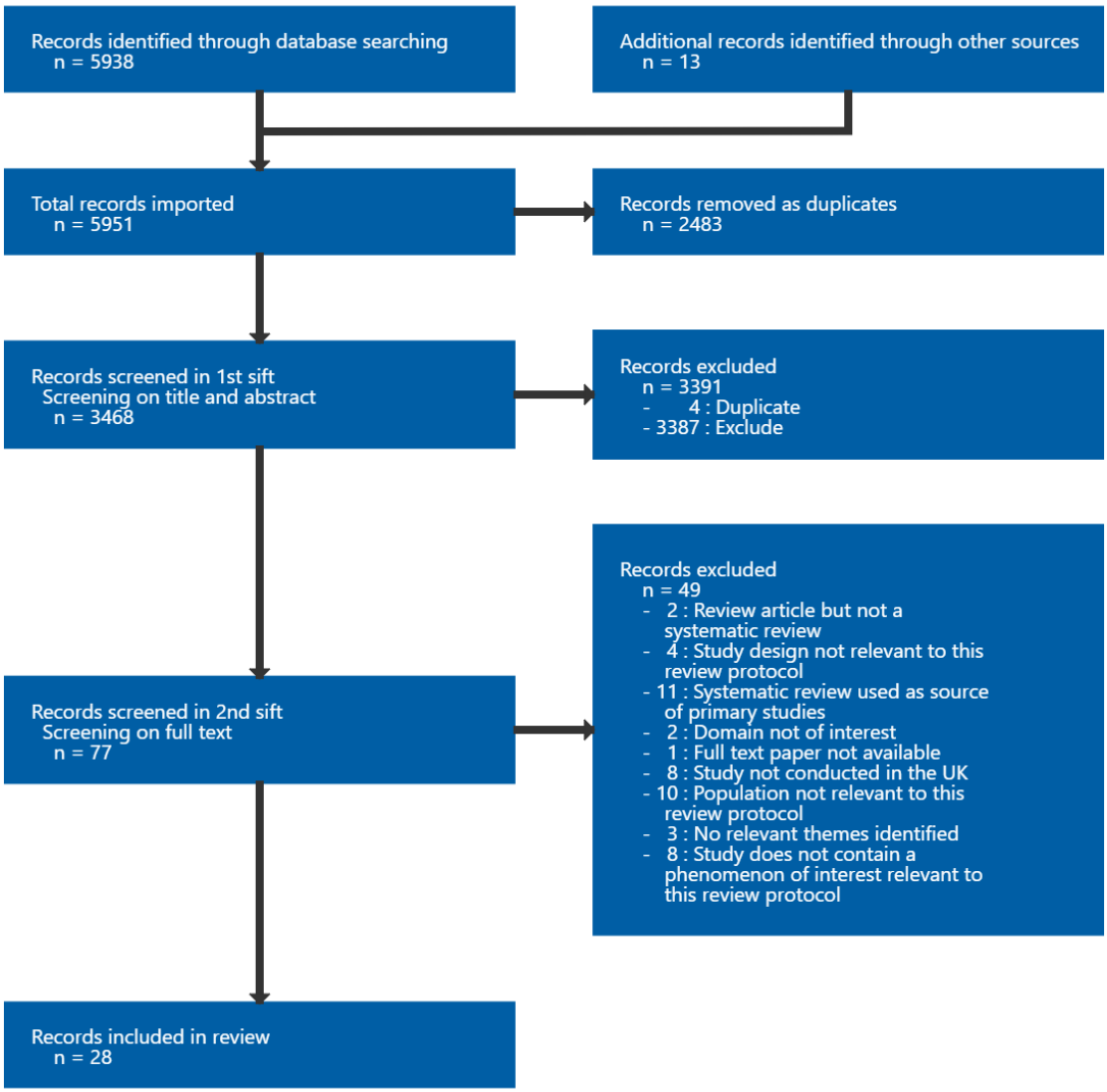
#	Searches
S29	(MH "Energy Intake")
S28	(MH "Nutritional Requirements")
S27	(MH "Nutritive Value")
S26	(MH "Eating Behavior")
S25	(MH "Diet")
S24	S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23
S23	TI wean* OR AB wean*
S22	TI ((((solid or baby or soft or finger or mash* or puree* or infant*) N2 (food* or fruit* or veg*)) or solids or babyfood*)) OR AB ((((solid or baby or soft or finger or mash* or puree* or infant*) N2 (food* or fruit* or veg*)) or solids or babyfood*))
S21	TI ((((complementary or supplement* or introduc*) N2 (feed* or food*))) OR AB ((((complementary or supplement* or introduc*) N2 (feed* or food*)))
S20	(MH "Infant Nutritional Physiology")
S19	(MH "Maternal Nutritional Physiology")
S18	(MH "Child Nutritional Physiology")
S17	(MH "Infant Food")
S16	(MH "Infant Weaning")
S15	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14
S14	TI ((child* or baby or babies or boy? or girl? or infan* or juvenile? or kid? or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? or toddler*)) OR AB ((child* or baby or babies or boy? or girl? or infan* or juvenile? or kid? or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? or toddler*))
S13	(MH "Pediatric Nursing")
S12	(MH "Pediatrics+")
S11	(MH "Minors (Legal)")
S10	(MH "Infant+")
S9	(MH "Child+")
S8	TI ((famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*)) OR AB ((famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*))
S7	(MH "Infant Care")
S6	(MH "Paternal Behavior")
S5	(MH "Parenting")
S4	(MH "Parent-Child Relations+")
S3	(MH "Maternal Behavior")
S2	(MH "Family Relations")
S1	(MH "Parents+")

Appendix C Qualitative evidence study selection

Study selection for: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

The flow chart includes records for both appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years sections of the review.

Figure 5: Qualitative evidence study selection flow chart



Appendix D Evidence tables

Evidence tables for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

Table 6: Evidence tables

Arden, 2015

Bibliographic Reference	Arden MA; Abbott RL.; Experiences of baby-led weaning: trust, control and renegotiation; Maternal & Child Nutrition; 2015; vol. 11 (no. 4); 829-844

Study Characteristics

Study type	General qualitative inquiry Semi-structured interviews
Country/ies where study was carried out	UK
Setting	**Setting** In participant's convenience over email **Aim** To investigate the reported experiences of the mother and infant using a Baby Led Weaning (BLW) approach in order to better understand the benefits and challenges of the approach, and the beliefs that underpin these experiences.
Data collection and analysis	**Data collection**

	Semi-structured interviews over 5 emails. A list of questions embedded into an email message were sent and participants were to respond in their own time. Once a response was received, further planned questions along with follow-up questions to responses earlier received in order to get clarity or seek elaboration on responses were sent. The final (5th) email contained only follow-up questions on previous responses. **Data analysis** Thematic analysis - NVivo 8 was used to assist in the organisation and categorisation of data. Transcripts were read thoroughly, involving reading (and re-reading), as part of an inductive data-driven process. Then the data was annotated with initial coding ideas relating to the broad research questions and derived from the reading process. Ninety codes were produced initially and were collated into potential themes, which were represented schematically in a 'thematic map' of the data. The codes/themes were checked for repetition and in such instances, were merged and checked for coherence.
Recruitment strategy	Participants were recruited from range of UK-based Internet parenting sites and forums, including those with a specific focus on BLW and general parenting forums in order to try to recruit mothers with a range of experiences. Permission was sought from the owners or administrators of the sites or forums to place an advert for mothers who were willing to take part in an interview about BLW conducted via email. Interested individuals were asked to respond by emailing one of the researchers for further information.
Study dates	Not reported
Sources of funding	Not industry funded
Inclusion criteria	Mothers who: 1. had tried BLW (even if they had mixed it with other approaches or decided to change to a different approach) 2. had an infant aged between 9 and 15 months 3. were living in the UK.
Exclusion criteria	Participants who did not complete the full interview process were classified as withdrawals and excluded from the study.
Sample size	N = 15 women
Participant characteristics	Mother's age in years [range]: 29 - 39 (n=3 unknown age)

	Infant's age in months [range]: 9 - 15 Infants' sex [n]: Male = 9 Female = 6 Parity [n] Primiparous = 12 Multiparous = 3 Age of first complementary food in weeks [range]: 19 - 26
Results	**Authors themes:** • Trusting the child ○ Food for play or hunger? ○ Infant control (timing, amount eaten and food choice) ○ Idealised eating ○ Future relationship with food • Parental control and responsibility ○ Monitoring eating ○ Providing balanced nutrition ○ Parental worry or concern

  - Avoiding force-feeding
  - Following best practice
  - Validating choices
- Precious milk
  - Importance of breastfeeding
  - Attachment parenting
- Renegotiating BLW
  - Mess
  - Nursery
  - Combining traditional weaning (TW) and BLW

Study findings:

Trusting the child: Food for play or hunger?

Mothers wrote about the use of food as a toy, for play and exploration.

"At this point the book said food is for fun until they are one, so I didn't worry that he appeared to be just messing with his food and all of it ended up on the floor." (page 833)

Moving from food for play to food for sustenance was related to trusting in the child's ability to develop necessary skills for effective self-feeding at a pace that was consistent with their nutritional needs.

"I think his ability to handle food has developed alongside his ability to eat it, so I've never felt he's missed out on what we wanted/needed to eat" (page 834)

Trusting the child: Infant control (timing, amount eaten and food choice)

This sub-theme focused on the infant's control of the amount of food eaten, which was expressed by the infant either stopping eating or indicating a desire for more food.

"He does stop eating when he's had enough, and lets us know if he hasn't had enough and wants more." (page 834)

Trusting the child: Idealised eating

	Many participants mentioned their desires for their child to develop good appetite control and the ability to make healthy food choices. "I have great faith that if I offer him a variety of healthy foods that he will pick out the ones he needs." (page 834) *Trusting the child: Future relationship with food* Some participants hoped that the appetite control skills they believed their infants would develop during weaning would extend through the rest of their lives. "He is a 'happy' eater, confident in what he does and doesn't like and I'm confident in his ability to judge his own appetite. I'm very hopeful that in the future he will stop eating once he is full, and not over-eat but enjoy the occasional treat, not feel ashamed to be eating it but knowing that it's something he eats in moderation." (page 834) *Parental control and responsibility: monitoring eating* Some participants reported closely monitoring their child's eating or a desire to do so which they found difficult to achieve. "The negative side of baby led weaning is that it's hard to measure how much food he has eaten." (page 835) *Parental control and responsibility: providing balanced nutrition* Many participants reported that they controlled the types of foods their infants were exposed to, especially by withholding or limiting the amount of 'unhealthy' or treat foods offered. "Treats are definitely limited. For example, I will only offer him one slice of cake and will tell him it's all gone if he asks for more." (page 835) *Parental control and responsibility: parental worry or concern* Contrary to the findings of Brown & Lee (2011) that mothers who followed baby-led weaning (BLW) were less anxious than those following traditional weaning, some participants reported that introduction of solid foods to their infant was a stressful process that caused them to worry, particularly in the context of the amount eaten and the intake of a diet that fully meets their nutritional needs.

"However, I am now more concerned that she is not getting all she needs from a nutritional point of view from breast milk and the very little amount of solid food she eats...I worried particularly that she would not be getting enough iron." (page 836)

Parental control and responsibility: avoiding force-feeding

The potential worry of a BLW approach was often contrasted with a strong desire to avoid more traditional puree-fed approaches, which were often characterised by being akin to force-feed, and the food described in un-appetising terms (for example mush).

"My daughter was clearly not ready to eat at 6 months, but if I had followed the traditional weaning route (and she took a spoon!) I would have been forcing food into her before she was ready, and that really doesn't seem right. We don't force our children to do other things before they are ready (for example walking), so why should food be any different, as long as they are healthy and gaining weight." (page 837)

Parental control and responsibility: following best practice

Participants often reported their desire and efforts to follow best practice with respect to the introduction of solid foods and BLW fitting in with these.

"I wanted to follow guidelines. I also felt that it would be easier as he would be able to eat almost everything straight away, for example bread. I did want to have an element of BLW also and would only be able to do this at 6 months." (page 837)

Parental control and responsibility: validating choices

There was inconsistency between participants commitment to follow the guidance both from WHO and BLW to delay the introduction of solid foods until 6 months, and trusting the child to determine the timing of the introduction of solid foods. For the mothers in this study, this represented an inherent conflict between a desire to follow best practice and wait until 6 months, and the desire to allow the child to direct the timing of the introduction of solid foods, albeit limited by their developmental readiness to self-feed. However, where solid food was introduced earlier, the 'trusting the child' principles were used to validate the choices made.

	"I planned to commence solids at 6 months as per WHO guidelines. However the baby had other ideas and stole food off of [the] plate aged just over 5 months . . . I was initially concerned that we had not reached to recommended 26 weeks, but as he decided for himself I was not too worried." (page 837) *Precious milk: importance of breastfeeding* Majority of the participants in this study breastfed their infants and wrote about the importance of breast milk in their infant's diet during the process of the introduction of solid foods and particularly until the age of 1 year. *"I believe that a baby shouldn't be rushed into eating solid food. Milk is enough for them until they are 1."* (page 838) *Precious milk: attachment parenting* For others, breastfeeding was part of a whole parenting style and not just a method of feeding their child. Some participants mentioned attachment parenting, baby-wearing and co-sleeping alongside breastfeeding and BLW. *"I love the idea of attachment parenting (although he's very supportive it's a bit too far up the 'hippy' scale for John's liking!) and I feel that BLW fits in very well. I was a keen baby-wearer for the first 5 months until Ben got a bit too heavy to carry permanently."* (page 838) *Renegotiating BLW* Throughout the text, participants described their varying experiences of BLW. In many cases, these deviated from the key principle of BLW that the baby '... feeds herself...' *"We now usually spoon feed at tea time as she is often tired, but she likes to take the spoon from us towards the end and have a go herself."* (page 839) *Renegotiating BLW: mess* In each case, participants offered a reason or justification for the spoon-feeding... often this was related to the issue of mess

	"Lydia tends to drop quite a lot and have it handed back but we can't do this on the train, so I'll give her a pot of food on a spoon and a little square of sandwich or some banana to go with it." (page 839) *Renegotiating BLW: nursery* Some participants reported different feeding practices at home compared to those followed in nursery. *"I didn't ask nursery to do BLW at that stage a lot of food was being thrown around and not much was being eaten. I would have been embarrassed to ask them to do this if she wasn't eating anything. "* (page 839) *Renegotiating BLW: combining TW and BLW* Many participants in the study reported adopting a combination of BLW and TW. The authors stated that mothers may have been led to renegotiate how BLW should be defined and practiced. *"If a baby doesn't like handling and eating pieces of food and prefers to be spoonfed, that's fine and it's still baby led!"* (page 840)

WHO: World Health Organization.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(Lack of justification for research design; lack of justification for data collection; no discussion of data saturation; a lack of researcher reflexivity)*
Overall risk of bias and relevance	Relevance	Relevant

Brown, 2013

Bibliographic Reference	Brown, Amy; Lee, Michelle; An exploration of experiences of mothers following a baby-led weaning style: developmental readiness for complementary foods.; Maternal & child nutrition; 2013; vol. 9 (no. 2); 233-43

Study Characteristics

Study type	General qualitative inquiry Semi-structured interviews
Country/ies where study was carried out	UK
Setting	**Setting** Not reported **Aim** • To explore the behaviours associated with use of a baby-led weaning approach in more depth *(following a previous study)*, examining the attitudes and reasoning of mothers following the baby-led method including decisions to introduce complementary foods, progress through this period and balancing solid meals with milk feeds. • To examine maternal experiences, both positive and negative of using the method and considers how the method may potentially have longer term outcomes for infant health.
Data collection and analysis	**Data collection** Semi-structured interviews exploring factors influencing decisions to introduce complementary foods, experience of introducing complementary foods, typical diet and mealtimes and attitudes towards baby-led weaning. Interviews were recorded by Dicta-phone following consent and transcribed. **Data analysis** Content analysis on each transcript was performed, which involved reading through to identify emerging themes. Themes were then grouped into key themes and sub-categories. Data collection continued until data saturation was reached - when

	it was felt that no new themes or ideas were emerging, a point that was confirmed by 2 independent coders with agreement in over 90% of the cases.
Recruitment strategy	Purposive sampling involving an online advert placed on a baby-led weaning forum requesting mothers from the UK to take part in an interview about their experiences. Snowballing sampling, where participants who had been interviewed informed their peers of the research was also employed.
Study dates	Not reported
Sources of funding	Not industry funded
Inclusion criteria	Mothers with • infant aged 12 to 18 months • had followed a baby-led weaning approach (including those who had used spoon-feeding and purees 10% or less of the time)
Exclusion criteria	Infants with • a low birthweight (<2500 g), premature birth (<37 weeks) or significant health conditions, which may affect nutrition or weight
Sample size	N = 36 mothers
Participant characteristics	Mothers age in years [mean (SD)]: 28.6 (5.62) Number of years in education [mean (SD)]: 14.27 (2.33) Marital status [n (%)]: Married = 24 (66.6)

	Cohabiting = 9 (25) Single = 3 (8.3) Home ownership [n (%)] Owned = 22 (61.1) Rented = 12 (33.3) Council = 1 (2.7) Other = 1 (2.7) Maternal occupation [n (%)] Professional and managerial = 14 (38.8) Skilled = 8 (22.2) Unskilled = 5 (13.8) Other = 9 (25.0) Geographical variation: NR Religion and cultural considerations: NR

	Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR Ethnicity: NR
Results	**Authors themes** • Introducing complementary foods • Keeping track of energy and nutrient intake • Experience of following a baby-led approach ○ Positive experiences • Challenge ○ Mess ○ Waste ○ Choking **Study findings** *Introducing complementary foods* 55.5% (n=20) of mothers waited until at least 26 weeks before introducing complementary foods. The time which solids were introduced was much related to ideas of developmental readiness for complementary foods. All mothers were aware that the recommendation is to introduce complementary foods at around 6 months after birth and followed this guidance. However, mothers also reported being led by developmental signs observed in their infants such as being able to sit up unsupported, grasp items and bring food to their own mouth. Often, the decision to start complementary feeding was led by the infant by taking food from the mother and eating it: *"She took a piece of cucumber out of my hand and shoved it in her mouth so I took that as a sign she was ready"* (page 236) The traditional approach to complementary feeding is spoon-feeding. However, participants in this study gave the control to their infants, who selected and took the foods to their mouths, rather than being fed. Foods were offered on a high chair

	tray, cut into chunks that could be easily picked up and held, or for softer foods like yoghurt, placed in a spoon on the tray. The infants generally ate the same foods as the family adapted into manageable pieces for the infant to handle. *"He's always taken an interest in what we eat so it seemed strange to give him something different"* (page 236) Mothers discussed adapting family meals and cooking to reduce salt, sugar and fat in foods as a standard adult diet may not be suitable for an infant as it's likely to contain higher levels of salt, fats and additives. Meals were also adapted to include more variety and nutrient content to ensure infant was getting a balanced diet but was not necessarily practiced by all mothers following the baby-led weaning approach. *"It has improved the quality of our family meals as I prefer him to eat healthy nutritious meals which means we have to do the same"* (page 236) Adapting meal contents however did not extend to herbs and spices as mothers used these for flavourings as they would in adult meals. The infants accepted these foods willingly and therefore, ate meals such as curries and spices from a young age. *"Ours seem to like curries and chillies as long as they aren't too hot. There is very little food that isn't suitable for smaller children."* (page 236) Popularly, it is believed that baby-led approach to weaning leads to less fussy children who would eat a wider variety of food in the future. Participants shared a belief that if they offered their children a variety of foods at weaning, and combined this well empowering infants to self-feed, their infants would develop a healthy food habit later on. *"I think that is he is offered lots of tastes then that is what he will grow up expecting to eat. Start as you mean to go on"* (page 236) Mothers also discussed sharing meals with their infants where infants ate with the rest of the family, or when not feasible, either parent sat with the infant eating a snack while the infant had a meal. Generally, family meals were to align with infants natural hunger pattern. "*She has eaten with us from around 7 months. We changed her routine so we could all eat together in the evening when her dad gets home."* (page 236)

Keeping track of energy and nutrient intake

Many mothers expressed that their infant had phases where they ate very little sometimes but they were happy to give the infant a chance to balance their appetite in this way, often because they were still breastfeeding, noting that at times when appetite for food was low, the infant might consume more milk:

"I take the view that she is capable of eating so if she hasn't eaten she isn't hungry. She knows better than I do how hungry she is" (page 237)

Experience of following a baby-led approach: positive experiences

Overall, following BLW method was considered to be simple, convenient and fitted in easily with family lifestyle and mealtimes. Mealtimes were viewed as easier and less stressful because it allows the infant to participate rather than simply being fed. This both reduced cost and time and made mealtimes more pleasurable as the infant could feed themselves rather than needing to be spoon-fed by someone trying to eat their own meal. Mothers also viewed their infant as having a better experience as a result of eating foods in their natural rather than processed forms.

"I think it saves a lot of time and money being able to feed the baby what the rest of the family is enjoying and they feel included in mealtimes. You can all eat a meal while it's hot rather than having to feed the baby with a spoon instead of eating your own meal." (page 238)

Challenges: waste

Some mothers explained that they were reluctant to give more expensive foods, despite wanting to give a range of tastes because the infant would drop them on the floor and remain hungry.

"He really likes raspberries but they are very expensive. When he was first starting he did eat some but he also threw some, squashed some and smeared some in his hair. It was very hard not to get tense and think that's £1 you just wasted... £1.50... £2.00. When you are on a tight budget it is hard." (page 238)

Challenges: mess

Mothers expressed that the mess involved in the baby-led approach to weaning was considered a challenge, particularly when the infant was still learning to handle food and manage self-feeding. This was considered a particular challenge when

	they were out of their houses e.g in family or friends' homes or in a public place where there the social norm was an expectation of a neatly fed child. *"I have some brilliant photos of those first few months. He got more in his hair than in his mouth which was time consuming. I couldn't just let him eat like that and run out the door and sometimes I did wonder whether it would have been easier to just spoon it in for him."* (page 238) However, mothers found ways to adapt their approach to limit the mess explaining that they used large, long-sleeved bibs, covered the floor underneath the high chair, as well as recognising certain less messy foods as preferred foods to be eaten outside the home. But as the infant got more skilled and coordinated, the level of mess reduced. *"We soon learnt what he would eat up immediately and what he seemed to particularly like smearing about. And what stained and what didn't. And what you would be picking out of your carpet for months on end. Those foods were not given at Grandma's!"* (page 238) *Challenges: choking* A common anecdotal criticism of the baby-led weaning method is that there is a higher risk of the infant choking. Many considered this possibility and were wary initially. They worried that the infant would not be able to chew certain foods or might swallow them too quickly and choke. This was exacerbated by others around being anxious and critical to normal gagging sounds. "My mother was very anxious and used to hover and squeak and make things very tense. She would grab foods away from her or rush and grab her if she gagged." (page 239)

NR: not reported; SD: standard deviation.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(Lack of justification for research design; A lack of researcher reflexivity)*
Overall risk of bias and relevance	Relevance	Relevant

Buttivant, 2012

Bibliographic Reference	Buttivant, Helen; Knai, Cecile; Improving food provision in child care in England: a stakeholder analysis.; Public health nutrition; 2012; vol. 15 (no. 3); 554-60

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	UK
Setting	**Setting** Child-care settings (4 nurseries, 2 pre-schools and 2 childminders) **Aim** To review national policy governing nutrition in child-care settings and explore policy translation at a regional and local level in the South East of England.
Data collection and analysis	**Data collection** One-to-one semi-structured interviews lasting 25 to 40 minutes, investigating factors influencing food policy and practice. collaborating with 5 local experts, an interview guide was developed to draw out key themes that relate to nutritional policy development and implementation, and capture local issues. **Data analysis**

	Recordings from the interviews were transcribed verbatim to aid the process of familiarisation with the data. Information obtained from the interviews was mapped into a thematic framework.
Recruitment strategy	Purposive sampling approach was adopted to recruit participants.
Study dates	June to August 2010
Sources of funding	Not industry funded
Inclusion criteria	• Child-care settings registered by OFSTED e.g day-care nurseries, pre-schools and childminders • Children aged 1 to 5 years
Exclusion criteria	• Children <1 year old • Non-registered child-care providers, foster carers, children's homes or hospitals
Sample size	N = 13 • Childcare providers: n=8 • Catering staff: n=2 • Strategic advisors: n=3
Participant characteristics	Child's age in years [Mean (SD)]: Not reported, age range 1 -5 Level of socioeconomic deprivation (identified using the Index of Multiple Deprivation) Deprived area [n]: • Childminder =2 • Preschool-supervisor =1 • Day-nursery manager =3 • Day-nursery catering staff =1

	Middle-income area [n]: • Pre-school supervisor =1 Affluent area [n]: • Day-nursery manager =1 Mixed income area [n]: • Day-nursery catering staff = 1 Working at local level [n]: • Adviser = 1 Working at regional level [n]: • Advisers = 2 Geographical variation: Not reported Religion and cultural considerations: Not reported Babies or children with disabilities and other physical and mental health conditions: Not reported Babies and children with developmental problems: Not reported Ethnicity: Not reported
Results	**Authors themes** • Child-care settings' food policy and menu planning

- Food provision and mealtimes
- Communication and collaboration between actors
- Knowledge and training

Study themes

Child-care settings' food policy and menu planning

Only one out of the eight settings had a specific food policy in place... All child-care settings had attempted to provide healthy food although with varied approaches... All four of the day-nurseries undertook formal menu planning but their influence over the menu content varied depending on the catering arrangements. One nursery had a dedicated cook who had total autonomy over menu development. On the other hand, child-care settings relying on external catering providers, such as school kitchens, had little or no control over menu planning... Menu planning was much less systematic among childminders and in pre-schools, where only snacks are generally provided.

No quotes for this theme

Food provision and mealtimes

The majority of settings had strategies for introducing new foods and dealing with rejection by children; however some providers were concerned practice did not always match policy.

"Some nursery nurses don't persevere to introduce new foods; they're too quick to give up due to the pressured environment." (page 557)

Communication and collaboration between actors

Most providers agreed that educating parents is important if diet is the early years was to improve; however many of them discussed concerns around their role in providing this education. Both private day-care providers and childminders highlighted that possibility of tensions arising between practitioners and parents in privately funded settings where parents, as customers, hold the power to influence food provision and practitioners may feel disempowered to influence the parents'

	choices for fear of losing their custom... On the contrary, in publicly funded settings, there appeared to be more willingness to discuss healthy eating with parents, although some still had concerns, noting that: "it's a bit of a problem talking to the parents... some of the children really need to be here and some parents... need support and... if you're too judgemental I think then you'll put a lot of people off" (page 557) *Knowledge and training* Practitioners most commonly referred to childminding magazines, the Internet and parents as their sources of information. Only one practitioner was aware of nutritional guidelines identified in the APFNEY Provisional Review as a primary source of information... Perhaps of greatest concern is the lack of knowledge among catering professionals in this sector. Neither of those interviewed had received specialist training. One commented: "all these kids' nutrition is reliant on me and I'm just fumbling in the dark" (page 557)

Ofsted: Office for Standards in Education, Children's Services and Skills; SD: standard deviation.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Serious concerns *(Lack of justification for research design; Lack of justification for data collection; No discussion of data saturation; A lack of researcher reflexivity; No description of how presented data were selected)*
Overall risk of bias and relevance	Relevance	Relevant

Carnell, 2011

Bibliographic Reference	Carnell S; Cooke L; Cheng R; Robbins A; Wardle J; Parental feeding behaviours and motivations. A qualitative study in mothers of UK pre-schoolers; Appetite; 2011; vol. 57; 665-73

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	UK
Setting	**Setting** Telephone **Aim** To generate a comprehensive picture of parents' perspectives on feeding behaviours and motivations that could potentially be used to inform the development of parent-friendly interventions.
Data collection and analysis	**Data collection** Telephone interviews lasting 30 to 60 minutes about how parents fed their 3-5 year old child that day. Interviews were conducted after 5pm and if it was not convenient to talk, a later time for the interview was arranged. The interview used a topic guide with key questions and suggested follow-up probe questions to elicit further details. Parents were asked repeatedly if events were typical and to describe when things were different, in order to get a range of experiences. Data was also collected using food diaries and included in the analysis. **Data analysis** Thematic framework analysis - interviews were transcribed and entered into a framework. The intention was not to conduct a theoretically-driven analysis, therefore, more differentiated sub-themes were generated in a 'bottom-up' approach based on in-depth analysis of a sub-set of 5 interview transcripts. Frequency of mention of each concept or sub-theme was scored

	per interview transcript where 1 was allocated when there was at least one mention of the sub-theme and 0 where there was not. The scorings were independently completed for 5 interviews by 2 authors and then compared to test inter-rater reliability.
Recruitment strategy	Not reported
Study dates	Not reported
Sources of funding	Not reported
Inclusion criteria	Parents who: • had children attending the first four preschools to be surveyed of the 12 preschools ultimately included in the study • had sufficient English language ability to participate
Exclusion criteria	Not reported
Sample size	N = 14 parents (interviewed)
Participant characteristics	Parent's age in years [%]: <30 = 8% 30 - 40 = 70% ≥41 = 22% Child's age in years [%]: 3-4 years (in nursery) = 47% 4-5 years (in reception) = 55%

	Education [%] Educated up to: • 16 years or younger = 25% • 16-18 years = 31% • > 18 years (possessing a university degree) = 31% Ethnicity [%] White = 86% Marital status [%] Married = 78% Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR
Results	**Authors themes** • Strategies to promote intake • Motivations for promoting intake • Strategies to restrict intake

- Motivations for restricting intake
- Instrumental feeding
- Meal-time rules
- Child involvement
- Flexibility
- Parental engagement with children's eating behaviour

Study findings

Strategies to promote intake

Parents frequently reported that they used different strategies to encourage or pressure their child to eat such as modifying food preparation methods, presenting food more attractively, verbal or physical encouragement, repetition or exposure to certain foods, or providing a structured feeding environment. Parents also reported increasing food appeal in other ways such as playing eating games, or arranging the food into pictures.

"I used to chop all the fruit up and they used to pretend they were in their nursery or whatever and pass it round and they love it!" (page 8 & 18)

"You have to pretend that the animals are coming to eat the food and sometimes he can eat a bit more that way…with A. you have to pretend you're not looking and someone's come and eaten her food for her." (page 8 & 18)

Motivations for promoting intake

These food-promoting behaviours were motivated by practical reasons for example time pressures or short-term management of appetite, trying to promote a healthy and nourishing, balanced and/or varied diet, including restriction of less healthy foods, and, only infrequently, trying to maintain or increase the child's weight.

"I've said to her in the past I suppose that it's very important that she eats certain things to have healthy bones." (pages 8 & 18)

Motivations for restricting intake

	Mothers occasionally mentioned specific health-related reasons for restrictions, for example protection of teeth, but more often it was implicit in mothers' language (for example junk, rubbish) that they limited certain foods that they felt were unhealthy. Alternatively they would mention specific dietary elements with the implicit assumption that they were undesirable (for example salt, preservatives). "She doesn't get to choose in that sense, no, because I don't want her eating just things like Coco-pops and stuff like that, general purpose rubbish." (page 9 & 19) *Instrumental feeding* 'Instrumental feeding' was used to refer to instances where food was used in any kind of means-end contingency, and explicit emotional feeding. While some parents reported explicitly using foods or non-foods as bribes for intake or good behaviour, alerting their child to the contingency, others simply administered or withheld the reward in question without alerting the child to the existence of a contingency. "She then asked for a chocolate from the Christmas tree. I said she could have one if she ate a satsuma first, which she did." (page 9 & 19) "If he tells me half an hour or an hour after that he's hungry and "Can I have a biscuit?" or "Can I have a bag of crisps?" or something then he won't get them because he hasn't eaten his breakfast." (page 9 & 19) *Flexibility* Many parents explained that they made exceptions from the usual restrictions or encouragements to eat healthy foods at weekends, on special occasions such as parties or holidays, or when their child was outside the parent's direct care (for example with grandparents or other parents). One mother discussed becoming more flexible as her children grew older, although she wasn't able to identify why her attitude had changed. "Obviously when there's guests here and there's other kids eating [chocolate bars] I don't say to her Oh no you can't have nothing because you've had your quota for the day'. She will be allowed to eat a bit more…but it's only for one day" (page 10 & 20) *Parental engagement with children's eating behaviour*

	Perhaps the most common thread was a conscious awareness of children's characteristic appetitive styles and/or food preferences (and sometimes the relationship to body weight). Explicit responsiveness to the child's weight and eating behaviour was also frequently reported. For example, some parents showed awareness in how they described a comparison of siblings' eating styles or preferences, or how eating styles had changed with age. Others described reminding a child with a smaller appetite to eat or limiting access to unhealthy foods because if the child was left to decide, he or she would eat in excessive amounts. "I keep an eye on what she actually is eating because I'm sure if I put…a big tin of Quality Street out in front of her, she'd quite happily demolish as many as possible." (page 10 & 20)

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(A lack of researcher reflexivity)*
Overall risk of bias and relevance	Relevance	Relevant

Caton, 2011

Bibliographic Reference	Caton SJ; Ahern SM; Hetherington MM.; Vegetables by stealth. An exploratory study investigating the introduction of vegetables in the weaning period; Appetite; 2011; vol. 57 (no. 3); 816-25

Study Characteristics

Study type	General qualitative inquiry

Country/ies where study was carried out	UK
Setting	**Setting** Not reported **Aim** To explore parental feeding practices relative to official recommendations and to discover the ways by which parents encourage their children to like and to consume vegetables.
Data collection and analysis	**Data collection** Semi-structured interview using an interview schedule, containing questions relating to various aspects of infant feeding behaviour. The interviews lasted about 20 minutes and were recorded. **Data analysis** Thematic analysis - Recorded interviews were transcribed verbatim and analysed by 2 researchers. An inductive approach was used. Transcripts were carefully read and re-read by each researcher to get immersed into the data, and researchers made notes of the initial impressions they had in the margins. Then, the transcripts were re-read systematically and researchers identified recurring patterns, which were then clustered together and coded, and began the process of identifying themes. 2 researched discussed the codes and themes and key themes were agreed upon.
Recruitment strategy	Random selection of 13 parents and caregivers from a list of 75 mothers who had completed and returned postal questionnaires and agreed to be contacted for interviews. The original sample of 75 mothers were contacted via SureStart.
Study dates	Not reported
Sources of funding	Not reported
Inclusion criteria	Not reported

Exclusion criteria	Not reported
Sample size	N = 13
Participant characteristics	Maternal age in years [Mean (SEM)]: 28.5 (1.2) Child's age (at the time of the questionnaire) in weeks [Mean (SEM)]: 58.4 (4.2) Maternal education (school leaving age) in years [Mean (SEM)]: 17.3 (0.5) Parity [Mean (SEM)]: 1.7 (0.3) Level of socioeconomic deprivation: NR Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR Ethnicity: NR
Results	**Authors themes** • Vegetables • Concerns about their child's diet • Child's eating status (Not applicable to this review) • Guidelines versus reality • Weaning and sleep

Study findings

Vegetables

Mothers accepted that they had the responsibility to ensure that their child/children ate enough vegetables. This was exemplified as mothers described having lots of vegetables in the house and some mothers actively spoke about trying to ‘‘get as many down them’’ as possible.

‘‘well every day. He will have one proper cooked meal with at least two different types of veg – his favourite is broccoli and carrots and cauliflower – he absolutely loves broccoli so yes, he has lots of vegetables’’ (page 820)

In response to how they would deal with vegetable rejection in their children, the mothers suggested a number of techniques including modelling, such that mothers would often sit and eat meals with their children so that their children see them consuming vegetables. Other techniques were modifying the taste of vegetables either by using dips and sauces or incorporating them in to other more liked foods and modifying the texture of vegetables by pureeing or cutting up into small pieces.

‘‘well when I first tried him with this pasta sauce thing that I make he spat the peppers out so then I decided to make it into a smooth one. So rather than the lumps of the pepper and mushrooms I blended it and then put it on his pasta – so I did that. I blended it all up and then once he got used to the taste of it now he will eat it in big lumps." (page 820)

Concerns about child's diet

An important factor frequently mentioned as a deciding factor of what food to offer to their children was the nutrient quality of food, which in this instance referred to the salt and sugar levels in foods, offering highly digestible foods during weaning and buying organic or ‘‘natural’’ produce. Several mothers expressed a preference for home-cooked foods, which appeared to be considered superior in taste and in terms of nutrients and ingredients, when compared with ready-made infant foods. One mother talked about how readymade foods were only used in an emergency and another, how she made her own food to avoid the excess sugar that is contained in readymade fruit-puree.

‘‘even the xxx baby food for weaning and stuff has still got sugar in it – it’s got concentrated ingredients in which contain sugar and stuff and they say that is quite bad for their teeth so they said the best thing to do is just to stew your own fruit and mash this up...’’ (page 821)

	Guidelines versus reality All mothers identified differences between the guidelines and their own experiences in reality. Mothers' acknowledged that 'every baby is different' and in many cases felt these differences justified a degree of flexibility with using the guidelines and their approaches to weaning, and in other cases, they felt a total disregard for them. The mothers felt that there was too much focus on the guidelines or that they are too structured, and described feelings of restriction and a sense of obligation to hold off or begin weaning purely because they were instructed to do so by the information they have received from their health professional. *"I'm not just going to wean her because I feel as though I should be because she's over six months old – every baby is different. Not every baby is the same at six months are they?"* (page 821 - 822) *"I think there is too much emphasis that it has got to be done at six months... but you always think that you are not doing as well as you can if you are not doing it according to the guidelines. And they are only guidelines and it is up to yourself... I do think Health Visitors can be strict and stringent with certain things especially when it is written all over that it is advised to have exclusive breast feeding for the first six months."* (page 821 - 822) *Weaning and sleep* Many mothers described a relationship between weaning and the amount of sleep they or their infant got, with a number of them believing their baby's sleeping pattern was directly related to the amount of food received and being on solid foods. A large proportion of mothers mentioned lack of sleep, as one of the reasons they had decided to wean. *"...and waking up in the night for feeds that he had not had before so I decided that I would try him on some solid food basically."* (page 822-823)

NR: not reported; SEM: Standard Error of Mean.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(Lack of justification for data collection; No discussion of data saturation; Ethical approval not described)*

Section	Question	Answer
Overall risk of bias and relevance	Relevance	Relevant

Condon, 2017

Bibliographic Reference	Condon, L. J.; McClean, S.; Maintaining pre-school children's health and wellbeing in the UK: a qualitative study of the views of migrant parents.; Journal of Public Health; 2017; vol. 39 (no. 3); 455-463

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	UK
Setting	**Setting** Community setting familiar to local mothers **Aim** To explore the barriers and facilitators to maintaining pre-school children’s health in the UK
Data collection and analysis	**Data collection** 5 x Focus groups with parents using a topic guide, led by both study authors and lasting between 60 and 90 minutes. Focus groups were conducted in the first language of participants with interpreters providing contemporaneous translation except

	in 2 groups which either chose to speak English (Polish group) or was conducted in Romanian due to an absence of Roma interpreter (Roma gypsy group). Focus groups were digitally recorded. **Data analysis** Thematic content analysis - The English content of the focus groups were transcribed verbatim. The resulting data was imported into NVivo 10, where coding to identify themes and categories using constant comparison took place, patterns were identified and search for 'deviant cases' was conducted. The researchers coded transcripts independently, discussing themes emerging within and across groups and reaching an agreement about dominant themes.
Recruitment strategy	Gatekeepers, who were interpreters and link workers familiar to local communities aided the recruitment process in inner-city areas of ranked in the 10% most deprived in England. Verbal information and translated written information was provided to potential participants 1 week before focus group to give time for a decision on participation to be made.
Study dates	January to March 2015
Sources of funding	Not industry funded
Inclusion criteria	Parents: • of preschool children • from recent EU accession countries (Romania and Poland), or from longer established migrants (Somalia and Pakistan) • migrated within the last 10 years prior to study
Exclusion criteria	Not reported
Sample size	N = 28 Romanian group, n = 7 Roma group, n = 6

	Polish group, n = 6 Somali group, n = 5 Pakistani group, n = 4
Participant characteristics	Parents' age in years [Mean (range)]: Romanian = 30 (18-35) Roma = 30 (17-47) Polish = 33 (28-36) Somali = 35 (27 - 43) Pakistani = 31 (29 - 35) Sex [n]: Female = 22 Male = 6 Education [n]: Master's degree = 2 Bachelor's degree = 2

	A level equivalent = 13 GCSE equivalent = 2 Vocational qualifications = 3 No qualifications = 6 Unknown = 1 Employment [n]: Employed = 9 Student = 2 Seeking work = 3 Mothers at home = 11 Unknown = 4 Length of residency in years [Mean (range)]: Romanian = 2 (≤1 - 4) Roma = 3 (≤1 - 5) Polish = 7 (2 - 9)

	Somali = 6 (5 - 9) Pakistani = 5 (1 - 10) Level of socioeconomic deprivation: Within the most deprived 10% in England Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR Ethnicity: NR
Results	**Authors themes** • Socio-economic wellbeing • Living a healthy lifestyle in UK **Study findings** *Socio-economic wellbeing* A broad view of the factors influencing abilities to keep their children healthy in the UK was taken by all groups, who saw financial stability as the cornerstone of their children's health. "Men is a bit easier than women to find a job. As a woman you have the kids mainly with you and a man can do like a heavy duty job like warehouse, they can do taxi driver…bus driver." (page 456 & 458)

	One of the main factors considered by parents as being influential in keeping their children healthy was the possibility of a better life chance for their children in the UK, as they considered the availability of facilities and care to help them keep their children healthy. This influenced their decision to live in the UK, irrespective of the difficulties experienced by parents in living apart from home and family. "I feel the life is much better here especially for the children; there are a lot of facilities for the children, there is more care here than back home." (page 456-457) *Living a healthy lifestyle in UK* Parents described aspects of healthy living which were challenging to maintain in the UK. Views on healthy food were mixed, with all groups except the Polish and Roma considering that food was healthier in their country of origin. "[At Easter] we did have a tradition with a basket that you take for food to the church to be blessed and the next morning you eat it together with your family…[here] I won't take my little ones because I think that's the only time we go into the church." (page 458-459) "I feel the life is much better here especially for the children; there are a lot of facilities for the children, there is more care here than back home." (page 458 - 459)

GCSE: General Certificate of Secondary Education; NR: not reported.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(No discussion of data saturation; A lack of researcher reflexivity; No discussion of ethical issues raised by the study)*
Overall risk of bias and relevance	Relevance	Relevant

Cook, 2021

Bibliographic Reference	Cook, Erica Jane; Powell, Faye Caroline; Ali, Nasreen; Penn-Jones, Catrin; Ochieng, Bertha; Randhawa, Gurch; Parents' experiences of complementary feeding among a United Kingdom culturally diverse and deprived community.; Maternal & child nutrition; 2021; vol. 17 (no. 2); e13108

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	UK
Setting	**Setting** Local community centres or any other time and place convenient to participants **Aim** To examine parents' knowledge, beliefs and practices of complementary feeding, in particular exploring the initiation of complementary feeding, approach and types of foods offered during this phase and the factors that inform and underpin parental knowledge, beliefs and practices relating to this.
Data collection and analysis	**Data collection** 24 x focus groups consisting of between 2 and 8 participants, lasting approximately 90 minutes and conducted by bilingual, gender-matching facilitators. A topic guide exploring parents' knowledge, beliefs and practices surrounding complementary feeding was used. Focus group discussions were audiotape recorded with permission from participants.

	Data analysis Framework analysis - Recording from focus groups were translated where necessary, transcribed and manually coded initially. 2 authors independently coded 3 transcripts and then discussed assigned codes. All authors discussed and agreed on themes and subthemes. The research team agreed on an analytic framework with brief description of all codes, which was applied to all transcripts. The range and diversity of coded data was them summarised and synthesised by refining initial themes and categories. the authors in collaboration developed abstract concepts by identifying key dimensions of synthesised data and making associations between themes and concepts. The management of data was done in NVivo v11. Core findings were discussed with the interviewer to determine that they accurately reflected the interviews without inaccuracies.
Recruitment strategy	Purposive stratifies sampling strategy was used for recruiting participants from 5 most deprived wards in Luton, UK
Study dates	February 2014 to January 2015
Sources of funding	Not industry funded
Inclusion criteria	Mothers or fathers: • aged 21 to 45 years • with at least one child between 0 and 5 years • residing in one of the five most deprived wards in Luton • self-identifying as being from the White British, Pakistani, Bangladeshi, Black African/Caribbean or Polish ethnic groups.
Exclusion criteria	Not reported
Sample size	N = 110 parents (Mothers, n = 63; Fathers, n=47)
Participant characteristics	Parents' age in years [range]: 21 to 45 years • Stratified as 21-30 and 31 to 25 years

	Ethnicity [n]: Bangladeshi = 20 Black African = 15 Black Caribbean = 9 Pakistani = 22 Polish = 29 White British = 15 Level of deprivation in ward numbers* [n]: Ward 1 = 24 Ward 2 = 18 Ward 3 = 23 Ward 4 = 19 Ward 5 = 26 Level of parental education: NR Geographical variation: NR

	Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR WARD characteristics • Ward 1 - Compared with Luton, younger ages and higher than average non-white population (majorly Pakistani and Bangladeshi) • Ward 2 - Higher non-white population, majorly Pakistani and Bangladeshi and Muslim • Ward 3 - Compared with Luton, higher than average lone parents with dependent children and predominantly White population with a recent high influx of Polish immigrants. • Ward 4 - Compared with Luton, higher proportion of Black African, Caribbean and White British populations who are predominantly Christians or non-religious • Compared with Luton, higher percentage of white Europeans and Black Africans, as well as students. Higher population living in purpose-built black of flats. The local population is younger than Luton as a whole. Higher proportion than the Luton average of non-White ethnic groups with the majority being of Pakistani and Bangladeshi ethnic origin. 2 This ward has a higher proportion of non-White ethnic groups, in particular, Pakistani and Bangladeshi. The majority of residents within this ward describe themselves as practicing Muslim (Islam). 3 This ward has a higher percentage of lone parent families with dependent children when compared with the Luton average. This ward has a predominantly White population with a recent high influx of Polish immigrants. 4 This ward has a higher proportion of Black African, Caribbean and White British residents compared to the rest of Luton. This ward is predominantly Christian or non-religious. 5 This ward has a higher percentage of White Europeans (for example, Polish), Black African compared with the rest of Luton. There is a high student population in this area and a distinctly higher proportion of the population residing in purpose-built blocks of flats.
Results	**Authors themes** • Initiation of complementary feeding ○ Professional advice versus personal preferences ○ Perceived infant readiness • Complementary foods: consistency and composition

- Cultural diet, beliefs and practices
- Commercial versus homemade food
- Influence of family and friends

- Approach to complementary feeding
  - Spoon-fed versus baby-led weaning

Study findings

Initiation of complementary feeding: professional advice versus personal preferences

Majority of mothers irrespective of ethnicity stated that they received advice from a health care professional, not to begin weaning until infant was 6 months, but most parents admitted to disregarding the. Only a few parents mentioned potential problems associated with early initiation of weaning (for example, not fully developed stomach). The most common reason for not adhering to this advice was that it conflicted with their personal views (based on intuition regarding infant readiness) and values within their familial and cultural context or previous recommended advice, such as the change from 4 to 6 months for starting weaning.

"you know you have to wait until six months to start feeding them but erm previous generations of kids it was four months so I was kind of like oh I don't know if I should wait" (page 5)

Initiation of complementary feeding: perceived infant readiness

Knowing when an infant was ready to be fed solids was based on mother's intuition and cues associated with readiness such as putting fingers in mouth, chewing, or showing interest in food.

"They said don't feed him until six months, but I felt he was really hungry, but she strongly said six months that's when you start feeding him. But I can tell he was hungry he was interested when everyone having their dinner, chewing, he was hungry" (page 5)

Some mothers especially from the Pakistani and Bangladeshi groups perceived mother's intuition as the most important factor in making decisions about infant's readiness for solid foods.

"So, these 20 years old midwives are going to come and tell me what to do, I am not going to listen to them. I respect them but I am sorry I am going to give my child [solid foods] at 4 months. I am not going to give them [solid foods] at 6 months." (page 5)

Traditional cultural practices and familial influences were particularly relevant to initiating complementary foods. For some parents, introducing complementary foods was closely aligned to traditional practices from their country of origin. Black African mothers, for example, explained that culturally, complementary foods are not introduced until infants are 6 months, as they were not perceived to be ready to swallow African foods:

"I think even culturally 6 months; because where I come from, from Nigeria, you start weaning – although with African food, like with okra, we give that to them so that they can swallow" (page 5)

However, South Asian parents were more likely to introduce solids earlier than expected according to their home country traditions, as expressed by one father:

"you slowly introduce solids like even at the age 1 or 2 months, 2 months if you feed them right, but again it's in our culture isn't it, because rice is there and then you feed them that" (page 5)

Family had a strong influence on the initiation of complementary feeding for all parents. Among South Asians, the mother and/or mother-in-law were the most influential and would often indicate when the child was ready to receive solids, usually from observations or past experiences.

"I live with my mother in law so obviously she gave me loads of tips and stuff, she said when they're about three four months, put baby rice in the milk and apparently that keeps them, that starts off the weaning process kind of thing" (page 6)

Complementary foods: consistency and composition (cultural diet, beliefs and practices)

All participants agreed to the view that complementary feeding is the transition from milk to the family's cultural diet, and was centred around slowly introducing softer foods (mostly baby rice, fruits and vegetables), adapted across all parents to reflect ethnically sourced foods and their cultural diet.

"he went for the cultural food and it was mashed banana and plantain, my boys didn't have anything English until his first birthday party" (page 6)

	Polish fathers frequently discussed how important adapting the whole family's diet was to ensure that the family foods met the nutritional needs of the infant (for example, limiting salt, spices and 'heavy foods', for example, processed meat and increasing vegetables). On the contrary, South Asian fathers who were viewed as the head of the household focused more on getting the infant used to the family's diet. So, although they will make family foods more suitable to the infant by mashing for example, they would progressively add spices (such as turmeric and paprika) to the foods to slowly get their infant used to eating spicy food. *No quote* *Complementary foods: consistency and composition (commercial versus homemade food)* The most negative views towards using commercial foods was held by Polish fathers who acknowledged that although homemade food took additional time and effort, the health benefits for the child outweighed the discomfort. However, there were some inconsistencies in the use of commercial baby food across focus groups, with Polish parents still commonly using them, although mostly during the early stages to help the infant transition from breast to solid foods: *"we had a challenge after weaning away from the breast so we started to feed him food from little jars"* (page 7) After the early stages of weaning, when challenges may have been overcome, food was homemade, usually with the fathers input and while this took much more effort, it was considered worthwhile: *"And now we started to basically cook on our own, we made ourselves some groats, we'd make them with some vegetables. We also invested in a blender and we basically made things ourselves. Most things. So, hmm, let's say that it required a lot of input and effort, but it was worth it"* (page 7) *Complementary foods: consistency and composition (influence of family and friends)* Most parents were positive about the eating practices followed by the older generations. However, some parents, mostly South Asian and White British younger parents, were more critical and suggested that their views on healthy eating were outdated. Notwithstanding, some parents felt pressured by the older ones in their circle to provide their children with the culturally traditional foods that they were brought up on, whether they felt they were healthy or not, often leading to confrontation

	"It stems from the pressure of our parents, if you try to say “We want to try to give our child XYZ” or we want to try and give them some healthy options, your father will say “what's wrong with the dal and Roti that we've been eating for the last 30/40 years? Nothing happened to us" (page 8) *Approach to complementary feeding: spoon-fed versus baby-led weaning* South Asian and Black African parents adopted spoon-feeding approaches, while White British and Polish parents strongly advocated baby-led weaning. Polish parents stated that they introduced pureed fruits and vegetables to start and then progressed their infants to solid foods to allow infants the opportunity to hold food, eating with some independence. The advantages reported of this approach was around how it enabled infants to explore different flavours and textures of foods and provided infants with more control over what they were eating and how much. *"She [child] sometimes squishes her food, plays with it but that is what it is all about, learning about different foods and their textures"* (page 8)

NR: not reported.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(No explanation of recruitment approach; No discussion of data saturation; A lack of researcher reflexivity)*
Overall risk of bias and relevance	Relevance	Relevant

Garcia, 2019

Bibliographic Reference	Garcia AL; Looby S; McLean-Guthrie K; Parrett A.; An exploration of complementary feeding practices, information needs and sources; Int J Environ Res Public Health; 2019; vol. 16; 4311

Study Characteristics

Study type	General qualitative inquiry Mixed methods but only qualitative data extracted
Country/ies where study was carried out	UK
Setting	**Setting** In-person or over the phone **Aim** • To explore CF practices of parents in North Lanarkshire, an area of high economic deprivation in the West of Scotland. • To find out where parents sourced information on CF and what type of information they needed
Data collection and analysis	**Data collection** One-to-one structured interviews lasting 10 to 15 minutes using a schedule developed between the researchers and stakeholders with questions investigating the practices, perceptions, information seeking behaviours and concerns of parents and caregivers. Interviews were recorded. **Data analysis** NVivo version 12 was used to transcribed and analysed the recorded interviews. Within the software, common themes within the text were identified and coded. Based on prevalence within the text and the importance in relation to the research question and aim, key themes were highlighted.
Recruitment strategy	Recruitment was done via • word of mouth • advertisements placed in relevant public places such as baby and toddler playgroups, local libraries and local playgrounds/supermarkets

	• online social networking sites such as Facebook and twitter
Study dates	June 2018 to July 2018
Sources of funding	Not reported
Inclusion criteria	Parent or full-time caregiver • of an infant aged between 4 and 12 months • living within North Lanarkshire • who speak English as their first language
Exclusion criteria	Parent and caregivers • of infants <4 months or >12 months of age • of infants not currently consuming any form of solid food • not living in North Lanarkshire
Sample size	N = 21 parents or caregivers interviewed A total of 64 participants took part in questionnaires survey, 21 of which were interviewed.
Participant characteristics	Parental age (n = 64): Mothers' age in years [Mean (SD]: 30 (6) Fathers' age in years [Mean (SD)]: 33 (6) Parents' age in years [range]: 20 to 57

	Infants' age in months [Mean (SD)]: 7.5 (2.5) Infant's sex [%]: Female: 47% Male: 53% Mothers' education [%] (n=62) Low (no formal education or just primary) = 6% Medium (Scottish Standard Grade and Highers - Secondary education)= 25% High (Degree or Higher education) = 66% Fathers' education [%] (n=57) Low (no formal education or just primary) = 14% Medium (Scottish Standard Grade and Highers - Secondary education) = 33% High (Degree or Higher education) = 38% Level of socioeconomic deprivation [%] (of total participants): Quintile 1 = 25%

	Quintile 2 = 27% Quintile 3 = 19% Quintile 4 = 11% Quintile 5 = 8% Note: Quintiles 1–2 represent areas of high deprivation, and quintiles 3–5 represent areas of low deprivation. The majority of parents lived in socioeconomically deprived households (52%) Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR Ethnicity: NR
Results	**Authors' themes** • Weaning practices ○ expectations versus reality ○ mothers' concerns with child's eating • Information sources and needs ○ the NHS ○ practical advice ○ need for more **Study findings**

	Weaning practices: expectations versus reality Many mothers expressed awareness of the recommended age to start weaning and expressed that they intended to wait until six months before introducing solids. However, some mothers decided not to follow them, but chose to wean earlier. *"I wanted to wean him early . . . I know the guidelines is six months"* (page 7) Mothers that waited until six months before weaning often reported that it was due to the advice received from a health professional *No quote* When mothers, particularly those who started to wean before 6 months, were prompted on why they had started weaning, the common reasons cited were hunger and an interest in foods. *"he was guzzling milk, he was up to 32oz a day"* (page 8) *"she was constantly grabbing food off of everybody else, so it was like you may as well have, you may as well start having some food."* (page 8) *Weaning practices: mothers concerns with child's eating* Allergies caused worries for the mothers and different ways in which the mothers choose to manage their concerns were highlighted. Some mothers either avoided allergenic foods completely, while others choose to introduce them slowly. *"I introduced the same foods for a number of days to make sure there was no allergies there, especially things like strawberries and things that people are prone to have allergies"* (page 8) Mothers expressed the need for more information on portion sizes for infants, explaining that they had uncertainties about how much to feed an infant which led to concerns about whether the infant was getting sufficient food. *"Portion size and things like that I was not really too sure what to give"* (page 9) *Information sources and needs: the NHS*

	Participants highly regarded the Information provided by the NHS, which was considered official government advice delivered primarily by health visitors in the UK. In Scotland, health visitors provide complementary feeding information in the form of a booklet (First Fun Foods), and 'weaning fayres' are also organised by the NHS local teams in some areas with parents invited to these. *"I did find the NHS book quite helpful just knowing what to give, what not to give"* (page 9) Some participants noted that weaning information changes rapidly, even between pregnancies and felt that their health visitors did not keep as up to date with these changes. Therefore, the participants referred directly to the website instead. *"The NHS website is very up to date, but I just think there's a wee bit of, maybe the people who are out in the community do need to catch up with the current information a wee bit because it doesn't seem to marry up."* (page 9) *Information sources and needs: practical advice* Participants lacked awareness of weaning classes in local areas. The few who knew and attended discussed receiving information on practical elements such as the difference between commercial and homemade foods. *"not that there was any class that I really saw that was available to be honest, because I maybe would have considered it if there was"* (page 9) *Information sources and needs: need for more information* Mothers commonly reported turning to online sources for information as they felt information received from health visitors was insufficient. They particularly reached out to other mothers and friends online through various forums and Facebook groups, specifically local ones. *"it's a really big Facebook page, it's got 2500 members and it's all local mums that's on it."* (page 10) Mothers reported sharing tips and advice with others via these groups and viewed it as an easier and faster way to obtain information, rather than waiting for a health professional to get back to them. *"It's easier to access as well, its quicker to access information online than it is to contact a health professional about it and wait until they get back to you"* (page 10)

CF: complementary feeding; NHS: National Health Service; NR: not reported; SD: standard deviation.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Serious concerns *(Lack of justification for data collection; No discussion of data saturation; A lack of researcher reflexivity; Concerns regarding data analysis)*
Overall risk of bias and relevance	Relevance	Relevant

Goldsborough, 2016

Bibliographic Reference	Goldsborough, N.; Homer, C.; Atchinson, R.; Barker, M.E.; Healthy eating in the early years: A qualitative exploration of food provision in the childminder setting; British Food Journal; 2016; vol. 118 (no. 4); 992-1002

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	UK
Setting	**Setting** Child-minder's homes

	Aim To examine the factors impacting on current food practices of child-minders.
Data collection and analysis	**Data collection** Face-to-face semi-structured interviews lasting 15 to 90 minutes (average 30 minutes) using an interview schedule developed with the support of key stakeholders. An adapted ethnographic approach was also used to observe the childminder's food practices as full immersion in the research setting was not possible due to practical reasons. Therefore, direct observation of childminder's food preparation and serving practices was undertaken where this was ongoing while the researcher was present and recorded in field notes immediately after leaving the childminder's home. Details of food provided over a 7 day period was collected if the childminder had a menu plan. All interviews were digitally recorded and transcribed. **Data analysis** Qualitative thematic approach involving the development of an initial set of codes from the interview transcripts and field notes, using a deductive approach from pre-existing questions and theory and an inductive approach from the data itself. NVivo 10 software was used to map codes and develop themes. This involved identifying any associations between themes and discussing the meaning of the data with other research team members. An on-going iterative process was adopted where emergent themes were explored in more detail in subsequent interviews.
Recruitment strategy	Participants were recruited using purposive sampling and convenience sampling approaches. The Early Years and Childcare Team at Rotherham Metropolitan Borough Council (RMBC) who held the names and contact details of all registered child-minders on a secure database identified childminders who had agreed for their details to be shared and sent them a letter inviting them to take part in the study. Only 1 childminder responded to the letter of invitation. Therefore, childminders were thereafter contacted by telephone to see if they were interested in taking part in the study.
Study dates	April 2013 to August 2013
Sources of funding	Not reported
Inclusion criteria	Not reported
Exclusion criteria	Childminders who had not agreed to share their details with Rotherham Metropolitan Borough Council.
Sample size	N = 8 childminders

Participant characteristics	Not reported
Results	**Author's themes** • Food and drink provision in the childminder setting o Routine of care and time constraints o What do children eat? • The childminder as a provider of healthy food o Healthy eating knowledge o Source of knowledge - Guidelines and training - access to support • The childminder-parent relationship o Partnership - the importance of communication **Study findings** *<u>Food and drink provision in the childminder setting - Routine of care and time constraints</u>* Childminders often found it impractical to plan meals in advance due to day-to-day changes in routine of care which resulted in variability in demand for provision of meals and snacks. *No quote* Some child-minders sometimes supervised children's consumption of parent-provided food, while others discouraged parents providing food to their children to avoid "conflict" among the children. *"First day she turned up with yoghurt and a packet of crisps – I says I can't give her the 201 crisps cos I've not got a packet of crisps for everybody else and I don't provide those"* (page 8) Many of the child-minders reported that due to the different schedules of the children within their care, the time they had available to cook was impacted... and reported serving foods such as "fish-fingers for ease"

"Yeah it's (food provision) influenced with time as well, because obviously I can't spend a lot of time in the kitchen when I'm meant to be looking after them…" (page 8)

Food and drink provision in the childminder setting - What do children eat?

Children's preferences for foods was the major driver for food provision in many of the childminder settings.

"I try to mix it up, you know and erm so either fish fingers or cos to be honest I think well yeah you could prepare the most healthy meal in the world and they'll just sit and look at it and think what on earth is that and they just wouldn't eat it." (page 9)

Most childminders tried to encourage children to eat by using tactics such as, hiding vegetables *"so they don't tend to know it's there";* presenting food in creative ways such as *"salad caterpillars"*; or children were *"encouraged just by saying if they eat their tea they get pudding"*. (page 9) Quotes within text.

The Child-minder as a Provider of Healthy Food - Healthy Eating knowledge

Most participants recalled headline messages such as *"five-a-day"* and *"balanced diet",* and showed a good understanding for children <2 years to having full-fat milk and older children having semi-skimmed. Most childminders also referred to *"portion control"* and some discussed the need for younger children eating *"little and often"*. However, only 2 childminders discussed salt levels and 2 participants were unable to answer the question about what they understood by healthy eating. (page 9)

Quotes within text

The Child-minder as a Provider of Healthy Food: Source of Knowledge - Guidelines and Training- Access to Support

It was noted by the childminders that food did not feature much in guidance. Childminders had either not seen any guidance for healthy eating in younger children <5 years, had seen but did not apply them, used their personal experiences of dieting or used guidance for school-age children, which are inappropriate for pre-school children.

"regarding guidelines for food and things I mean to be fair I don't really see a lot of that in the EYFS, I see nothing in the EYFS regarding food…. I don't actually think it says enough – I don't think it really hits the mark" (page 10)

	Childminders expresses a desire for more training and support to include menu ideas and appropriate portion sizes of foods. Other areas identified were guidance around feeding babies and providing weaning foods. *No supporting quotes* Childminders reported feeling isolated, but acknowledged that the local authority could be contacted for support if necessary. Some participants reported attending local network groups where they received support from peers. However, the structures of the groups varied. One participant reported: *"all the onus is on you – the onus is on you to research it, read up on it, find it, apply it and just basically muddle your way through it"* (page 10) *The Child-minder-Parent Relationship: Partnership - the importance of communication* Child-minders described that they are commitment to working in "partnership" with parents. All childminders conducted an induction with parents where they had discussions about parents food preferences as well as explained to parents any practice policies regarding food provision, for example not allowing sweets. Some childminders were explicit – *"I have rules and I don't bend them for anybody really"*; but many were of the opinion that the parents had the ultimate authority and responsibility for providing healthy food: *"…if they really really do not like it and they will not eat it and it's somebody else's child, I think well you know you can't force them to eat it cos it's not your child, but if it's my own I'd treat them a little bit differently."* (page 11)

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns *(No discussion of data saturation)*
Overall risk of bias and relevance	Relevance	Relevant

Goldthorpe, 2018

Bibliographic Reference	Goldthorpe, Joanna; Ali, Nazneen; Calam, Rachel; Providing healthy diets for young children: the experience of parents in a UK inner city.; International journal of qualitative studies on health and well-being; 2018; vol. 13 (no. 1); 1490623

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	UK
Setting	**Setting** Quiet area of the venue where participants were recruited (for example Sure Start children's centres, community parent and toddler group) **Aim** To explore parent’s experiences of providing a healthy diet for children of pre-school age (under 5 years)
Data collection and analysis	**Data collection** Face-to-face semi-structured interviews typically lasting 20 minutes, using topic guides informed by relevant literature. Interviews were audio recorded. **Data analysis** Recorded interviews were transcribed by one author to improve familiarity with the data, and analysed using thematic analysis. Emerging issues and themes were identified from the data using an inductive approach. Consistency in the

	analysis process and ensuring the data was based on evidence from the data was achieved using a constant comparative method. Coding and analyses, as well as interviewing were carried out simultaneously by one author and by another author following interview completion. Themes were refined in discussion with the 3rd author. NVivo was used to organise the data.
Recruitment strategy	Opportunistic sample from 2 x Sure Start children's centres and a community parent and toddler group set in a church.
Study dates	Not reported
Sources of funding	Industry funded (TESCO PLC)
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N = 20 parents/caregivers
Participant characteristics	Parent/caregiver's age in years [range]: 23 - 44 (Ages unknown, n = 5) Child's age [range]: 9 months - 5 years IMD score [n]: High = 18 Medium = 2 Low = 0 Note: Area deprivation ranking was generated based on Lower layer super output areas (LSOA's) in England. The score is based on measuring education, income, employment, health, crime, housing and living environment.

	Parental education: NR Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR Ethnicity: NR
Results	**Author's themes** • Information and education • Barriers ○ Having a child with special needs ○ Children's food preferences ○ Using food to promote desirable behaviour • Techniques to overcome barriers ○ Household rules and routines ○ Setting limits and parameters ○ Modelling and food preparation **Study findings** *Information and education* Participants discussed that their upbringing and family practices/habits influenced and informed their approach to feeding their children. Family members' advice and habitual practices was usually supported by health professionals, who reinforced positive messages about preparing food from scratch:

"My mum told me, “make your own food, don’t buy from a shop, always make at home”, that’s why I make fruits, vegetables, I cook myself and that’s why the doctor says, “your daughter is very healthy”" (Page 4)

Barrier: having a child with special needs

Parents of children who had special needs highlighted certain difficulties with providing a healthy balanced and varied diet to their children. The concerns were higher when there was a perceived lack of specialist information and advice for children with unusual dietary requirements. Parents reported that they needed to adjust to the requirements of the child and be more accepting of different approaches to feeding in the context of their child's condition.

Has [feeding child fruit and veg] been difficult? (Interviewer)

It sort of has, I mean, she’s an autistic child as well so she knows what she wants and if she doesn’t get it then it can be hard work (participant 7)

Have you had any help with that, with managing that? (Interviewer)

We’ve been to them, the weight management clinic, but it’s alright people telling you what to give them, but her doing it and her wanting to do it is different (participant 7) (page 5)

Barrier: children's demands for preferred foods

Parents reported that children of all ages make their preferred foods known, which are usually foods high in fat, sugar and salt, and often refused to eat certain foods such as vegetables. Some parents accepted this as a limitation and adapted to their children's preferences:

"I try to give her like broccoli and stuff but she just won’t touch it, she literally gags on it so, she eats what she wants to eat" (page 5)

Barrier: Using food to promote desirable behaviour

Parents described using the children's preferred foods such as biscuits, sweets and rice cakes to manage crying and tantrums, in order to avoid potential judgement or attention from strangers and to adhere to perceived social norms. As a

result, in certain contexts where strangers are in close proximity such as travelling on public transport, parents find it challenging to restrict the amount or type of foods offered to their children:

"Yeah, well in public especially, not so much at home, but in public yeah because you just want him to be quiet, if we're on the bus or whatever and he's screaming for more rice cakes, you're just like, "oh go on then", you don't want to upset all the other passengers do you?" (page 6)

Techniques to overcome barriers: household rules and routines

Rules and routines are structures put in place for members of the family to know what is expected and permitted within the family home. Participants reported that they felt parents have the responsibility to control and monitor what their children eat, and therefore viewed restricting food (usually foods high in salt and sugar) as desirable:

"I think, if you don't want them to eat things you don't introduce them in the first place, none of my grandchildren drink juice, they don't even know what it is, they never have it . . .it's us that introduce the food, we're in charge of what they eat, not them" (page 6)

Techniques to overcome barriers: setting limits and parameters

This theme differs from household rules and routines because it extends beyond the home. Foods high in sugar, fat and salt were often called 'treat' foods and only permitted under certain conditions.

"We will have the odd treat night . . . anything processed with sugar in I won't give them that, if they have sugar it's a treat" (page 6)

Techniques to overcome barriers: modelling

Participants had an understanding that children may be encouraged to eat healthier meals if they observed their parents doing the same.

"We have friends, you know, and let's say we've seen them doing this with their children, they are drinking coke and they say to the child, "oh you're not drinking coke it's not good for you", well when the child sees you drinking coke then [they think], "how is it not good for me?" It's hard to say, "no". If they see you eating fruits obviously they would like eating fruit, rather than sweets" (page 7)

	Techniques to overcome barriers: food preparation Participants reported various methods used while preparing food to increase healthier food consumption and also improve nutrients contained in food, such as reducing the amount of salt and sugar in foods, replacing frying with baking or grilling, homemade alternatives for takeaways, disguising vegetables to improve acceptability and other methods to increase calories in underweight children. "*We do have little techniques to boost the calories, like I will put a spoonful of oil in with her food to increase the calories . . . I will put polenta in with her soup or couscous so she has more roughage"* (page 7)

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(No description of data collection; No discussion of data saturation)*
Overall risk of bias and relevance	Relevance	Relevant

IMD: Index of Multiple Deprivation; NR: not reported.

Hayter, 2015

Bibliographic Reference	Hayter AKM; Draper AK; Ohly HR; Rees GA; Pettinger C; McGlone P; Watt RG.; A qualitative study exploring parental accounts of feeding pre-school children in two low-income populations in the UK.; Maternal and Child Nutrition; 2015; vol. 11; 371-84

Study Characteristics

Study type	General qualitative inquiry

Country/ies where study was carried out	UK
Setting	**Setting** Focus groups at selected children's centres, and interviews at participants' homes **Aim** To explore, parents' perceptions of feeding their children in two low-income populations (one rural and one urban) in the UK
Data collection and analysis	**Data collection** 4 x focus groups, each lasting an average of 54 minutes, led by a facilitator and an assistant and using a topic guide, which was initially developed and piloted with a group of 12 parents, and thereafter amended with minor changes. Focus groups began with an icebreaker - a modified version of 'Circle time', where participants were asked to discuss their views on some examples of processed foods and drinks marketed at young children. 4 x Interviews with families living inn very remote areas with limited access to local services such as children's centres. Interviews were arranged by a health visitor, who accompanied the researcher to conduct the interview. The same topic guide used for focus groups was used for individual interviews, with the addition of questions relating to access of support and services. Interviews were digitally audio-recorded. **Data analysis** Recorded interviews were transcribed verbatim and checked for quality, coded in Microsoft Excel. Framework analysis was used to analyse the data with the aim of keeping the integrity of the data and reduce fracturing. Richie and Spencer's (1994) approach to framework analysis was used. Thematic codes were deductively generated from question asked during data collection, with additional specific codes emerging upon indexing the data, which were used to generate subcategories inductively. Throughout the analysis process, the framework was updates to fit the data, allowing themes to be identified both within and across interviews.
Recruitment strategy	Participants were selected from 2 contrasting and diverse income populations (Cornwall and Islington) and sampling was carried out first as clusters (children's centres) and then individually within each cluster. Children's centres were purposively

	selected using a maximum variation sampling approach based on a subjective assessment of their engagement with nutrition-related activities. An additional selection criteria (geographical location - North and South of the county) was used in selecting children's centre at Cornwall due to having a larger land area and population. Within each children's centre, posters were displayed and staff within the centres aided the process of recruiting participants, with particular effort made to recruit participants who were considered vulnerable, in need of support or socially isolated by the centre staff.
Study dates	September 2009 to December 2009
Sources of funding	Not industry funded
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N = 39 Focus groups, n = 33 Interviews, n = 6
Participant characteristics	Parent's age in years: NR Children's age in months [Range]: 18 - 39 Parent's education: NR Level of socioeconomic deprivation: NR Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR

	Ethnicity: NR
Results	**Author's themes** • Affordability of food • Time constraints • Supermarkets, food shopping and food marketing • Lack of cooking skills and confidence • Parental role modelling • Family influences and challenges to parental practices • Peer influences • Fussy eating • Food waste **Study findings** *Affordability of food* Parents reported often being unable to afford food and a recurrent and dominant conversation was the need to manage on a limited budget. Some coping strategies were identified with respect to this including prioritising unavoidable expenses such as nappies and rent over some foods. *"If I've got to spend £20 on nappies, the food has to suffer that week"* (page 375) Many parents perceived 'healthy food' as being too costly, for example: *"Having fresh fruits and vegetables on a daily basis is expensive"* (page 375) *Time constraints* Parents expressed that they were often conflicted between knowing what they want to do with respect to providing food for their children and what was possible within the confines of their busy, working lives. As a result, preparing food from scratch suffered.

	"I work three 12 hour shifts a week and by the time you get in . . . I'd love to have things all prepared but I'm working, I'm so tired . . . on a Wednesday when it's my first day off I'm so exhausted from doing all those hours in three days that I try my best just to make sure, you know that I spend time cooking, but you don't always get time to prepare" (page 376) *Supermarkets, food shopping and food marketing* Parents suffered from 'pester power', as their children try to pressure them into buying unplanned items not on their shopping list... some of which appeared to be directly resulting from advertising aimed at children. Of Haribo sweets, one parent said: *"I think when [sweets are] obviously in the shops and advertising them and [the children] can see them, it makes it very hard obviously to get away from that with them demanding things like that"* (page 377) *Cooking skills and confidence* Parents who felt that they lacked the confidence to prepare a healthy meal often reverted to ready-made, convenience foods instead of cooking from scratch: *"The confidence I think could be [a barrier to providing healthy food], yeah, thinking, oh my goodness I'm going to mess that meal up, I'm going to go for the easy option"* (page 377) Acquiring cooking skills was often linked to culture and upbringing with some parents expressing they had the knowledge of healthy foods and how they are prepared by reason of their childhood experiences. *"We're traditional, I like to spend a lot of time cooking. I'm always cooking' (CW2) and 'my mum used to cook all the time . . . so we know how to cook, it's just I think a lot of it is down to laziness as well isn't it?"* (page 377) *Parental role modelling* The participants were in agreement that parents should not expect their children to eat foods that they don't eat, neither should they be eating foods that their children aren't allowed to eat. *"We want our children to have the best food and I've learned that children do copy us . . . when your husband is having chocolate it's not fair to expect your child to have banana or fruit"* (page 378)

	Family influences and challenges to parental practices Parents reported that other family members such as ex-partners and grandparents often offered children unhealthy foods as a way of spoiling them, particularly when their contact with the child was not very often, which led to parents feeling concerned and frustrated about their efforts to model healthy eating behaviours. "*If they're at their dad's or their gran's, they eat just junk food all the time, because they don't like to say no, they like to spoil them as much as possible"* (page 378) *Peer influences* Parents reported that their children's eating habits were highly influenced by other children, both positively and negatively. They get encouraged to try new foods after seeing other children eating them, particularly at nursery or school: "*[my daughter] is eating a lot more vegetables now since she's started school dinners because she's seeing other children around her eating them (CW1) and she's slightly better at school because they've got all their friends. And they're all [eating], aren't they?"* (page 378) *Fussy eating* Most parents reported that their children displayed some fussy eating and discussed fussy eating at length: "*They don't really eat hardly anything (CW2), I can't find a way where I can just give it to her and make her enjoy the fruits and veg (IS1), and she doesn't eat dry food. But she wouldn't eat a puree either. I couldn't make her a puree, she wouldn't eat it . . . she'd just fling it across the floor . . ."* (page 379) *Food waste* Parents voiced expressed their concerns about food (and money) waste as they discussed their approach to feeding fussy eaters when on a limited budget. An approach some parents adopted was to stop offering food that had been previously refused to their children: *"I'll stop buying something if they spit it out once because we don't want the waste"* (page 379)

NR: not reported.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(No discussion of data saturation; A lack of researcher reflexivity)*
Overall risk of bias and relevance	Relevance	Relevant

Isaacs, 2022

Bibliographic Reference	Isaacs, Anna; Halligan, Joel; Neve, Kimberley; Hawkes, Corinna; From healthy food environments to healthy wellbeing environments: Policy insights from a focused ethnography with low-income parents' in England.; Health & place; 2022; vol. 77; 102862

Study Characteristics

Study type	Ethnographic Semi-structured interviews, shop-along interviews and photo elicitation
Country/ies where study was carried out	UK
Setting	**Setting** Neighbourhoods with similar socioeconomic characteristics within 3 considerably deprived areas of England (Great Yarmouth, Stoke-on-Trent and Lewisham) with higher than average childhood obesity rates. **Aim** • To understand how families in areas of low income experience their food provisioning environment (FPE) • To understand how families' structural contexts (socio-cultural, economic) shape their use of the FPE

	• To understand how FPEs shape food practices and vice versa?
Data collection and analysis	**Data collection** 60 x Semi-structured interviews lasting between 30 and 70 minutes, using an interview guide. The interview guide was amended as interviews progressed to explore emerging areas of interest in more depth. Additional topics considered relevant to the food provisioning environments and context within each area were equally added. Field notes were recorded following each interview. Interviews were audio recorded. 22 x Shop-along interviews, which required the participant to guide the researcher around one or more shops that they chose, in order to add context to what had been discussed during the interviews. 58 x photo-elicitation exercise, where participants took photographs of things that made buying preferred foods for their families easier or harder. **Data analysis** Verbatim transcripts of audio recordings of the interviews were produced and combined with field notes as data for analysis. An iterative thematic analysis was used to analyse the data using the NVivo 12 software. two authors independently read the first 2 transcripts noting key ideas and then together, they developed a coding framework with 118 codes and subcodes that were applied to the next 2 transcripts to check for any missing ideas. Thereafter, only one author completed the coding for the rest of the interview transcripts, and added any new codes over time. Codes were then grouped into themes.
Recruitment strategy	A purposive sampling approach involving participants recruited via: • direct engagement with community events and activities within neighbourhoods of each study site, in venues such as libraries, shops selling highly discounted produce and community playgroups. • posting flyers around targeted neighbourhoods • snowballing
Study dates	During 2018 and 2019
Sources of funding	Not industry funded
Inclusion criteria	• Resident in one of the specified neighbourhoods • Living in the 20% most deprived postcodes in England OR not currently in work*

	• Aged over 18 • Parent of a child in school or nursery • Primary shopper
Exclusion criteria	Not reported
Sample size	N = 60 parents Great Yarmouth, n = 20 Stoke-on-Trent, n= 19 Lewisham, n= 21
Participant characteristics	Parents' age in years: NR Child's age: NR Ethnicity: Great Yarmouth site: Mostly British Stoke-on-Trent site: 25% first generation South Asian immigrants Lewisham: Ethnically diverse

	Employment [n]: Unemployed = 36 Level of socioeconomic deprivation: NR Parental education: NR Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR
Results	**Author's themes** • Participant characteristics and practices • Food purchasing across the case study sites • In the context of limited food budgets, parents drew on tools to navigate FPEs o Food shopping was prioritised for certain times in the month o Items were sought out where they were cheapest o Certain products were bought if there was a deal • In the context of limited opportunities for affordable activities parents use FPEs to meet social and emotional as well as food needs o FPEs offered access to affordable treats o FPEs enabled social engagement and activities • In the context of unhealthy food shopping environments, parents face tension in attempting to balance multiple needs

Study findings

Participant characteristics and practices

The participants discussed with emphasis the importance of their children's general wellbeing and most expressed their preference for a healthy diet for their children. For some, their value for nutrition meant that it dominated their feeding choices, and for most families, it was simply one of many other factors that determined food choices. Majority of the participants combined using pre-prepared meals and snacks with home-made meals, which they perceived as ideal. Reasons for their preferences included family norms, cultural backgrounds, transmission of values, time and cost. (page 4)

No quotes

Food purchasing across the case study sites

Participants reported having very routine lifestyles where they only travelled between home, school, play groups and work, for those that had a job. Takeaways were not routinely purchased and considered a treat by the majority. Food banks had been used by some of the participants previously but did not make up a core part of their FPE. However, for many of the participants, affordability of food was considered a challenge especially getting close to the end of the month, with many using surplus food stores as a means to overcome this challenge. (page 4)

No quotes

Food provisioning environments were different by study sites as reflected by the shopping practices of participants. In Lewisham, purchasing from the local market, especially for those looking for their traditional foods, had an important role to play, whereas in Great Yarmouth, tourists and residents overlapped, making snacks popular with tourists more readily available. In Stoke-on-Trent however, participants were at least 1 mile away from their nearest full-service supermarket, which made access to shops on foot more challenging than at the other 2 locations. (page 4)

No quotes

In the context of limited food budgets, parents drew on tools to navigate FPEs - Food shopping was prioritised for certain times in the month

	Managing on a low income was a dominant theme discussed by participants, which shaped when, how and what they purchased in order to remain within budget. For example, scheduling shopping to align with particular time in the budget cycle, which may mean they had to delay shopping or rely on frozen products until they receive another bout of money. *"Because I work part-time and obviously being on benefits as well. So I would do shopping a few times a week. I don't do a massive shop. I'll just get, say I get money on Monday, for example, then I'll buy a bit to last from Monday to Thursday. And then obviously when I get money on Thursday, then I'll buy a bit to last from Thursday to Sunday"* (page 4) Recent changes to receiving benefits in England, where payments are now received monthly further challenged pre-established practices of some participants, creating stress and anxiety. *"I definitely find it a lot harder, because I got everything on a Tuesday before, so it was easier to budget. So, you run out of more, don't get me wrong. But yes, you just struggle through, don't you? A lot of my freezer stuff lasts, it's more cupboards and fridge things, they just go like no tomorrow (…) It is definitely like, you can feel the end of the month feeling, the pinch, as I say"* (page 4) *In the context of limited food budgets, parents drew on tools to navigate FPEs - items were sought out where they were cheapest* Participant knew the prices of foods across different shops and would often visit multiple shops in a single shopping trip to attempt to get the cheapest prices for the foods they purchase. They adopted practices such as switching up their regular buying stores if they felt they could find the food cheaper elsewhere on a given day, frequented discount shops or stores selling supermarket surplus, and shopping together to share minicabs back home, in order to stretch the family budget. Despite the work involved in obtaining food in this manner, it was considered a necessity and a source of pride to have such knowledge. *"If you are money conscious you have to, like me I know the where to get certain things, I know where I can get them cheaper. I know that I can get this, so I tend to do that."* (page 5) Participants considered value-for-money to determine where to purchase products, which went beyond price alone but included whether it was likely to be eaten or wasted and the cultural value assigned to the food. *"Yes, the green banana. The supermarkets have it, but these here [in the market] are more cheaper, I feel, and you get more for your money. And the green bananas, they're more healthier"* (page 5)

	In the context of limited food budgets, parents drew on tools to navigate FPEs - certain products were bought if there was a deal Participants looked out for deals, mainly to be able to get preferred foods at a cheaper rate. One participant reported buying certain products only when they were on a discount and saving them up until she had all the ingredients to make a full meal of choice. This way, she could satisfy her desired without going over her budget. *"I'll make a list, and I'm thinking, and I'll go in, oh, that isn't on offer this week is it, so I'll sack that, I'm not buying that. When I buy things like, if I saw the Dolmio [on offer], I will buy that, and then maybe the following week I'll go get some mincemeat. I'll say, oh, I've got them jars of Dolmio so I do use them"* (page 5) *In the context of limited opportunities for affordable activities parents use FPEs to meet social and emotional as well as food needs - FPEs offered access to affordable treats* The study sites had a variety of options for tasty and inexpensive snack foods such as biscuits and ice cream, which allowed participants to opt for more affordable options that could take the place of treats such as holidays that seemed out of reach. *"it's the only place in Yarmouth that sells real Jersey ice cream ... yes. Being on holiday times and I'm glad, in a way, because I've not got the money to go to Jersey every year like my mum did and that. So, I thought I won't miss out, because I'll just go to this place"* (page 5) *In the context of limited opportunities for affordable activities parents use FPEs to meet social and emotional as well as food needs - FPEs enabled social engagement and activities* When participants were unable to obtain some aspirational activities, they replaced these with foods, usually less healthy foods and use the place of purchase as a route to social activities and social connection they may have struggled to get otherwise *"Everything involves money. No. Like for example, I wanted to take Danny for his fifth birthday to soft play, but I thought about the money. I thought, I can't just call people and say, come. I have to pay for the kids as well, so I was like, you know, just forget it. Whenever that I have enough, then I'll take him. So nothing's free, nothing. Apart from the park. Nothing is free. Nothing else is free."* (page 5)

	Mothers found ways to provide their children with enriching activities by sticking to a routine or ritual to incorporate such activities into their lifestyles regularly, such as taking a ride on the bus once a week to get a discount voucher for McDonalds for the family. There were solutions provided within FPEs despite the financial pressures families experienced. However, this could sometimes be difficult for families with varied ages of children or interests, and for one mother, although preferring healthier foods ideally, having the weekly snack and takeaway night was the way found for her and her children to come together. *"Yes, we have one night a week on a Saturday night is our, it's called family night, we go to the Chippy normally. Sometimes we'll have kebabs or pizza or something like that, but normally it's the Chippy. That night we'll eat chocolate and crisps and watch a film or play a board game or something. We try to do it once a week because although they're in the same house you don't always see each other. Like I said 14 year olds in her bedroom on her phone, you hardly say hello to her some days."* (page 5) *In the context of unhealthy food shopping environments, parents face tension in attempting to balance multiple needs* In the presence of such financial pressures, it became clear that FPEs provided a variety of products to meet different family's needs. However, which fall within the tight budgets and are largely available were often products could be those generally high in fat, sugar and salt. *"We just went to the shop, just then and they've got big bags of crisps, £1.50 for two and they're normally £1 each and then, they'll do Haribos, two for £1.50, the really big packets and stuff like that. It's mainly the stuff that they're saying, oh, we don't want people eating. We want everyone to eat healthy but then, they've put all the healthy stuff up and kept all the crap stuff really cheap. What do they expect people to be able to afford?"* (page 6) The food environment also created conflicts between parents and children who were being drawn by the marketing unhealthy foods, and making demands for them. Parents often felt helpless and gave in to their children's wishes to avoid tantrums from their children or themselves having feelings of guilt. *"As a parent for the second time around, I'm beginning to understand why they wouldn't want things like McD's posters everywhere. I'm beginning to understand the logic behind it. Other than, okay, yes, it's unhealthy. It's just your kid will cry all the way home saying they want McDonald's instead of having something substantial and proper to eat"* (page 6)

NR: not reported.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(A lack of researcher reflexivity)*
Overall risk of bias and relevance	Relevance	Partially relevant *(Study is not entirely focused on children but on family experiences.)*

Jolly, 2018

Bibliographic Reference	Jolly A; 'You Just Have to Work with What You've Got' Practitioner Research with Precarious Migrant Families.; Practice; 2018; vol. 30 (no. 2); 99-116

Study Characteristics

Study type	General qualitative inquiry Semi-structured interviews
Country/ies where study was carried out	UK
Setting	**Setting** Not reported **Aim** • To understand the experiences of food poverty for families who were at risk of destitution because of their immigration status

	• To identify transferable learning for practitioners to improve social work and social care practice with this service user group
Data collection and analysis	**Data collection** 6 x Semi-structured interviews using interview schedules eliciting information around themes of food, access to services and children. **Data analysis** Inductive content analysis was used for analysis and data was sorted into 12 categories using open coding
Recruitment strategy	Parents who attended play sessions at the researcher's place of work were invited to take part.
Study dates	Not reported
Sources of funding	Not reported
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N = 7
Participant characteristics	Not reported
Results	**Author's themes** • Low and irregular incomes prevented healthy eating • Lack of cooking facilities prevented parents providing a balanced diet • Opportunities to grow food were valued • Saving money and making food last was essential for survival • Lack of transport made getting cheap food more difficult • Accessing food aid was linked with feelings of stigma and shame. • Use of fast food restaurants as play areas • Unfamiliarity with education system *(No relevant theme identified)* • Not having recognised ID created barriers to accessing health provision

- Improvised solutions to lack of healthcare access *(No relevant theme identified)*
- Disappointment and frustration with social workers
- Bargaining and questioning the decisions of welfare gatekeepers *(No relevant theme identified)*

Study findings

Low and irregular incomes prevented healthy eating

Interviewed parents expressed that they felt concerned about being able to provide nutritious foods for their children.

"A typical diet is just a bellyful, it can't be something where you're gonna think healthy options, it's just something to fill you up really" (page 101)

One participant expressed strong views about her food intake in the presence of improved finances.

"If I had the resource, more fresh fruit and vegetables, and … a cleaner diet really, and more cleaner living, at the moment you just have to work with what you've got." (page 101)

Lack of cooking facilities prevented parents providing a balanced diet

Facilities available significantly impacted on the food consumed by the families. For example, a parent described living with her child in an accommodation provided by Children's service, which was a single room with a rice cooker and table top hob, and concerns around such living conditions increased feelings of isolation and inadequate diet.

"When I say I cook, it sounds hard to cook in a room, but trust me, I cook in that room - it's hard to live in, and sleep in and using the toilet and cooking in the one room…" (page 102)

Opportunities to grow food were valued

Participants referred to food consumed in their childhood years in their countries of origin as being healthier than what is available to their children in the UK and regretted not being able to access this for their children. They highlighted the possibilities of being involved in gardening project at their local community centre as a way to reconnect with their home country and childhood experiences, as well as get access at little or no cost to fresh fruits and vegetables to supplement their diets.

No quotes

Saving money and making food last was essential for survival

Insufficient income to purchase food was an issue that the participants had to contend with. For some, it meant going without food so that their children could eat:

"that's what I eat, whatever he's left over, or otherwise I just get some smart price noodles or bread, 40p bread. I don't look for my food, food I'd like, just whatever is cheaper, I'll get it." (page 103)

while others found resourceful ways to make the little they have go a longer way.

"If I buy a chicken, that will last a whole week, so it's cheaper for me if I buy my meat like that, or if go to the food bank and they give me rice, that will last me two weeks" (page 103)

Participants described the monotony in eating the same food repeatedly and expressed how challenging it gets to keep repetitive food interesting for children. They reported regularly consuming supermarket's brand of instant noodles as it was the most affordable option available at 20p per pack and discussed actions taken to keep it interesting for their children.

"He loves noodles, and he'll have noodles all the time, but then I'll look at noodles, and I could add some vegetables, or I could have some chicken, it depends on how he has his noodles" (page 103)

Lack of transport made getting cheap food more difficult

Families living in areas without a nearby supermarket found it challenging to access cheaper food alternatives due to distance. Without access to funds for a bus ticket, finding such affordable foods may require long walks - up to a 45 minute walk one way to save £2 on bus fare

"Where I'm at right now, there's not really any supermarkets, the closest one is Morrison, and I still have to take a bus. Where I was previously I could walk to Asda, and I'm saving £4 there, so now I'm gonna have to kinda evaluate things… like today, I come out, I have to use a bus pass. I need to make sure that whatever I have it can serve me until whenever I'm coming back out because if I have to come out tomorrow or come out Sunday, that's £4 out of a hundred pound" (page 104)

Accessing food aid was linked with feelings of stigma and shame.

Participants reported accessing foodbanks but expressed unease about using emergency food aid.

"It wasn't something that I ever thought I'd have to do...I think how the public who doesn't have to go through it portray it makes you - even when you want the help - wouldn't want to go there" (page 104)

One participant reported relying on food banks to supplement what they were able to buy from shops but sometimes got foods they were unfamiliar with and had to work around.

"You get a voucher to go and get some tinned stuff, and the tinned stuff they're giving you, we don't even, we've never ate them before, it's like [sigh] you've just got to take what you've been given, we've got no choice." (page 105)

Use of fast food restaurants as play areas

Parents were sometimes pressured by their children to purchase foods from fast foods restaurants, which ordinarily was an added expense. However, one parents explained how such added expense could translate into being a good use of limited funds

"He has a treat on a Wednesday after we finish play centre, go into town, and he can get a MacDonald's, or he can get a sandwich or something like that… even though I might say 'let me go and buy a packet of chicken nuggets for a pound' sometimes your child don't want it when you do it at home, when I sit in the environment and enjoy the environment and stuff like that… it is tough, but you just have to be wise in dealing with it, you just have to know how to balance things" (page 106)

Not having recognised ID created barriers to accessing health provision

All interviewed participants were registered with a GP but they described hidden barriers encountered in the absence of a regular address, official ID such as a British passport, utility bills or a driving licence, which often led to inappropriate acute hospital admissions.

"They said, lady, you have to go home and give us a call tomorrow morning…and make an appointment, but what if I don't have a phone to phone you from tomorrow because I don't have credit… I've been out of credit for the last two months, and they said, you know 'it's not our problem', so I said, 'that's a crap surgery' I should move to another one. I went to this new surgery, and they asked me NHS number, bills, you know, lots of documents. It's only changing a doctor - I'm not applying

	for a bank loan or a mortgage! They ask all these questions, and I'm like… what England has become to! You know what I mean? Why do you need a bill to register with a doctor? …. So, I said no. I say to the crap one, if something happens, I just go to the emergency room. I live across to the hospital; I'll just be in the hospital all day. I'll just be in the hospital! It's very stressful you know" (page 107) *Disappointment and frustration with social workers* While participants had a mixed view of their experiences with social workers, one participant described feeling pleased with the support received from Children's services but felt concerned about the time it took before anything was actioned following the referral, during which period the family has no income at all. *"It's like proving to them that we're destitute, or we've got no food or proving to them that we're homeless, it's like proving things before they actually try to help."* (page 108)

GP: general practice; ID: identity.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(No description of data collection; Ethical approval not described; No description of data analysis)*
Overall risk of bias and relevance	Relevance	Relevant

Jones, 2023

Bibliographic Reference	Jones, Eliza; Burton, Amy E; Exploring Vegan Mothers' Experiences of Making Food Choices for Infants and Young Children.; Journal of nutrition education and behavior; 2023; vol. 55 (no. 9); 624-633

Study Characteristics	
Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	**Setting** Interviews were conducted on Microsoft Teams. **Aim** Our study aimed to explore vegan mothers' experiences and decision-making processes when feeding their children (up to 3 years old).
Data collection and analysis	**Data collection** Semi-structured photo-elicitation interviews were used to collect data. The interviews lasted between 25-40 minutes and were transcribed verbatim. **Data analysis** Reflexive thematic analysis was used to analyse data. The first author coded the data and collated themes, which were discussed with the second author for coherence.
Recruitment strategy	A convenience sample was recruited through social media platforms.
Study dates	January 2021 and April 2021
Sources of funding	Not industry funded
Inclusion criteria	• Aged >18 years • Mothers with a child aged between 6-35 months.
Exclusion criteria	Not reported
Sample size	N=8 women with vegan diets

Participant characteristics	**Maternal age, years (n):** 30-<35: 7/8 ≥35: 1/8 **Ethnicity (n):** White British: 7/8 Mixed: 1/8 **Education (n):** Higher education: 5/8 Postgraduate education: 3/8 **Youngest child eating solids age, months (n):** 15-19: 4/8 20-31: 3/8 *Data not available for 1
Results	Author's theme: 1. Being a role model for vegan values: 'Do what mummy does, eat what mummy eats' 2. Shared decision-making: 'What we feel is best' 3. Nutritional guidance for vegan parents: 'A bit of an afterthought' 4. Fear of judgement for being vegan: 'Being labelled a bad parent' 5. Desire for convenience: 'Something quick and easy'

Being a role model for vegan values: 'Do what mummy does, eat what mummy eats'

Participants reported becoming vegans due to moral, environmental, health, and personal preference, and reported applying this rationale to providing their child a similar diet. They saw themselves as role models and hoped to set a lifestyle example for their child. 6 out of 8 participants provided their child with a vegan diet, 1 as a vegetarian, and 1 as an omnivore.

'I would like him to think that he wants to do what mummy does and eat what mummy eats, but if he doesn't then that's fine, because I didn't, you know? I didn't, wasn't a vegan when I was a child, so I can't really expect him to be.' (Lucy) [Quote: page 626]

Shared decision-making: 'What we feel is best'

Participants described that if the whole family was vegan then planning meals for the family became a lot easier than if only one parent was vegan.

'I'm not going to go out and buy non-vegan products just so my children can try them, that's, you know? Until they're old enough to make their own decisions they'll eat what we have [...] because we're vegan they are vegan too.' (Nina) [Quote: page 627]

Nutritional guidance for vegan parents: 'A bit of an afterthought'

Participants reported that nutritional information about vegan diets was quite sparse and when it was lacking, participants reported making decisions against their values, for example giving their child formula containing cow's milk protein. Some participants were aware of sources of information about infant diets, such as NHS resources, however they felt that it wasn't tailored to their needs. With this lack of formal guidance, many conducted their own research.

'He is entirely sort of vegan food based, with the exception of his formula that is a bit of a bugbear, but it is what there is.' (Claire) [Quote: page 627]

'Guidance for vegetarian and vegan parents is a bit of an after-thought. [...] it kind of feels like a bit of an invalid choice or lifestyle when it just is sort of like, here's all the information, "oh and by the way, if you're vegan, then you might want to think about this" [...] Even if they had like 1 [leaflet] for Omni diets and 1 for vegetarian and vegan, so you didn't have to like

	wade through all of the stuff that was like "oh and make sure they eat yoghurt and make sure they have some cubes of chicken, they are really easy for them to eat" and stuff like that.' (Sue) [Quote: pages 627-628] <u>Fear of judgement for being vegan: 'Being labelled a bad parent'</u> Participants were worried about the perceptions of other's when they revealed they were vegan, and so they sometimes did not tell anyone about their diet. However, participants felt more comfortable when surrounded by others who were also vegan. *'[Having vegan friends and family members] certainly makes me feel more confident and validated that it's you know a valid, healthy, and appropriate choice to feed them mostly vegan diets.'* (Sue) [Quote: page 628] Desire for convenience: 'Something quick and easy' Participants reported making practical choices when choosing what to eat, often going for meals that were quick and easy to prepare. However, these quick meals were often unsuitable for vegan and vegetarian infant diets. However, participants did report that this was improving and different options were available. *'There aren't a huge amount of vegetarian and vegan pouch options.'* (Claire) [Quote: page 630]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Khanom, 2015

Bibliographic Reference	Khanom, Ashrafunnesa; Hill, Rebecca A; Morgan, Kelly; Rapport, Frances L; Lyons, Ronan A; Brophy, Sinead; Parental recommendations for population level interventions to support infant and family dietary choices: a qualitative study from the Growing Up in Wales, Environments for Healthy Living (EHL) study.; BMC public health; 2015; vol. 15; 234

Study Characteristics

Study type	General qualitative inquiry Semi-structured interviews
Country/ies where study was carried out	UK
Setting	**Setting** Family home or workplace **Aim** To elicit evidence on the main barriers and facilitators to dietary choice, and to inform the development of interventions that parents would like to see put in place to promote a healthier food environment for their children.
Data collection and analysis	**Data collection** 61 x face-to-face semi-structured interviews lasting and average of approximately 30 minutes each carried out in English language or in the mother's language. An interview schedule was used to elicit responses, and this evolved over time to allow for exploring emerging concepts from the interviews. Interviews were audio-recorded **Data analysis**

	An inductive thematic data analysis process was used to analyse the data. Audio-recorded interviews were transcribed verbatim. Independently, the researchers systematically drew out relevant themes and categories from 20 transcripts based on research aims and used the codes and link quotes from these as a basis for coding and analysing the remaining transcripts. Researchers continued to discuss throughout the coding process to maintain inter-coder reliability and consistency. Codes were thereafter refined and clustered. A senior qualitative researcher was involved to challenge and critique the process.
Recruitment strategy	Participants were recruited purposively from the population recruited into the 'Growing up in Wales' birth cohort study,. Recruitment for the cohort study was done when participants attended maternity appointments in hospitals and clinics within the Abertawe Bro Morgannwg (ABM) University Health Board.
Study dates	Not reported
Sources of funding	Not industry funded
Inclusion criteria	Participants: • aged 16 years or older
Exclusion criteria	Not reported
Sample size	N = 61 (35 interviews included fathers)
Participant characteristics	Mothers age in years [Mean (range)]: 30 (20-42) Fathers age in years [Mean (range)]: 35 (21-52) Child's age [Mean (range)]: 4.75 years (1 months - 18 years) Parent's employment [n]: Non manual Mothers = 16

	Fathers =27 Manual Mothers = 16 Fathers = 26 Student Mothers = 5 Fathers =3 Not in employment Mothers = 11 Fathers = 4 Homemaker Mothers = 12 Fathers =1 Parent's education [n]: Higher degree Mothers = 16

	Fathers =12 First degree Mothers = 15 Fathers = 13 Diplomas in higher education Mothers = 6 Fathers =3 A/AS level Mothers = 4 Fathers = 3 O/GCSE levels Mothers = 14 Fathers =14 Other Mothers = 2 Fathers =12 None

	Mothers = 4 Fathers = 3 Unknown Mothers = 0 Fathers =1 Parent's ethnicity [n]: Welsh Mothers = 48 Fathers =51 Romanian Mothers = 1 Fathers = 0 Polish Mothers = 1 Fathers =1 Bangladeshi

	Mothers = 4 Fathers = 4 African Mothers = 2 Fathers =1 Middle Eastern Mothers = 2 Fathers = 2 South East Asian Mothers = 1 Fathers = 1 Pakistani Mothers = 2 Fathers = 1 Socioeconomic status [%] Affluent neighbourhoods: 43%

	Deprived neighbourhoods = 57% Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR
Results	**Authors themes** • Community level influences • Individual and family barriers and facilitators • Policy level influences, barriers and facilitators **Study findings** *Community level influences* Community and culture played a strong role in defining the diet of infants as parents felt it was easier to simply follow their traditional practices and habits "*…it's not healthy actually its oily, it's our traditional food that we have grown up with…we are not trying to eat healthy. We are just following the past generations…we are just carrying on not thinking about our health"* (page 6) Many lower-income families perceived unhealthy food as an affordable treat for the family to enjoy. They felt the need to provide the best for their children, but were concerned that their peers may view their child as deprived.

	"…it's hard when you haven't got much money and they want ice cream and they want chips…Don't get me wrong, I do get my little boy McDonalds, don't think I'm nasty" (page 6) Deprivation and structural inequality contributed to food choices and finances were a major reason families from deprived neighbourhoods hardly get fresh foods but rely more on frozen foods or jars of food that keep longer, reduce waste and are cheaper. Parents practically skipped meals as a response to the income inequality, compromising their nutritional requirements for their children. *"We don't eat breakfast…X(child) has breakfast. We go without breakfast… it's just another cost to us, isn't it?"* (page 7) Parent's discussed their busy schedules as a result of shift work, caring for children and activities outside the home as reasons for not having structured meals, as they lacked the time to prepare the food. *"as for time to sit down and have a set meal, don't always get it so…[wife] had the kids all day, she'd go to work and then I've got them for about two hours … [with] the recession…money is very important to everybody so taking time off work might be detrimental to looking after the kids"* (page 7) Some families however were proud of being able to provide healthier foods for their children, even if they weren't getting any, and they were usually families that had attended community centre cookery classes or came from families who cook. This was also more common among those with university education as shown in this quote: "*Living with students and what have you, so I've picked up skills*" (page 7) Access to fresh foods was identified as an issue for families living in deprived areas where local shops within walking distance were unavailable and they had no access to personal transport. These families therefore rely on takeaways as they were unable to access supermarkets easily and therefore unable to do large weekly shopping. *"I can't get everything on the buggy on my own so we do go without, we eat terribly [rely on takeaways]"* (page 7) On the contrary, some areas had local initiatives where fruits and vegetables were sold at affordable rates, sometimes delivered to residents or had church-run facilities offering subsidised healthy meals to families. *"We are quite lucky…because a van comes round once a week with fresh fruit and veg"* (page 8)

	Individual and family barriers and facilitators Some families who had access to fresh healthy foods chose not to buy them, wither because they didn't have the knowledge to cook, were from families who did not cook, or had busy schedules and couldn't spare the time to cook and clean up afterwards. *No quote* Some other families had limited access to fresh foods but were determined to provide their children with healthy meals. *"I think it is cheaper to go and buy fresh and cook it yourself than ordering food or buying food from outside, if you look at a pizza you order, £15, that £15 you can cook a lot of food which is going to be healthier, 100 percent healthier"* (page 8) Children also played a major role in what they ate, as parents explained that they sometimes refused to have healthy meals while at home but may have some when eating with others. In such instances, parents offered their children food they knew the children were more likely to eat. *"Yeah chicken nuggets, it is a must for him, every day, every dinner, lunch, because that is only what he wants to eat"* (page 8) Parents were aware that children may mirror their eating habits, so when they felt that their diet was unhealthy, they either ate away from their children's views or insisted on the children not eating what they were eating. *"The kids always have their meals…but then he'll perform for mine and I can't really give it to him because it is full of salt and that"* (page 8) *Policy level influences, barriers and facilitators* Parents were aware of some messages encouraging healthy diets such as the 'Eat 5 a Day' message, but did not seem aware of the Change4Life campaign, as this was not mentioned. *No quote*

	Many parents expressed uncertainties about what foods to offer their children and practical ways to achieve it. Health visitors were considered unhelpful in that regard, giving prescriptive messages. "*Perhaps they [health visitors] are knowledgeable, perhaps they just don't have the time to give… when I was first weaning X [son] you know like what proportions of meat and veg I should be giving him…that's not something that I know and they were quite unhelpful to be honest"* (page 8) Parents also referred to advertising and promotions in supermarkets encouraging unhealthy diets and not targeting fruits and vegetables promotion. *"A few weeks ago we was in X [supermarket] and they were giving out free 'Haribos' to let you try it … that's not particularly helpful for parents. (Laughs)… They never give out a free banana"* (page 8) Parents from deprived neighbourhoods expressed gratitude for the provision of government 'Healthy Start' vouchers as it gave them the opportunity to buy healthy fruits and vegetables for their young family. "*'Healthy Start' vouchers…I think they are a good thing because you can only buy milk and fruit and veg, so they're really encouraging"* (page 9)

GCSE: General Certificate of Secondary Education; NR: not reported.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(A lack of researcher reflexivity)*
Overall risk of bias and relevance	Relevance	Highly relevant

Lakhanpaul, 2020

Bibliographic Reference	Lakhanpaul, Monica; Benton, Lorna; Lloyd-Houldey, Oliver; Manikam, Logan; Rosenthal, Diana Margot; Allaham, Shereen; Heys, Michelle; Nurture Early for Optimal Nutrition (NEON) programme: qualitative study of drivers of infant feeding and care practices in a British-Bangladeshi population.; BMJ open; 2020; vol. 10 (no. 6); e035347

Study Characteristics

Study type	General qualitative inquiry Focus groups and semi-structured interviews
Country/ies where study was carried out	UK
Setting	**Setting** Community centres/spaces or participants' home NHS space or via phone for health professionals only **Aim** To explore common complementary feeding and care practices and their social and cultural influences within the British-Bangladeshi population of Tower Hamlets.
Data collection and analysis	**Data collection** 12 x Focus groups involving between 4 and 14 participants and lasting approximately 90 to 120 minutes using topic guides informed by the literature were held first with community members separated by gender (6 x focus groups; male = 2, Female = 4) to explore social norms towards infant feeding. Then additional focus group discussions were held separately with fathers (2 x focus groups), grandmothers (2 x focus groups) and grandfathers (2 x focus groups) to understand and inform findings from semi structured interviews with mothers. Initially, focus group discussions were led by one researcher and thereafter as the study progressed, was handed to community facilitators, who led subsequent discussions, while the researcher observed. Facilitators with the same gender as the participants led the discussions Semi-structured interviews lasting approximately 45 to 90 minutes using topic guides informed by the literature and modified according to the findings from focus group discussions, were conducted with key informants, mothers, pregnant women and health professionals to explore in more depth the cultural and social norms towards infant feeding. Mothers

	were stratified by migration status in the UK (<3 years or >3 years) and interviews were led in either English, Bengali, Sylheti or a mixture of languages. All focus group discussions and interviews were audio recorded. **Data analysis** Framework analysis was used to analyse the data and involved transcribing the audio recorded data, 2 researchers independently familiarising themselves with the data and discussing preliminary themes and codes, applying open codes to the data in NVivo 11 software, and deciding on the final themes and subthemes, seeking community facilitators input and revising the themes where necessary.
Recruitment strategy	Purposive sampling involving multiple recruitment approaches including: • study details being shared with local schools, community and children centres, and NHS clinics • recruiting from public spaces using posters and through informal networks and word of mouth to reach people who are less likely to access health services • identifying key informants during community focus groups and via snowballing • researchers identifying and contacting health professionals
Study dates	Not reported
Sources of funding	Not industry funded
Inclusion criteria	Participants who • self-identified as British-Bangladeshi • were resident in Tower Hamlets • expecting a baby or caring for a child aged between 6 and 23 months in the capacity of mother, father, caregiver or grandparent Community members who: • self-identified as British-Bangladeshi • were resident in Tower Hamlets

	Health professionals who • practice in Tower Hamlets • had experience of nutritionally related diseases among infants and young children in Tower Hamlets Community key informants • holding a significant role in the community
Exclusion criteria	Not reported
Sample size	N = 141 Community members, n = 47 Key informants, n = 6 Health professionals, n =9 Mothers, n =21 Pregnant women, n =9 Fathers, n = 10 Grandmothers, n = 28 Grandfathers, n = 11 Focus groups, n = 96 participants in 12 focus group discussions Interviews, n = 45

Participant characteristics	Parent/carer's age: NR Child's age: NR Ethnicity Parents/carers: British-Bangladeshi Community members: British-Bangladeshi Key informants: NR Health professionals: NR Level of socioeconomic deprivation: NR Parental education: NR Parental age: NR Geographical variation: NR Religion and cultural considerations: NR Babies or children with disabilities and other physical and mental health conditions: NR Babies and children with developmental problems: NR
Results	**Author's themes** • Modifiable infant feeding and care practices ○ Early and late introduction of semi and solid foods ○ Overfeeding: Forced feeding ○ Overfeeding: Unregulated portioning ○ Overfeeding: Top-up feeding

- Overfeeding: Distraction feeding
- Feeding to fill the belly
- Feeding to fill the belly: Preferences for milk and sweet foods
- Feeding to fill the belly: Chasing fussy eaters
- Prolonged parent-led feeding practices: Prolonged hand and spoon feeding
- Prolonged parent-led feeding practices: Prolonged bottle feeding

- Factors influencing infant feeding and care practices
  - Influences from society and culture: Chubby equals healthy
  - Influences from society and culture: Anxiety and social visits
  - Physical and local environment: Physical space for play (No relevant themes identified)
  - Physical and local environment: Fast food outlets
  - Physical and local environment: Advertising
  - Physical and local environment: Household environment (Theme not representing views of parents or carers)
  - Information and awareness: Engaging with health services
  - Information and awareness: Balancing cultures
  - Information and awareness: Parent style

Study findings

Modifiable infant feeding and care practices: Early and late introduction of semi and solid foods

Parents expressed awareness of the NHS recommendation to introduce solids to infants at 6 months but had different opinions about this timing. Some parents favoured an earlier introduction between 3 and 5 months explaining that this improves the nutrition of non-breastfed babies or helps babies grow faster. Others either agreed that introducing solids at 6 months was ideal or preferred a later and late introduction of semi and solid foods. However, late weaning was not as common as early introduction to solids. Food advertising was one of the reasons given for early introduction to solids.

"As a Bengali we tend to put our children onto solid food as quickly as possible" (page 5)

Modifiable infant feeding and care practices: Overfeeding - forced feeding

Forced feeding was defined as consistently encouraging a child to eat when they are not hungry. Parents reported seeing this practice among their families and communities, although did not report being involved in the practice. They were of the

	opinion that parents need to 'work hard and not force the child' because of the stress and unpleasantness associated with forced feeding and the risk that children may become afraid of food. (page 6) *No quote* *Modifiable infant feeding and care practices: Overfeeding - unregulated portioning* There was consensus between family and community members that portion sizes was not usually measured among this population. Parents felt that children eating half portions or only 2 to 3 spoons of food were eating too little. (page 6) *No quote* *Modifiable infant feeding and care practices: Overfeeding - top-up feeding* Offering frequent and additional meals outside of an infant's regular meal was termed top-up feeding. Whilst parents reported having schedules meal times, there were variations across households regarding the timing of dinner (usually 8pm or after) and parents still left time out to provide their children with an extra feed before bedtime, sometimes milk or solid food in a jar. *"The other thing is obviously a lot of the people say right in our community, which is true, people eat up to the brim of their neck and even sometimes you will see people eating just after 15 min before they go to bed which is not good because you have not digested your food yet, it is still in your chest."* (page 6) *Modifiable infant feeding and care practices: Overfeeding - distraction feeding* Parents had mixed attitudes about the importance of including play at meal times. While some felt that it prevented messy eating, others felt it was a missed opportunity for interacting with the infant. Grandparents with limited mobility often felt that the TV was a useful tool for spending time with the infant to enable the mother get on with other household chores. Other distraction techniques reported included singing and storytelling. *"[…] you know some babies they don't like to eat, almost you have to make different circumstances to make them happy to eat, like some entertainment thing like rhymes or something. Or lots of toys to put in front of her high chair and then […]"* (page 6)

Modifiable infant feeding and care practices: Feeding to fill the belly

Family and community members expressed thoughts around caregivers feeling that they need to *'fill the belly'* for the infant to grow and develop healthily. Community members explained that this could be taken literally at times, with parents looking out for a protruding belly.

"There have been times, many, many times we've been telling parents how their baby's stomach is probably this small, like the size of their fist, that's how big your stomach is. So, if you are trying to feed them that much rice on a plate, that is more than they should be taking in. Parents tend to think oh no she didn't eat properly, she hasn't had 5 bites and they want to give more bites in her mouth or encourage to eat more. But really that is all the food she can take." (page 6)

Modifiable infant feeding and care practices: Feeding to fill the belly - preferences for milk and sweet foods

Desiring to fill the belly had an influence on what the infant was offered such as offering formula milk, high-energy foods (prioritising rice-based foods) and sugary snacks.

"I never know, my husband always says that's enough, don't give no more. He likes you know Asians make this thing called Kheer, it is milk with rice and sugar and it is really sweet and it is really nice. He absolutely loves it. Any time of day you feed him that he'll eat it." (page 6)

Participants mentioned sugar as a customary part of the British-Bangladeshi diet, highlighting that offering dates to infants as a first food was a traditional practice, and customarily, household visitors shared sweets and treats. Although, mothers reported that sharing treats with young children was common, many of the study participants had negative attitudes towards fizzy drinks. Mothers reported offering infants fruit juices prepared either from concentrates, using a blender or store bought, a practice that health professionals attributed to high daily sugar intake. More informed participants were aware of the effects of these sugary drinks on oral health, they felt powerless to stop the dependence on sugar.

"I just don't want him to have too much sweet, because obviously all the kids in my family had all teeth taken out. I don't want him to go through that, he's only got five. I don't want him to lose all his beautiful teeth. I try and keep him away from sweets. I say that but I want to keep him away from sweet stuff" (page 7)

Modifiable infant feeding and care practices: Feeding to fill the belly - chasing fussy eaters

	Participants discussed fussy eating at different levels including children avoiding food generally or avoiding vegetables or solids, or preference for a particular food that is and so on Parents who felt their children were fussy eaters expressed feelings of anxiety and concern about the range of food the infant was taking *"You put him in his highchair and give him a few spoons and that's it. No, turns his face. And I have to like literally beg him, please one more, one more, he won't eat. And he's quite a healthy child. You'd think he eats quite a bit, he doesn't. He drinks 8ozs of milk and for him that's enough, he doesn't want no more."* (page 7) *Modifiable infant feeding and care practices: Prolonged parent-led feeding practices - hand and spoon feeding* Some parents as well as health professionals expressed their concerns around extended periods of feeding infants with hand as spoon, describing it as missing the opportunity to encourage children to feed themselves, which impacted on the some British-Bangladeshi children not being able to feed themselves in primary school. *"Culturally we've always eaten rice by hand, okay. That's something I would never let go of. In all honesty, rice and curry is so tasty with hands, we don't enjoy it with fork and knife."* (page 7) *Modifiable infant feeding and care practices: Prolonged parent-led feeding practices - prolonged bottle feeding* Parents reported that bottle feeding often started a few weeks after birth, particularly when mixed breast and bottle feeding was practiced. Reasons for introducing bottle feeding included thoughts that the nutrients were scientifically curated to benefit the infants growth, to aid easier feeding outside the home or in social situations, or as a stepping-stone towards introducing solid foods. *"My boy is used to the bottle from his father, maybe at just one or two months he did breastfeeding, after that he didn't breast feed now he is sleeping my wife tried the breastfeeding at night time. Sometimes he drinks but sometimes not, but he used to have the bottle and it's easier for us as well to give him the bottle."* (page 8) *Factors influencing infant feeding and care practices: Influences from society and culture - Chubby equals healthy* Parents presented a quintessential societal image of a healthy child being 'chubby', placing emphasis on good growth and development. Parents had had to be supported on meal planning and being resilient about the right perceptions of a healthy weight, and some others were taught the importance of responsive feeding at local courses.

"The baby who has good health with no disease, is chubby. With good health they look nice." (page 9)

Factors influencing infant feeding and care practices: Influences from society and culture - Anxiety and social visits

There was some anxiety about social occasions reported by mothers particularly relating to an anticipation that family or friends may comment on their babies being too skinny as a way of expressing that they were not well fed, or being too chubby, often associated with jealousy. Mothers also reported that they occasionally experienced difficulty challenge social practices such as those that relate to offering treats, even when this was not practiced in their own homes.

"*If we try to talk to her about [overfeeding her child] she gets offended. In Bengali culture, we have what we call the 'evil eye' […] so, she thinks we are giving her children the 'evil eye' because they eat well, they eat a lot. We still talk to her about it [overfeeding] though, we don't stop"* (page 9)

Factors influencing infant feeding and care practices: Physical and local environment - Fast food outlets

The abundance of fast food outlets was regarded as a major influence to unhealthy eating as parents reported having takeaways as frequently as once a week as a treat, sharing with infants/children.

"[…] my grandchild is nearly 6 years old and we did try a little bit of chips to taste it." (page 9)

Factors influencing infant feeding and care practices: Physical and local environment - Advertising

Parents reported that semi-solid and solid foods sold in the supermarkets marketed as being appropriate for babies from 4 months of age was confusing, causing them to feel that 4 months was a good age to introduce solids. Similarly, the sales of formula milk for hungrier babies gave parents an impression that their infants may need more food or more energy dense foods than other babies.

"[…] I think anyway if you go to the supermarket and you see something that says four months then you should be doing that because the packaging, if the baby food companies are telling you that you should be feeding your baby at four months why wouldn't you, why would you wait until they were six months, because even though it is not that much of a difference but when you have had a baby they are growing so quickly you think that two months is a big deal and that you should be giving that extra food, but definitely I do not think many families that I have seen will wait until six months." (page 9)

Factors influencing infant feeding and care practices: Information and awareness - engaging with health services

	Although mothers and fathers had different preferences on where to seek information, with fathers favouring GPs and mothers favouring health visitors, children's centres, online and community groups, parents generally felt that information either changed constantly, was conflicting or just not available. Pregnant women opined that antenatal classes provided information on what to do but not how to feed after birth. Parents expressed a desire for more information support relating to complementary feeding and how to go about weaning. *"I am always confused, I am always ringing up the doctors and asking them questions all the time, especially about the milk thing. They said it depends on your child, every child is different. I was a bit like he's still little, doesn't he need the nutrients in the powder to grow?"* (page 10) *Factors influencing infant feeding and care practices: Information and awareness - balancing cultures* Mothers often attempted to navigate their way around information from different cultures and generations as it relates to their infant feeding practices. For example, extended family members such as grandparents and in-laws were either supportive or pressuring in their approach, which mothers had to navigate. Similarly, extended family members were reported to have adverse feeding practices such as feeding extra meals and in front of the TV. *"By starving, I actually used that term, starving may mean they think the child has not eaten […] like for example if they have not eaten in two or three hours […] I will give you a perfect example, I went to the wedding over the weekend and my mother in law was on my case to feed my son […] I just said when he is hungry he can communicate with me, he will come up to me and say mum I want to eat. I tried three times, after three times I am not going to go round walking after him. My mother in law you know how she is she is so protective of her grandchildren […] she took him and she fed him, so can you see the difference?"* (page 10) *Factors influencing infant feeding and care practices: Information and awareness - parent style* Mothers described feeling anxious when they felt they had insufficient information or skill on how to feed their children. This was especially common among mothers of 'fussy eaters'. However, among mothers who were considered as proactive in seeking information, a more relaxed and confident approach was described, as they were aware of various sources of information and took the time to engage with them as well as various groups online and within the community. *"I notice in our community we have a real thing about feeding them and making sure the fact they are having a full […] do you see what I mean but I just tend to find that be a bit relaxed, see if they take to it, if they eat or whatever. If they don't eat, come back to it, come back to the same meal, come back to that thing. It might be you try something else, they might like it but don't become stressed by it."* (page 11)

NHS: National Health Service; NR: not reported.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Lloyd-Williams, 2011

Bibliographic Reference	Lloyd-Williams, Ffion; Bristow, Katie; Capewell, Simon; Mwatsama, Modi; Young children's food in Liverpool day-care settings: a qualitative study of pre-school nutrition policy and practice.; Public health nutrition; 2011; vol. 14 (no. 10); 1858-66

Study Characteristics

Study type	Ethnographic
Country/ies where study was carried out	United Kingdom
Setting	**Setting** Interviews took place in community pre-school nurseries. **Aim** To explore nutrition and food provision in pre-school nurseries in order to develop interventions to promote healthy eating in early years settings, especially across deprived communities.
Data collection and analysis	**Data collection**

	Semi-structured interviews were used to collect data using a topic guide. **Data analysis** Thematic analysis was used to analyse the data.
Recruitment strategy	Participants selected purposively using convenience sampling.
Study dates	Not reported
Sources of funding	Not industry funded
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N=39 Parents, n=12 Nursery staff, n=12 Cooks, n=6 Note: other people interviewed but data were not extracted for them as specified in the review protocol.
Participant characteristics	Not reported
Results	Author's themes: 1. Nursery capacity building o Differences between private sector and children's centre nurseries o Nursery-level healthy eating policy and guidelines o Ofsted ‘rolling snacks’ strategy o Training 2. Catering environment o The catering environment o Menu planning

- Cook's role and experience
- Cooking practices and knowledge of nutritional content of food provided
- Snacks
- Budget, time and capacity

3. Children attending the nursery
    - Creating the right atmosphere
    - Strategies to encourage eating
    - Learning and food
    - Social skills development
4. Parent and nursery relationship

<u>Differences between private sector and children's centre nurseries</u>

Private nurseries lacked access to information and policy guidelines concerning healthy eating for young children. One manager said they followed Ofsted guidelines, which mentioned providing a healthy diet but did not give many details.

'No. I mean we work on the Ofsted requirements, I mean our whole thing is done really through the Ofsted requirements.' (NC manager) [Quote: page 1861]

Meanwhile, nurseries attached to children centres had access to a wide range of information and advice, for example other colleagues within the centre (such as health promotion specialists and family support workers).

<u>Nursery-level healthy eating policy and guidelines</u>

Nurseries had heard of the CWT guidelines, but had not seen or utilised them. Only one nursery had developed a healthy eating policy and another was in the process of developing a policy. The other nurseries used their menu planning as the way to maintain a focus on healthy eating.

'We have never had really sort of guidelines, we have just sort of planned that we would not have processed foods on the menu really, so you are left then with basic meats, vegetables, potatoes, rice, pasta.' (NC manager) [Quote: page 1861]

<u>Ofsted 'rolling snacks' strategy</u>

The Ofsted strategy of rolling snacks (providing snacks throughout the day to help children develop their independence) was considered to work against healthy eating messages.

'No we don't, there is a bit of emphasis coming through about giving them the choice and you know this freedom of whatever. But how on earth do you monitor what they are eating, how do you interact, how do they interact with each other? If someone is playing in a sand pit while someone is having their toast or what have you, how is that a learning experience? It's almost like just pulling into a petrol station.' (NF manager) [Quote: page 1861]

Training

Nursery managers felt there were few training opportunities, other than compulsory food handling and hygiene courses. There is a need for skills development in relation to the role of food, eating and meal times within the context of wider early years learning and education.

'We can't find any you know. It's not that I haven't looked, we did the safer food for better business; I did that about 2 years ago. I sent X [the cook] on a dental hygiene course, but to be honest nothing, because we can't afford to send anybody on courses that aren't free, and nothing comes through from the city council for any food things.' [page1861]

Beyond menu planning and food preparation training, a need for classroom-based training to develop skills around food, eating and meal times as part of the wider early years learning and education was identified in research.

'...it all encourages doesn't it you know, and it makes them see food in a different way doesn't it. And not maybe a chore time where you have got to sit and you know, push all this food into my mouth you know, it can be a fun time as well can't it, yes. Yes. Oh we will have to look out for the training definitely.' (NA manager) [Quote: page 1861]

The catering environment

Nursery managers reported that they had little control over the food provided.

'It's one thing us being over here moaning about the meals coming over, the cook basically had her hands tied, there is only so much she can do, she orders for the school we just have to fit in, it was quite a long, lengthy process but we got there y I work with quite closely [with the cook's line manager], she actually left me the menus which enables me to go through them, find out what the school are having on what days and I can pick and choose whether it suits me or whether something can be adapted.' (NF manager) [Quote: page 1862]

Menu planning

All of the nurseries had the menus available for parents, but some were more detailed and easier to follow than others. For example, one nursery had the most detailed menu which grouped food into categories: main dish, starchy food, vegetables and dessert.

No supporting quote.

Cook's role and experience

The cooks in this study were quite experienced and had some formal training, however none had specific training on healthy eating in the udner-5s.

'You could do, I mean I have made, you know the bechamel sauce what goes on the top of lasagne; we were buying that in, the Dolmio, and that was like I think it was £1.79 for one jar of it, and I thought I am going to have a go myself at making it, and it is so easy. All it is flour, it's just the method, you have got get it right...and then slowly add the milk so it doesn't congeal and go all ... So yes, so I do that now, so I don't have to, we don't buy that in and also it's not full ... well, like [of] all these, all like stabilisers and stuff you know.' (NB cook) [Quote: page 1862]

Cooking practices and knowledge of nutritional content of food provided

A way to measure whether appropriate meals were being served to children was whether they were prepared from fresh or frozen unprocessed ingredients.

No supporting quote.

Snacks

Often snacks were likely to be unhealthy processed foods that were ready-made or from packets.

'We provide cookies or sponge cake with custard which is to me, is quite high in sugar, although I use a lot less sugar. I halve the sugar content that I put in anything, and the fat in the crumble as well I tend to halve.' (NE cook) [Quote: page 1862]

Budget, time and capacity

The amount of money allocated to food was a huge determining factor in deciding the quality of ingredients purchased. Higher quality of food also seemed to be related to more time available to purchase food and greater knowledge of what to buy and where.

'That [budget for food] all comes out of parent fees, but being a parent funded, parent governed nursery, they set out the budget; they allow us to provide a certain standard of food, because it's their children that they are benefiting.' (NC manager) [Quote: page 1862]

Creating the right atmosphere

The size and type of cutlery and crockery (for example, using brightly coloured items) and the layout of the nursery affected eating practices positively.

No supporting quote.

Strategies to encourage eating

Nursery staff used positive and gentle encouragement to encourage children to eat, often using play as a method to facilitate eating.

'One little girl wouldn't eat her carrots so X [EYP] played a clever game with her. X said to her 'I bet you can't eat this carrot? Oh you've eaten it!' General laughter from the child and the other children. X then said that she was going to eat the carrots and put a carrot on a fork and turned her head to speak to the rest of the children while pointing [to] the carrots near to the child. There was then great laughter as the child ate the carrot and X pretended to be surprised.' (NE diary) [Quote: page 1863]

Learning and food

Nurseries often put on themed weeks or other activities around food or cooking.

'X was doing Goldilocks and the three bears with props, teddies and rag doll, range of chairs and three bowls with oats in them. She had been doing G and the 3 Bs in some way or another all week. Tomorrow she is doing a Teddy Bears picnic and they will have apples dipped in honey. Children engaged and very responsive.' (NF diary) [Quote: page 1863]

Social skills development

Nurseries implemented tasks to help develop social skills, for example learning to help set the tables, serve each other, preparing ingredients, and bringing food to the table.

'[Charlie the Healthy Eating Chef] This is a lovely soft toy with a chef's cap, whites and apron. Using Charlie the EYP explains all about healthy eating and how Charlie is a healthy eating chef. She then gets out two soft toy plates, one in green and one in orange, and then a bag of different foods (soft toys). She then asks the children to take out a food from the bag, decide whether it should be on the green plate or the orange plate. The green plate signifies foods that are good and can be eaten at any time; the orange plate signifies foods that can be eaten but only occasionally as a treat. The children take turns deciding which food goes on to which plate. One child whenever he picks out a cake, sweet or chips because he likes them thinks they should go on the green plate. X uses this to explain the difference between what you like and what is good for you.' (NE observation) [Quote: page 1863]

Parent and nursery relationship

It was important to know what the child had eaten at home and at the nursery and so the amount and depth of communication between the nursery and the parents was important. Some parents actively sought advice from the nursery concerning what and how their child was eating, and in particular the cook would be asked how to make different dishes.

'When X [child] first started here, they were giving him things that I hadn't yet tried him with y wouldn't have known to or was a bit wary of giving him. So when I said 'Oh he hasn't had that before', and they were like 'Oh are we doing wrong?'; so I said no, as long as I know that he is fine with it now I can give it to him myself.' (NE parent 1) [Quote: page 1863]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(Minor concerns with researcher and participant relationship and data analysis.)*
Overall risk of bias and relevance	Relevance	Highly relevant

Lovelace, 2015

Bibliographic Reference	Lovelace S; Rabiee-Khan F.; Food choices made by low-income households when feeding their pre-school children: a qualitative study. ; Maternal and Child Nutrition; 2015; vol. 11 (no. 4); 870-81

Study Characteristics

Study type	Phenomenological Semi-structured interviews
Country/ies where study was carried out	UK
Setting	**Setting** Not reported **Aims** • To explore the food choices made by low-income families when feeding their pre-school children • To understand the socio-economic and environmental influences and constraints these families experience

	• To gain an insight into the reasons why the diet of young children in poverty are generally so poor, with a view to influence health education policy and practice with regard to nutrition in early years.
Data collection and analysis	**Data collection** Semi-structured interviews involving 7 semi-structured questions around what the children eat, how budget for food is handled, ease of making food choices, cooking and storing food, how much influence the children have and how this affects what they are offered. Questions also included questions around food preparation and healthy start vouchers. The interview schedule was piloted and modified before commencing the main study. Interviews were conducted with mothers as the primary interviewee but fathers were present in at least part of 3 interviews and their contributions were duly noted. All interviews were recorded and transcribed. **Data analysis** The transcribed interviews were analysed using a modified grounded theory approach. Analysis was ongoing as transcripts were typed up before additional interviews were conducted where possible. Themes that emerged were explored further in subsequent interviews. Data was coded and participants were assigned a unique number for anonymity.
Recruitment strategy	Purposive sampling of 8 to 12 families using health visitors knowledge of the families to select participants fitting the inclusion criteria.
Study dates	Not reported
Sources of funding	Not industry funded
Inclusion criteria	Families who: • did not own their own home • were in receipt of income support and/or qualifying for Healthy Start vouchers • had a child of pre-school age and no siblings of school age or greater.
Exclusion criteria	Not reported

Sample size	N = 11 families
Participant characteristics	Mother's age in years [range]: 19-25 Child's age in months [range]: 2-37 Receiving healthy start vouchers [n]: Yes =3 No = 6 No/not eligible = 1 Unknown = 1 Father resident [n]: Yes = 6 No = 5 Car owner/access [n]: Yes = 3 No = 8

Results	**Authors themes** • Influences on the timing of introduction of solid foods • Trust in commercial foods and brands • Concern about fluid intake leading to consumption of ‘squash’ and juices • Confusion about what constitutes healthy foods • Barriers and incentives to healthy eating ○ healthy start vouchers ○ parents' diet and cooking skills ○ influences outside the home ○ access to shops ○ cost • Positive changes in parents’ diets as a result of having children (Not applicable to this study) **Study findings** *Influences on the timing of introduction of solid foods* Participants sought advice from a variety of sources before introducing solid foods to their children, and often combined professional opinion with that of family members or personal knowledge. Many parents expressed that advice from health visitors was often not detailed enough. ". . . (the HV) spoke to us about, like, weaning him on to things but didn’t talk in much detail and then we spoke to family members and just read books and things . . ." (page 873) One mother mentioned that she was advised by her HV to wait until the child was 6 months old before introducing solids, but she went to the doctor for advice when the baby was around 4 months old. "She (HV) told me it was a bit too early . . . so I went to the doctor and I said ‘look I can’t fill him up and she told me some children go on to solids earlier . . . " (page 874) *Trust in commercial foods and brands*

	Mothers were not always aware that family foods can be given to their children; this could be either due to a lack of knowledge about suitability of family food or trust in commercial baby food or both. ". . . I didn't realise I could put her straight on to normal food . . . it wasn't until my health visitor said" (page 874) Many parents gave 'baby biscuits' and did not consider the sugar or fat content, assuming that, as these were aimed at babies they were suitable. "I thought because they were baby foods, like baby stuff, they'd be careful about what sugar and stuff they put in them" (page 874) *Concern about fluid intake leading to consumption of commercial drinks* Most parents gave diluting juice/squash. This was either because they thought it was good for them or they did not think the children drank enough water. ". . . if she's got water she'll have a couple of sips and then she'll walk off and about 20 minutes later she'll return and have a bit more . . . but if you make one of those beakers of squash . . . she has like a beaker of squash an hour" (page 875) *Confusion about healthy foods* All parents were aware that children should eat fruit and vegetables and avoid salt but were not necessarily aware of what foods were high in salt. "I don't put salt in nor nothing . . . She wants proper food, like chicken nuggets, waffles . . . " (page 875) *Barriers and incentives to healthy eating - Healthy start vouchers* Parents reported that Healthy Start vouchers increased the uptake and variety of fresh fruit and vegetables they offered their children. "We bought more fruit and vegetables because we had them . . ." (page 876) *Barriers and incentives to healthy eating - Parents' diets and cooking skills*

Parents expressed that they cook meals ‘from scratch’ but further enquiry showed that most used jars of sauces and only one parent had never used these. In two families, the father did the cooking and mostly cooked waffles, noodles, pizza and chips, or curries made with jars of sauces. Only one couple had not offered fruit to their child, but mentioned that he had once sampled a banana. Although the parents did not eat or cook vegetables at home, they and the child would eat them at the grandmother’s house. One mother demonstrated that their own preferences influenced what she gave the child.

"I don’t know about sprouts, I’ve never try her with sprouts, I don’t like them myself" (page 876)

Barriers and incentives to healthy eating - Influences outside the home

Parents added to their children's diets based on observations that the children ate a wider variety of foods outside the home, in venues such as toddler groups, children’s centres and nurseries. When asked about whether starting nursery changed the child’s diet, one mother stated:

"She used to be funny about carrots and bread sticks but they give them a snack of that at 10 o’clock every day and she comes home and asks for bread sticks now . . . she’ll eat carrots and she’ll eat bread sticks which she wouldn’t eat before which is good" (page 877)

Barriers and incentives to healthy eating - Access to shops

Access to shops was not highlighted by the parents as a major issue; this may be because they all lived within 2 miles of a major supermarket.

"It’s all from the supermarket . . . that’s just down the road. If I do a massive shop I get a taxi back" (page 877)

Barriers and incentives to healthy eating - Cost

When making food purchases, parents do consider cost and stated that they buy foods on offer but rarely anything that they would not normally buy. The biggest cost that parents mentioned was ‘fresh’ foods, especially vegetables, stating that frozen were cheaper and so sometimes they would buy them.

"Like I say I buy it (vegetables) frozen but if it’s on offer I’ll buy fresh" (page 877)

"Yeah, yeah, definitely more than if you just went and grabbed the frozen vegetables or something, yeah it works out a lot more" (page 877)

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(No discussion of data saturation; No description of how presented data were selected)*
Overall risk of bias and relevance	Relevance	Relevant

Lucas, 2013

Bibliographic Reference	Lucas P; Jessiman T; Cameron A; Wiggins M; Hollingworth K; Austerberry C; Healthy start vouchers study: the views and experiences of parents, professionals and small retailers in England.; 2013

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	**Setting** Interviews were conducted in the participant's home or in Children's centres. **Aim** To examine the views of healthy start beneficiaries.

Data collection and analysis	**Data collection** Interviews were used to collect data. **Data analysis** Not reported *Note: study reports that more analysis details available in appendix 1, however there is no access to appendix 1 available.
Recruitment strategy	Participants were recruited either face to face from health or children's services or through the national Healthy Start database
Study dates	Not reported
Sources of funding	Not reported
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N=107 parents (from 13 sites)
Participant characteristics	**Mean age of participants, years:** 27 **Number of participants aged <18 years:** 8/107 **Status of infants:** Pregnant: 14/107 Parents of ≤12 months: 50/107 Parents of 12+ months: 43/107 **Ethnicity (n):** Black and minority ethnic population: 17/107

	White, non British: 4/107 **Parity (n):** 2+ children including pregnancy: 56/107
Results	Author's themes: 1. Finding out and applying for healthy start 2. Parent understandings of the aims of healthy start 3. Spending healthy start vouchers 4. Barriers to using healthy start vitamins 5. Parents' perception of the impact of healthy start food vouchers o Diet and food purchasing habits o Financial support 6. Parents suggestions for improving healthy start o Broadening eligibility o Increased voucher value o Modifications to the voucher mode o Wider range of eligible products o Increased promotion o Additional Healthy Eating Advice 7. The Experience of Teenage Mothers 8. The Healthy Start Experience of Black and Ethnic Minority Parents <u>Finding out and applying for healthy start</u> Most participants described the process of applying for healthy start worked well and had found out about the scheme by a health professional (for example, a midwife or health visitor). Some people reported finding out about it from friends and family, or by leaflets from GP surgeries, health clinics, the Job Centre, or at children centres. *'It's good that midwives are the ones that raise Healthy Start because they know what keeps you and the baby healthy, so them telling you makes you think you should use them.'* Ex-recipient, mother, two children aged 7 and 30 months, Site 1 [Quote: page 43]

Some participants wanted information about this early on in their pregnancy and others thought that the information given to them was quite limited. Most participants received the application form for healthy start when they were given the information about the scheme, and a few considered filling out the form to be overwhelming and an inconvenience. Some participants described difficulties getting their form signed by a health professional, if they did not routinely see a healthcare professional. However. some had a positive experience and commented on how quickly they received benefits from the scheme.

'Midwives, oh, when I've been up there they're like 'No you have to have an appointment in order to come in for us to sign it', that's what they were saying to me and I was like 'Well but I'm here now, all you've got to do is sign it' and they're like 'oh you have to come at this time'. They are a bit like…fob you off.' Mother, Site 13, current recipient, child 22 months

'That's quick because everything else [other benefits] was all taking forever and then that it was ok, it was oh good they're here already!' Mother, Site 3, current recipient, child 8 months [Quotes: page 44]

Parent understandings of the aims of healthy start

Most participants were aware of the aims of the healthy start scheme. No participants had views about healthy start that were entirely wrong, although some misperceptions were apparent (for example, that the scheme was for 'single mothers' only, or that the vouchers were to cover the costs of milk only). Most common was that respondents had no knowledge about the aims of the scheme.

'Healthy Start [was] set up to keep people healthy during pregnancy and to help people take care of their children.' Mother Site 11, previous recipient no longer eligible, two children aged 3 years and 18 months

'Healthy Start was to get people to give their children healthy food.' Pregnant mother Site 7, current recipient, two children aged 11 and 13 years [Quotes: page 45]

Spending healthy start vouchers

Most participants used the vouchers at supermarkets to buy cow's milk, formula milk, fruits, and vegetables. Supermarkets were considered convenient, as having greater food range, lower prices, ease of use of the vouchers, and a greater ability to use the vouchers 'anonymously'. Some participants mentioned that they preferred to frequent the same places rather than having to ask at new supermarkets if they accept vouchers, which would be embarrassing. However, there were some participants who described accessibility issues in getting to larger supermarkets. A small number of participants used large national chemist stores to purchase formula milk and some used their vouchers at market stalls or at mobile fruit and

vegetable vans, which made stops at Children's Centres making it more convenient for parents. Some participants described difficulties using the vouchers at certain stores as the cashier's approach varied from store to store and even between branches.

'I don't think a lot of the local ones take them, back when I was in London quite a lot take them but up here I found it really, really hard to get anywhere to take them, you have to go and use the big stores.' Mother in receipt of vouchers, Site 13, two children 4 years and 11 months [Quote: page 46]

'Sometimes the people in the shops, I don't think they're educated enough about them and there's a little bit of a blag they do, like 'Oh I don't know if you can use it for this' or they've got to go right through your receipt and there's a big long queue and it makes you feel really self conscious, it's like 'Oh you're on the welfare!' Site 13 Mother in receipt, four children aged 16, 4 and, 2 years and 7 month old son [Quote: page 47]

Barriers to Using Healthy Start vitamins

A few participants were unaware about healthy start vitamin coupons, some were unaware of where to collect them, and some has been told by their midwife or health visitor that they didn't need them if their diet was healthy. Most faced some difficulty in obtaining vitamins: for example because of problems exchanging the voucher in pharmacies, finding it embarrassing to ask retail staff, lack of stock, or access to locations that supply vitamins. Other reasons for not taking vitamins included beliefs that they were unnecessary, having a dislike for taking them, concerns they were harming their children, and concerns about measuring out the correct dose.

'That was the problem. We had the vitamin coupons and for ages and ages I was trying to find out where to get them from, I'd go to my doctors they'd say you have to ask your health visitor or, um the midwife. I went to Boots cos they was telling me they'd do them at pharmacies, and they were saying they'd never seen them before didn't know what I was on about....I think one of the midwives said no its the pharmacist you go to, so I went to the pharmacist and they said they'd never seen this before I think it's your GP. So I went back to the GP and then I think one of them says it was Sure Start.' Mother in receipt, one child aged 10 months, Site 3

'When I rang up my health visitor to ask them about it they sort of like, one of them didn't even know what I was talking about and the other one, I couldn't even understand what she was saying about where I needed to go to get them. It's not well known about here.' Mother in receipt, Site 13, one child aged 22 months [Quotes: page 49]

Diet and Food Purchasing Habits

Many participants reported that healthy start vouchers had impacted positively on their food purchasing habits as they now bought more fruit and vegetables when they previously might not have bought any or did not have enough money to buy them.

'If I couldn't have the vouchers I couldn't get fruit - do you understand? Because it's expensive, so they wouldn't get fruit.' Mother in receipt, three children aged 6 weeks, 2 and 5 years, Site 3.

'I have them at Asda when I do my shop, and I think how many vouchers I've got and I buy the veg that I have the vouchers for. I suppose if I didn't have the vouchers, I would just pick out the little things. I don't think if I didn't have the vouchers I'd buy half as much, no. I think it's to encourage people to eat well and help mothers buy healthy stuff because obviously a lot of kids things like pizza and stuff, they are always cheaper and a lot of mothers find that buying lots of vegetables makes it more expensive.' Mother in receipt, one child 4 months, Site 2 [Quotes: page 50]

However, not all participants reported spending their vouchers on fruits and vegetables, but instead purchased formula milk and therefore their diets remained unaffected. Some were not interested in changing their diet and therefore did not use the vouchers for fruit and vegetables. Others prioritised healthy eating and cut costs elsewhere.

'Because we prefer McDonalds! I don't see many people eating fruit and veg really. If I have any veg then it's usually frozen as part of dinner but that's it.' Mother in receipt, one child aged 22 months, Site 13

'We can get clothes from the charity shop, and we do that, but food is important to me.' Mother in receipt, one child aged 2 years, Site 5 [Quotes: page 51]

Financial support

The food vouchers made a difference to the food budget of low income families, although the value placed on this contribution varied. Some reported that it made a large difference to their budget whereas for some it was not noticeable.

'You can get a meal even when you've got no money.' Mother in receipt, Site 1, two children aged 7 weeks and 6 years

'Mother: You're sort of relying on the vouchers just to get you a little meal ...when we was on a short patch when the money was crossing over we didn't have a lot. So we've say, like, a jacket potato so we'd go in the shop and get a jacket potato and think then, well we can't even get any cheese to go with to have with our jacket potato...Father: and when you're feeling

sort of stuck, when you had the voucher there was always something.' Parents in receipt, one child 10 months, Site 3 [Quotes: page 51]

'I thought that the scheme was great and would be a help, especially as I had just lost my job. It did help in pregnancy but now the baby is born and she needs formula, the vouchers do nothing, really.' Pregnant mother in receipt, 1 child aged 4 months, Site 4 [Quote: page 53]

Broadening Eligibility

Participants suggested extending the eligibility criteria of the scheme to include those just above the income threshold or to extend until their child was 5 years old.

'Parents are told that they should be buying healthy food for their children but you just can't afford it, it is particularly hard for people on low incomes who don't qualify for Healthy Start.' Ex-recipient mother, one child aged 2 year, Site 11 [Quote: page 53]

Increased Voucher Value

Participants suggested increasing the value of the voucher, specifically to cover the full cost of formula milk.

No supporting quote.

Modifications to the Voucher Mode

Vouchers were sometimes problematic because they can't be refunded for purchases below that amount, so some participants suggested issuing vouchers in smaller denominations to allow greater flexibility or giving a chargeable card instead of paper vouchers.

No supporting quote.

Wider Range of Eligible Products

Participants wanted more products to be eligible with the vouchers, particularly if their child had special dietary needs, for example an intolerance to dairy milk or wheat/gluten.

No supporting quote.

Increased Promotion

Participants thought that the scheme could be better promoted by healthcare providers and better advertised by retailers.

No supporting quote.

Additional Healthy Eating Advice

Some suggested that more advice about weaning and healthy could be given with their vouchers, via the website, and from health professionals.

No supporting quote.

The Experience of Teenage Mothers

Teenage mothers were more likely to mention parents, partners and carers as a source of information and advice around diet and nutrition and infant feeding. They rarely mentioned other midwives or health visitors as a source of support. However, some participants did report following the advice of their midwife. Most of the participants reported that the vouchers made a significant improvement to their food budget.

'I know there are vitamins for babies but since she's doing so well I didn't want to mess up a good thing.' Mother in receipt, baby aged 9 months, Site 6 [Quote: page 60]

The Healthy Start Experience of Black and Ethnic Minority Parents

Overall, there were very few differences between the experiences of BME parents and white British or other ethnic groups. Some reported that healthcare professionals did not tell them about healthy start and they got this information from elsewhere. One participant reported that they preferred to use smaller local shops due to the price, but it was not registered with the scheme.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(Insufficient detail available to make judgement on research design, recruitment strategy, data collection, researcher participant relationship, and data analysis.)*
Overall risk of bias and relevance	Relevance	Highly relevant

Maslin, 2015

Bibliographic Reference	Maslin K; Dunn Galvin A; Sheperd S; Dean T; Dewey A; Venter CA.; Qualitative Study of Mothers' Perceptions of Weaning and the Use of Commercial Infant Food in the United Kingdom. ; Maternal and Paediatric Nutrition ; 2015; vol. 1 (no. 1); 1-8

Study Characteristics

Study type	General qualitative inquiry Focus groups
Country/ies where study was carried out	UK
Setting	**Setting** Two towns in Surrey **Aim**

	To use focus group discussions to gain insight into parental perceptions of complementary feeding, specifically opinions on commercially produced baby food.
Data collection and analysis	**Data collection** 4 x focus groups with 6 participants each, using a semi-structured interview format, conducted by a professional market research company using the same 2 facilitators to moderate the each of the focus group discussions. Participants were prompted with questions on complementary feeding and commercial infant foods, after the initial icebreaker session. All discussions were in English and were audio recorded. **Data analysis** Thematic analysis was used for data analysis. Verbatim transcripts were produced by 2 experienced qualitative researchers from a professional market research company. Analysis involved the reading of transcripts a number of times to identify recurring themes, clustering of themes into categories and used to define typologies, selection of quotes on the basis that they supported the theme best, developing of mind maps to illustrate and summarise each theme and the discussion of themes, categories and mind-maps among co-authors.
Recruitment strategy	A market research company was used to recruit participants from an existing consumer panel held by the company, as well as snowballing of contacts and recruitments from mother and baby groups. A screening questionnaire was used to confirm participants eligibility for inclusion based on the inclusion criteria.
Study dates	March 2011
Sources of funding	Not industry funded
Inclusion criteria	Not reported
Exclusion criteria	• Participants from the existing consumer panel who had participated in a study in the last six months or had ever participated in a study about infants or diet.
Sample size	N = 24 mothers
Participant characteristics	Mothers age: Not reported

	Child's age in months [range]: 4-7 Ethnicity [n]: White British = 24 Parity [n]: Primiparous = 12 Multiparous = 12 Level of socioeconomic deprivation: Not reported Parental education: Not reported Geographical variation: Not reported Religion and cultural considerations: Not reported Babies or children with disabilities and other physical and mental health conditions: Not reported Babies and children with developmental problems: Not reported

Results	**Authors themes** • Defining typologies *(Not applicable to this review)* • Weaning to eat *(Not applicable to this review)* • How and when to wean • Initial use of home cooked foods • Use of commercial baby food: where and what? • Food allergies *(not applicable to this review)* **Study findings** *How and when to wean* Two patterns were observed with respect to timing of weaning. Second time mothers, usually in the “relaxed” group, tended to be baby led, following cues such as sleep pattern changes, finishing milk quickly, being more irritable and watching others eat. "He’d scream and stare at me when we were eating and he was a bigger baby so I went with rusks as not extreme" (page 3) Contrarily, mothers who preferred to seek advice, usually in the “concerned” group, sought advice from Health Care Professionals (HCPs), the internet, books, their own mothers or friends. Mothers in the higher socioeconomic groups were more likely to seek advice from HCPs. "My mum said start at 4 months - she said she started with me at 3 months but I am waiting I have seen the health visitor and I am going to start at 18 weeks" (page 3) *Initial use of home cooked foods* Generally mothers commenced the weaning process with excitement and good intention of cooking home-made foods. In the first three weeks all mothers behaved in a similar way (such as, preparing home cooked foods), because they could not buy single ingredient baby food. However, this phase was very short-lived.

	"You want to kick things off in the first stage - simple and single" (page 4) As they overcome many of their other initial concerns, many mothers report they start to introduce a multitude of new flavours and start to buy commercial baby food, composed of mixed ingredients. "He was hungry - he loves food so I moved him really quickly on to different jars" (page 4) *Use of commercial baby food: where and what?* Pre-prepared baby food was reported as being convenient when outside the home as it was “sealed and safe” and easy to carry. However, when probed, mothers reported using it at home as well for example, when a meal not perceived as suitable was being prepared for the rest of the family or to combine with home-cooked foods, or when there was a lack of time to prepare food due to being occupied caring for other children. "I use a meal one like a casserole and then I add my own fresh veg to it so he gets the fresh stuff as well" (page 4)

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate concerns *(No explanation of recruitment approach; Lack of discussion about recruitment challenges; No discussion of data saturation)*
Overall risk of bias and relevance	Relevance	Relevant

McDougall, 2003

Bibliographic Reference	McDougall P.; Weaning: parents' perceptions and practices; Community Practitioner; 2003; vol. 76 (no. 1); 25-8

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	**Setting** Not reported **Aim** • To establish that early weaning was a problem in the area studied; • To determine which factors or influences predispose to early weaning; • To ascertain parents' perceptions of health visitors' advice related to weaning; • To find out what are the principle sources of advice on weaning used by parents.
Data collection and analysis	**Data collection** Individual in-depth interviews were used to collect data from a subset of participants who had been involved in focus group discussions. Focus groups lasted for around 1 hour and were taped and transcribed verbatim. No information on how interviews were conducted was reported. **Data analysis** Thematic content analysis was used to analyse the data. Only data from the interviews were included in the themes.
Recruitment strategy	Not reported
Study dates	Not reported
Sources of funding	Not reported
Inclusion criteria	Not reported
Exclusion criteria	Not reported

Sample size	n=10 first time parents of infants aged 7-9 months.
Participant characteristics	Not reported
Results	Author's themes: 1. Infants weaned early o Sleep o Decision to wean made prior to advice from health visitor o Grandmothers and family members are a major influence o Knowledge o Introduction of solids was seen as an exciting and interesting stage o Perceptions of health visitors' advice 2. Infants weaned at recommended age o Family and peer pressure to introduce solids early o Perceptions- health visitor seen as 'expert' <u>Sleep</u> Sleep was a determinant when deciding to introduce solids as participants considered hunger to be a reason for why their child was not sleeping. Mothers in this group were single and two lived with their own parents. *'Well she wouldn't settle on a night time, so I couldn't wait to get her on solids so she'd sleep longer. It was better.'*[Quote: page 26] <u>Decision to wean made prior to advice from health visitor</u> Although some participants had discussed weaning with their health visitor, they reported that they had either already made up their mind to introduce solids or had already introduced them. *'The health visitor said to wait, but that wasn't what I wanted to hear. I had already decided. I ask their (the health visitor) opinion on something, but if I don't like it I follow my own road. I know what she can and can't eat. I'll do what I want but I ask the health visitor anyway, just to make her feel (pause) wanted.'* [Quote: page 26]

Grandmothers and family members are a major influence

Participants followed advice from mothers or other relatives and if they had started weaning earlier then this advice was qualified as sound because they had successfully raised children.

'I had no worries about giving them because my sister said her babies were fine on half a rusk, so I thought there's no harm in trying mine on it, I can't see her being any different.' [Quote: page 26]

Knowledge

Few participants were aware of the guidelines for weaning, however not all knew the basis of the recommendations and thought introducing solids at 4 months was something to do with the digestive system. Some participants were aware of the evidence behind weaning recommendations and reported that they had read the relevant literature on this.

'The stomach isn't developed enough to break down the food.' [Quote: page 26]

Introduction of solids was seen as an exciting and interesting stage

Participants spoke fondly of introducing new foods to their infant and described their facial expressions, as well as their own feelings about the experience.

'I couldn't wait. He took it no bother, I mean he pulled faces at first and it took ages to get it down, but then he was no bother.'

'The first thing I tried was a bit of bean juice off my plate (tomato sauce) she was watching me eat. I was a bit worried but excited as well.' [Quotes: page 26]

Perceptions of health visitors' advice

Some participants mentioned that they received conflicting advice from healthcare professionals and health visitors. For example, although these women were recommended to start weaning at 4 months, some health visitors said it was okay if women started weaning at 3 months.

'I talked to the health visitor and she said- if you've got 12 weeks you've done well.'

	'You get a lot of conflicting advice even from different health visitors. Some say don't wean 'til 14 weeks, others say wait 'til 16 weeks. Different leaflets tell you different things. And cow's milk as well, some say don't give it 'til a year, others say it's alright at six months. I know all babies are different and they can't give strict guidelines, but it's very confusing.' [Quotes: page 26] <u>Family and peer pressure to introduce solids early</u> Participants reported that family and friends played a large role influencing when to introduce solids. *'My man, she's always giving advice- you're doing this wrong, you're doing that wrong. All good intentions, but...'* *'She (gran) said you should be giving him solids, he'll get more nourishment, he should be putting more weight on.'* [Quotes: page 26] <u>Perceptions- health visitor seen as 'expert'</u> Some participants reported that they viewed the health visitor as an expert. If they received information from a different source, they would verify it with their health visitor before implementing. *'I take her (health visitor) advice because she deals with kids and knows what she is doing, and obviously that's the person to listen to. People say- oh well I've brought five kids up and I've done this and I've done that. But what's going to happen to them in years to come? I mean people are getting Crohn's disease and all sorts, and lots of other things what they're just finding out about now.'* *'We take him to the clinic every week to get weighed and checked by the health visitor. We always ask what we should do next and take her advice.'* [Quotes: page 26]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Serious concerns *(Insufficient detail provided for research design, recruitment strategy, researcher and participant relationship, ethical issues, data analysis, and findings.)*

Section	Question	Answer
Overall risk of bias and relevance	Relevance	Highly relevant

McFadden, 2014

Bibliographic Reference	McFadden, Alison; Green, Josephine M; Williams, Victoria; McLeish, Jenny; McCormick, Felicia; Fox-Rushby, Julia; Renfrew, Mary J; Can food vouchers improve nutrition and reduce health inequalities in low-income mothers and young children: a multi-method evaluation of the experiences of beneficiaries and practitioners of the Healthy Start programme in England.; BMC public health; 2014; vol. 14; 148

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	**Setting** Eleven workshops, six in Yorkshire and the Humber and five in London were held in children's centres, community and housing association centres and a Young Person's Education Centre. **Aim** To evaluate the Healthy Start programme in England from the perspectives of beneficiaries, potential beneficiaries and health practitioners and to focus on whether food vouchers can contribute to reducing nutritional inequalities for women and young children.
Data collection and analysis	**Data collection**

	Participatory workshops were used to collect data and were facilitated by Food Matters (a NGO working on food policy issues) and a researcher. The workshops lasted 2 and a half hours and participants were financially compensated for their participation. Additionally focus groups were held in March 2012 for women whose first language was not English. These focus groups lasted 90 minutes and took place in a children's centre or community centre. Each focus group was audio-recorded and transcribed. For the views of people from the Traveller community, telephone interviews, lasting 30 minutes and addressing the same key topics as the workshops and focus groups took place in April 2012. **Data analysis** The framework method was used to analyse data. One researcher was involved with coding the data and the interpretations were discussed with the rest of the team.
Recruitment strategy	Purposive sampling was used to recruit participants who were eligible for the Healthy Start programme
Study dates	November 2011 and April 2012
Sources of funding	Not industry funded
Inclusion criteria	• Women at all stages from pregnancy until their children were four years old • Women receiving vouchers • Women who had received vouchers within the previous year • Women who had recently applied for Healthy Start but were not yet receiving vouchers • Women whose application for Healthy Start had been unsuccessful • Women who thought they might be eligible for Healthy Start.
Exclusion criteria	Not reported
Sample size	N=109 n=105 women

	n=4 men
Participant characteristics	**Participant age, years (n):** ≤20: 12 21-30: 56 31-40: 34 >40: 4 Missing data: 3 **Ethnicity (n):** White British: 43 White other: 8 Asian: 30 Black: 20 Arab: 1 Mixed: 2 Other: 5 **Highest educational qualification (n):** None: 36

	GCSE D-G: 27 GCSE A-C: 19 A level: 12 Degree: 6 Missing: 9
Results	Author's themes: 1. Accessibility of healthy start o Eligibility o Awareness of healthy start o Application process 2. Using healthy start vouchers o Influence of healthy start vouchers on food choices o Accessing retail outlets <u>Eligibility</u> There were mixed opinions on whether the criteria were clear for people who received welfare benefits. Some participants thought the guidelines were clear and some thought that more people should be eligible. Participants thought that eligibility criteria relating to qualifying tax credits were confusing and sometimes discriminated against those in low paid work, especially for those families who move in and out of low paid work or for those with variable earnings from self-employment. In particular, women under 18 years old considered the information to be confusing because Healthy Start is a universal benefit for this group during pregnancy but is means-tested after birth and after they turn 18 years. Many participants thought that eligibility should extend to the child's fifth birthday to maintain good eating habits in children. *'When I was working I was worse off. Now I am on benefits I'm better off. I get vouchers and other support.*' (London workshop participant) *'It is no good having a threshold of £16,000 because everything has gone up – VAT, petrol, but the threshold hasn't gone up has it? So people on a low income have to cut back everything'* (Sylheti-speaking focus group participant)

'The system (Healthy Start) is not successful because I have five kids. My husband is self-employed-sometimes he has loads of work and sometimes we have to scrimp and sometimes he has no work. I want to be able to access the vouchers when my husband has no work' (Yorkshire and Humber workshop participant, rural).

'I get working and child tax credits. I did get the vouchers when I was pregnant but after the baby was born they said the scheme was not available anymore. I don't know why' (Urdu-speaking focus group participant). [Quotes: page 6]

Awareness of healthy start

Only a few participants were aware of the healthy start programme and some mentioned that their midwife or health visitor did not tell them about it so they found out when their child was over 2 years. Other sources promoting healthy start did not seem to be on the participant's radar so many were simply unaware of the scheme.

'I'm six month pregnant and until today I didn't know I was able to get Healthy Start' (London workshop participant)

'I see different health visitors and sometimes it's a language barrier and they are coming for a home visit and the most things they are asking is what are the children eating and what kind of food can I afford. They don't give information about what benefits we are entitled to' (Polish-speaking focus group participant). [Quotes: page 8]

Application process

Participants reported difficulties with the application process, especially for those who didn't speak English or those with poor literacy. Some participants spoke of support that was available to help complete the form, however they expressed that there was still little help for women who were not fluent in English.

'I got the information and filled in the forms but I never got a reply back. There was no point applying again and again and I couldn't ring to ask because of the language barrier.' (Urdu-speaking focus group participant) [Quote: page 9]

Influence of healthy start vouchers on food choices

All participants spoke positively about healthy start vouchers as it enabled them to buy better quality and a greater variety of fruit and vegetables, and helped with family budgeting. Several participants reported that the vouchers gave them access to food that they otherwise might not access. However, all participants thought that the voucher value should keep up with the rising cost of food or at least should be added to other welfare benefits.

	'In the week the vouchers come we can eat vegetables' (telephone interviewee from Traveller community) *'I am in the habit of shopping for fruits and vegetable so I think I'll carry on. Get your kids used to it and demand it of you'* (London workshop participant) *'I used to live on junk food - now I'm eating healthy. Without vouchers I wouldn't buy fruit and veg.*' (Yorkshire and Humber teenage workshop participant, urban) *'Having vouchers for formula doesn't influence the decision to not breastfeed but if it's not going well it means that having a way to help with the cost of formula takes away the worry about how to feed your baby'* (Yorkshire and the Humber workshop participant, rural) [Quotes: page 9] <u>Accessing retail outlets</u> Participants discussed problems with the range and location of supermarkets that accepted vouchers, for example those living in rural areas or those who shopped in culture specific food stores where the vouchers were not accepted. *'Rural area, some women have to travel up to 11 miles, often by bus, to spend vouchers - not cost effective. No small 'corner shops' will exchange locally'* (online consultation respondent). *'Shops [small independent retailers] would not want to get involved in the form-filling or probably they are not aware of the scheme. If we don't know about it how would the shopkeepers know?'* (Sylheti-speaking focus group participant) *'It would be good if cheaper market stalls could take vouchers but would it be a lot of administration? It would make such a difference'* (London practitioner focus group participant). [Quotes: page 10]

GCSE: General Certificate of Secondary Education.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

McInnes, 2013

Bibliographic Reference	McInnes, Rhona J; Hoddinott, Pat; Britten, Jane; Darwent, Kirsty; Craig, Leone C A; Significant others, situations and infant feeding behaviour change processes: a serial qualitative interview study.; BMC pregnancy and childbirth; 2013; vol. 13; 114

Study Characteristics

Study type	General qualitative inquiry Semi-structured interviews
Country/ies where study was carried out	United Kingdom
Setting	**Setting** Interviews took place at the participant's home and also over the telephone. **Aim** To investigate how parents and their significant others influence feeding behaviour change.
Data collection and analysis	**Data collection** Semi-structured interviews were conducted face-to-face to collect data, which were recorded and fully transcribed. **Data analysis** Thematic analysis was conducted by four researchers.
Recruitment strategy	Disadvantaged women who were about to give birth were recruited.
Study dates	Not reported

Sources of funding	Not industry funded
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N=73 n=36 women n=37 nominated significant others
Participant characteristics	Characteristics of women interviewed (n=36) **Maternal age, years, (n):** ≤20: 3 21-30: 8 31-40: 22 ≤40: 3 **Parity (n):** 0: 19 ≥1: 17 **Feeding (n):** Exclusive breastfeeding to six months: 1 Any breastfeeding to six months: 17

	Formula introduced in first week: 16 Formula introduced by six weeks: 24 Stopped breastfeeding by six weeks (including 1 who didn't start): 10 Solids introduced by 20 weeks (n = 34 (no solids data for 2 Site 2 women)): 20 **Scottish Index of Multiple Deprivation (SIMD 2009- 1 is the most deprived quintile. 5 is the least deprived quintile)** 1-3: 26 4-5: 10
Results	Author's themes: 1. Decelerators of feeding behaviour change 2. Accelerators of feeding behaviour change <u>Decelerators of feeding behaviour change</u> Participants reported the impact significant others and parents could have on behaviour change for the introduction of solids or formula feeding, for example by providing practical help (for example, help with cleaning and cooking), or by 'running the house'. Participants wanted health professionals to 'show interest in the baby and make me feel important', 'always listen' and take time, and considered their influence around the time of introducing solids to be important. However, they reported that the contact varied and it all 'depended on who you see'- this was particularly the case for issues such as weighing the baby, poor sleep, or an unsettled baby. Results suggested that older, more educated participants were more keen to 'follow the guidelines'. Woman: *'I can't sing her [health visitor's] praises enough, … she's always open to listen to anything really, and she will not be negative if, for instance, I've said, "I don't really know how much longer I can feed him" or whatever, and she'll just chat with you, you know, she won't sort of preach to you kind of thing. She's really good.'* (ID 2192. Interview 10 weeks after birth: breastfeeding with formula introduced at 5–6 weeks. Significant others: health visitor) [Quote: page 8]

	Accelerators of feeding behaviour change Several people could also impact behaviour change, including significant others, family members, and health professionals. Participants reported that often their mothers or mothers-in-law were big influencers and sometimes encouraged solids before six months, as this was in line with their personal experience. Although this could change behaviour, sometimes it was ignored because this information was from '40 years ago' when 'things were a bit different'. *No supporting quote.*

ID: identity.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(No explanation of recruitment approach; Lack of discussion about recruitment challenges; No discussion of researcher participant relationship.)*
Overall risk of bias and relevance	Relevance	Highly relevant

McSweeney, 2016

Bibliographic Reference	McSweeney, Lorraine A; Rapley, Tim; Summerbell, Carolyn D; Haighton, Catherine A; Adamson, Ashley J; Perceptions of nursery staff and parent views of healthy eating promotion in preschool settings: an exploratory qualitative study.; BMC public health; 2016; vol. 16 (no. 1); 841

Study Characteristics

Study type	Grounded theory
Country/ies where study was carried out	United Kingdom

Setting	**Setting** Parents competed the food map at their child's preschool centres or in their own home. **Aim** To assess the knowledge, beliefs and practices of preschool staff and parents of young children attending a preschool centre about the value and need for healthy eating promotion in preschool settings and identify any issues which they feel need to be taken into consideration when developing interventions. NOTE: views of preschool staff have not been extracted.
Data collection and analysis	**Data collection** For parents, data were collected through a 'food map' exercise, which represented their child's current dietary behaviour. The exercise lasted 30 minutes and acted as a tool to discuss healthy eating practices and these discussions were audio recorded. **Data analysis** Thematic analysis was used and guided by the principles of grounded theory. Data were coded independently by one researcher and analysis was discussed at regular meetings with another researcher.
Recruitment strategy	A convenience sample was used to recruit qualified nursery staff and parents of preschool children aged 3-4 years. Participants were recruited from pre-schools and contacted by letters and telephone calls.
Study dates	Not reported
Sources of funding	Not industry funded
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N=15 parents n=14 mothers n=1 father

Participant characteristics	**Parent age range, years (n):** 16-25: 3/15 26-35: 7/15 36-45: 5/15 **Child age, years (n):** 3: 4/15 4: 11/15 **Level of parent's education (n):** Some secondary school: 1/15 Completed secondary school: 3/15 Some additional training: 8/15 Undergraduate university: 3/15
Results	No author reported themes. In this study, parents reported their child's favourite food as fruit and vegetables over other types of foods and preferred to emphasise the positive aspects of their child's diet. Once the discussion progressed parents revealed other aspects of their diet too. *'I'm trying to stick to the healthy stuff, so it doesn't sound as bad.'* (P1LA1) *'Yeah oh, liquorice, he loves his liquorice, all the usual rubbish, pizza….. Oh, as regular as everything else, we're terrible.....'* (P1LA1) [Quotes: page 5]

	Discussions involved the idea that preschool centres could offer healthy eating advice to families, but this was met with mixed reactions from parents. Some considered this to be a good idea, however some were not keen on 'being told what to do'. *….because if you say to children, "Right, this is really important," then they may go home and tell their parents, but that's not going to just make any difference, or a letter home to parents saying, "Don't let your child do this," they're just going to not really take any notice* (P3LA2) *'…. doing it in a positive way, not just saying, you mustn't do this, you mustn't do this, otherwise you're bad parents'* (P2LA1) [Quotes: page 6] Participants considered that if preschool staff were giving out information about healthy eating in the home, this should also be considered within the preschool environment. Conflicting opinions arose from a lack of standardised guidelines. *'I'm not too sure what they have on. I know they have… they do fruit don't they? I think they do tea cake. I don't know what he actually has'* (P1LA1). [Quote: page 6]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(Some concerns with data collection and unclear if the research and participant relationship has been adequately considered.)*
Overall risk of bias and relevance	Relevance	Highly relevant

Spyreli, 2019

Bibliographic Reference	Spyreli E; McKinley MC; Allen-Walker V; Tully L; Woodside JV; Kelly C; Dean M.; "The one time you have control over what they eat": a qualitative exploration of mothers' practices to establish healthy eating behaviours during weaning; Nutrients; 2019; vol. 11; 562

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	**Setting** In the organisations where participants were recruited from. **Aim** To identify mothers' perceptions on acquisition of taste preferences and on the importance of food variety and their attitudes towards food exposure and shaping the feeding environment in weaning.
Data collection and analysis	**Data collection** Semi-structured interviews in focus groups were used to collect data, which took place in organisations where participants were recruited. Two researchers conducted the interviews and audio-recorded all discussions. Focus groups lasted around 45 minutes. **Data analysis** Thematic analysis was used to analyse the data by three researchers (one coded data, the second verified coding with the first, and the second and third researcher supervised and discussed the final findings).
Recruitment strategy	Purposive, snowball sampling technique was used to recruit participants from community organisations (for example, parent-toddler groups, community centres offering Sure Start programmes). Note: participants were financially compensated for their participation in the study. Additionally, their travel and subsistence were covered by the researchers.
Study dates	March 2017 to July 2017
Sources of funding	Not industry funded

Inclusion criteria	• Adult parents and legal guardians of healthy infant aged 3-14 months • Able to read and speak in English • All genders
Exclusion criteria	• Prematurely born infants • Infants with diagnosed allergies and intolerances • Infants with any medical condition that affects the ability to feed, swallow, or digest
Sample size	N=37 women
Participant characteristics	**Mean maternal age, years (SD):** 30.3 (6) **Mean infant age, months (SD):** 7.7 (3) **First-time mother, n:** Yes: 16/37 No: 21/37 **Mother's ethnicity, n:** White: 36/37 Black: 1/37 **Mother's education, n:** Primary school or equivalent: 1 1–4 GCSEs/NVQ level 1/Foundation GNVQ/foreign equivalent: 3 5+O levels/NVQ level 2/equivalent: 5

	Apprenticeship/2 or more A levels/NVQ level 3: 9 Degree/Post-grad degree/NVQ level 4–5: 19 **Already on solids at the time of focus group, n:** Yes: 30/37 No: 7/37
Results	Author's themes: 1. Opportunities to Shape a Healthy Relationship with Food o Acting as a role model for healthy foods o Using covert approaches to feed o Giving multiple opportunities to try a food o "It starts in the womb" o Food variety "so you don't have a fussy eater" o Without food variety "things aren't going to work properly" 2. Challenges to Shape a Healthy Relationship with Food o Offering a variety of foods only if mum likes them o "They have their own personality" o Being flexible about the feeding environment o Distractions occurring during feeding <u>Opportunities to Shape a Healthy Relationship with Food</u> Participants reported on the importance of establishing balanced eating behaviours during the complementary feeding period. The first year of life was considered to be a crucial time for children's exposure to different foods. Weaning was regarded as *"the one time in their life you have complete control over what they eat"* (Participant 007_03) [Quote: page 7] <u>Acting as a Role Model for Healthy Foods</u>

Participants were aware that they played a primary role in shaping their child's food preferences and habits, often done through modelling where children liked foods that they consumed.

Participant 004_01*: '. . . now I've started trying to eat what, what I want him to eat so like I'll have the banana too and he'll eat it a lot better . . .*'

Participant 004_03: *'If she wasn't here, we would be like throwing something into the microwave where it's really conscious to cook, so I cook what's suitable for her and then we have that, so it helps us eat healthily'.* [Quotes: page 7]

Using Covert Approaches to Feed

Since infants have little awareness of the solids they are being fed, participants considered this beneficial when it came to feeding various healthy foods; particularly foods that the child had initially rejected. Participants talked about hiding the undesired food in a liked one or modifying the consistency of that food. Through this, they realised that non-verbal communication during feeding is important and that it influences their infant's attitudes towards a certain food. Creating an encouraging feeding atmosphere was helpful, whereas mum's discouraging facial expressions lessened the child's interest in the food.

Participant 004_02: *'. . . so I would just try to kind of even get her bigger sister to be like 'aww you're doing really well' . . . And all of us are sitting "oh well done" all being very encouraging.'*

Participant 007_05: *'Your face if you're giving it to them, if you don't like it, they can see you like your face I think you wouldn't be as like keen.'* [Quotes: page 8]

Giving Multiple Opportunities to Try a Food

The frequency that a food was given was seen as a determining factor for a child to get used to this food and eventually enjoy it.

Participant 008_01: *'. . . if you kept trying them until they actually, you know, acquired that taste for it cause the reason I tried the first time not like it you just put it to the side but if you keep trying like that taste will come for it.'* [Quote: page 8]

"It starts in the Womb"

Participants discussed the opportunity for a mother to instill good eating habits arises before weaning, for example the child's sensory stimuli during pregnancy and lactation.

Participant 001_01: *'They say it starts in the womb, don't they? . . . Especially, I was told especially strong flavours like garlic and curries and stuff like that it starts in the womb and then if you breast feed it's meant to happen then as well.'*

Participant 004_01: *'Sometimes I read too that what you ate in pregnancy can affect what your baby eats but I don't know if that's the thing or not . . .'* [Quotes: page 8]

Food Variety "So You Don't Have a Fussy Eater"

Food variety motivated diverse eating and a diverse diet helped prevent picky eating behaviours. Having a fussy eater was linked to increased stress during mealtimes.

Participant 003_04: *'. . . I don't think there's anything worse than a fussy child, when it's you know I don't like that I don't want it I don't want it, it can get you really stressed . . .'*

Participant 005_03: *'. . . I'm not a big fish eater, I'm more chicken . . . So it's like some places I would go where there's a set menu and sometimes there's no chicken, so I'm just stuck eating soup and I think oh I kind of want to get [infant's name] into like kind of eating everything . . .'* [Quotes: page 9]

Without Food Variety "Things Aren't Going to Work Properly"

Feeding weaning infants with a wide range of foods was perceived to contribute to a sufficient intake of essential nutrients. Participants were aware of the link between poor dietary patterns and health problems such as gastrointestinal disorders, constipation, compromised immune function and risk of food allergies and intolerances.

Participant 001_01: *'. . . my dad is very much meat and two veg and he always has been his whole life and so was his dad before him so . . . and he has all sorts of bowel problems now to be honest and I think I was always very conscious of that . . .'*

Participant 005_03: *'. . . cause if they don't get all their vitamins they're not going to have a very good immune system and things aren't going to work properly . . .'* [Quotes: page 9]

Challenges to Shape a Healthy Relationship with Food

Although participants described their control during the weaning period there were also factors such as the mum, the children themselves, and contextual factors such as the immediate environment, where this wasn't the case.

Offering a Variety of Foods only if Mum Likes Them

Participants reported that their own aversions could limit providing a wide range of foods during weaning. Although some mums exposed their infant to foods they didn't enjoy eating, the majority of them wouldn't buy or offer a food that themselves disliked.

Participant 003_06: *'. . . I won't buy things, you know, that I won't eat.'*

Participant 008_01: *'Yeah we tried him with everything because we liked, he liked homemade Indian and stuff like that, cause we love that sort of stuff and now like he'll like, last night we had tikka masala.'* [Quotes: page 10]

"They have Their Own Personality"

The idea that children develop their own personality early in life emerged from the data.

Participant 001_04: *'Like I tried loads of flavours within the first year and I personally don't think it made a difference to him, cause he did try them and he ate them and then as time went on he just, just developed his own kind of little plain taste and likes what he likes and so . . .'*

Facilitator: *'And how do you think this choice is formed?'* Participant 002_03: '*They have a little bit of their own personality. And their own taste, so they start to develop their self-awareness . .'* .'

Participant 007_04: *'Like even though they are young, they have their own personality and what they like and dislike.'* [Quotes: page 10]

Being Flexible about the Feeding Environment

	Participants reported on the difficulties faced when feeding an infant and discussed the importance of being flexible depending on their routine. Participants discussed that eating together as a family was a good chance for the family to come together, however this could be challenging depending on daily activities and if mothers were feeding other children. Participant 005_03: *'But I'll feed her anywhere, like the other day me and [infant's name] were going into town and we were waiting on the bus and she was like right I need to feed her so I just fed her sitting at the bus stop one of her wee jars of food just feed her everywhere.'* [Quote: page 11] <u>Distractions Occurring during Feeding</u> It was acknowledged that infants' restricted attention span during feeding could inhibit the completion of a meal. some mothers described the distractions under a positive light. For example, the TV had a pacifying effect on infants and made them more willing to open their mouths to the spoon. It was agreed that patience is an important quality for a mother during the weaning period. Participant 001_01: *'Dining room for us . . . Anywhere else is too big of a distraction . . . And even then there's exciting photographs to look at . . .'* Participant 005_03: *'. . . she stares at the TV, but I have her high chair like pointing at the TV and I'm kind of sitting in front of it so she's still and I just put the spoon in her mouth and she just opens her mouth automatically . . .'* Participant 002_02: *'But the thing is you have to be patient to feed a kid . . . Cause you can stay long time, ages and ages waiting on a small thing like this!'* [Quotes: page 11]

GCSE: General Certificate of Secondary Education; GNVQ: General National Vocational Qualification; NVQ: National Vocational Qualifications; SD: standard deviation.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Tang, 2022

Bibliographic Reference	Tang, Tang; Wang, Wenmeng; Vazirian, Marjan; Croden, Fiona; Hetherington, Marion M; Designing for downsizing: Home-based barriers and facilitators to reduce portion sizes for children.; Frontiers in psychology; 2022; vol. 13; 915228

Study Characteristics

Study type	General qualitative inquiry Study used mixed methods but only data for qualitative component extracted.
Country/ies where study was carried out	United Kingdom
Setting	**Setting** Not reported but likely to have occurred in the participants home. **Aim** To observe in the home environment, the extent to which mothers use and need packaging to aid portion control of highly liked high-energy-dense foods for their children.
Data collection and analysis	**Data collection** Semi-structured interviews were used to collect data and lasted between 60 and 90 minutes. Questions covered parents' perceptions of portion size, the child–parent purchase relationship, feeding practices and portion size strategies, intention and confidence (self-efficacy beliefs) to serve age-appropriate portions of meals and snacks, and parents' perceptions and needs of packaging solutions for downsizing. **Data analysis**

	Thematic analysis was used to analyse data by two researchers. Discrepancies were discussed with another author to reach consensus.
Recruitment strategy	Convenience sampling was used to recruit women from Leeds, Manchester, and Chester.
Study dates	February 2017 to February 2018
Sources of funding	Not industry funded
Inclusion criteria	• Parent having primary responsibility for feeding their child most of the time • Biological parent of a child without a chronic medical condition affecting growth or eating (for example, food allergies or intolerances, developmental disorders, or birth defects)
Exclusion criteria	• Child attends nursery >3 full consecutive days • Child had breakfast and/or evening meals outside the home
Sample size	N=21 women
Participant characteristics	**Maternal age, years, (n):** 21-30: 3 31-40: 16 41-50: 1 51-60: 1 **Mean maternal age, years:** 35.1 **Infant age, months, (n):** 12-24: 4 25-36: 9

	37-48: 2 49-60: 10 **Ethnicity (n):** White British: 11 African: 1 Other white/white Irish: 1 Chinese: 8 **Income (n):** £10–20,000: 4 £20–30,000: 4 £30–40,000: 7 £40,000+: 6
Results	Author's themes: 1. Parents' perceived effects of packaging on children o Shaping children's taste perception and food preference o Encouraging slow eating 2. Concerns/negative perception and attitude towards packaging o Do not read portions o The use of cartoon characters on food packaging o Environmentally friendly packaging o Practicality 3. Mismatch between household observation and reported behaviours

Shaping children's taste perception and food preference

Participants reported the influence food packaging had on their children in terms of how appealing it was and its effect on willingness to try unfamiliar food. Different shapes and graphics on the packaging (for example, animal characters) also had an impact on preference and interest.

"Before she (MUd05D: 25 m) did not like cheese biscuits, but once, she picked up one by herself because of its packaging. There was a bear on the packaging. So she starts to eat cheese biscuits" [MUd05].

"Yeah, sometimes, when the packaging is attractive to them. Take the yoghurt, for example, once I bought yoghurt in a strawberry-shaped pack, he (MUd06S1:16 m) liked it, and he ate it all, he liked the strawberry-shaped packaging" [MUd06]. [Quotes: page 9]

Encouraging slow eating

Participants also reported the impact of games and puzzles on food packaging and how this influenced their child's consumption. Participants reported that it grabbed their child's attention and increased consumption of food that was healthy and perhaps not preferred.

"I buy (dry) fruit snacks that come in small portions... They are animals' paw shapes. He (MU03S:36 m) likes playing the matching game on the back of the packaging. He always takes one out and finds out whose the "paw" is before he eats it, even if he is hungry. It is a very small bag. The game slows down his eating otherwise, he would swallow them down very quickly and it helps him learn the animals and their paw shapes… if they are without the games on the packaging, he can eat two and three bags…" [MU03]. [Quote: page 9]

Do not read portions

Participants reported that they had insufficient time to read and understand information on packaging.

"I rarely read the portion. … I think most of the time the food that I am really used to, I have not read it" [MUi05].

"I probably do not look at the package to see what the portion size is. I do it least with cereal at breakfast time, because I definitely do not know (what) the portion size is for cereal. I do not measure breakfast cereal. Because cereal sizes are so small and he is really hungry at breakfast time. So I just let them have as much as they want" [MU05]. [Quotes: page 9]

	The use of cartoon characters on food packaging Some participants considered graphics on packaging to be problematic, because these food items were so appealing to children. These participants reported that the cartoon characters could be used instead to combat childhood obesity. *"It is very important to have a relevant design for the packaging design. These days you can see minions (characters from an animated movie) everywhere; children are crazy to see (them)"* [MU01] [Quote: page 9] Environmentally friendly packaging Participants preferred environmentally friendly packaging, for example, made with paper, and pointed out that buying small pre-packaged individual snacks and food items would cause more damage to the environment. *"Small packs aren't sustainable. (It) does not make sense to me"* [MUd03]. *"Probably I disagree with that. It's backwards. I understand why they do it, but it seems backwards to me"* [MU05]. [Quotes: page 9] Practicality However, a few participants preferred prepackaged individual serving snack foods. However, it was also pointed out that "different ages need (packaging) in different sizes" (MUi08), and family lifestyle plays a role in terms of acceptability. *"Informational and visual. Because the structural is difficult since different ages need (packaging) in different sizes"* [MUi08] [Quote: page 10] Mismatch between household observation and reported behaviours Some participants reported using portioning aids (for example, child sized bowls, plates, spoons, hand measurements, serving spoons, and scales), and adjusted portions of high-energy-density snacks (for example, by halving pre-packaged foods to their children). *"...never, savoury snacks - once a day, confectionery and cakes – I give them Kid size … I would not let them have the same size as me … just being logical"* [MU02] [Quote: page 10]

	Some participants reported that they were unsure of correct portion sizes and hoped that this information could be available on packaging. Depending on their lifestyles (for example, if they had more than one child or if they worked full-time), participants reported preferring to give pre-packaged individual snacks for convenience and to save time.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Minor concerns *(There are some minor concerns with the recruitment strategy due to insufficient details provided. It is unclear whether the researcher participant relationship has been adequately considered.)*
Overall risk of bias and relevance	Relevance	Highly relevant

Williams, 2022

Bibliographic Reference	Williams, Lorraine; Warren, Emily; Knai, Cecile; How involved are parents in their child's early years setting's food decisions and practices?.; SSM. Qualitative research in health; 2022; vol. 2; 100142

Study Characteristics

Study type	General qualitative inquiry
Country/ies where study was carried out	United Kingdom
Setting	**Setting** Data were collected over the telephone so it is assumed interviews took place in the participant's home.

	Aim To explore parents' drivers for choice of early years childcare settings (EYS), including the extent to which food practices and healthy eating played a part, how involved, or engaged parents were able or wanted to be in this, and how satisfied they were with the food and food practices within their EYS.
Data collection and analysis	**Data collection** One-to-one telephone, semi-structured interviews were conducted to collect data and lasted between 20 and 52 minutes. Kanter Public (now Verian Global) were commissioned to conducted the interviews due to resourcing issues resulting from the Covid-19 pandemic. **Data analysis** Framework analysis was used for data analysis, where interviews were coded and analysed thematically. Analysis was conducted by three researchers. Note: participants received monetary compensation for their time and contribution to the study.
Recruitment strategy	Purposeful sampling was used to recruit participants from a range of geographical areas in England and socio-economic backgrounds. Only parents or carers of children in early years childcare settings were recruited. In this study, early years childcare settings are defined as nurseries or childminders caring for children under 5 years and registered with Ofsted Early Years Register.
Study dates	May 2020 to June 2020
Sources of funding	Not industry funded
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Sample size	N=59 parents or carers
Participant characteristics	**Gender of parent/carer (n):** Male: 14/51 Female: 45/51

	Age range of parent/carer, years (n): 20-29: 14 30-39: 35 40-49: 9 >50: 1 **Age range of child, years (n):** Under 1: 1 1 to <2: 10 2 to <3: 20 3 to <4: 20 4 to <5: 3 **Area of deprivation (Index of Multiple Deprivation) (n):** 10 (least deprived): 8 9: 9 8: 5 7: 6 6: 6

	5: 6 4: 7 3: 2 2: 6 1 (most deprived): 4
Results	Author's themes: 1. Communication with the early years childcare settings (EYS) 2. Food quality and practices <u>Communication with the early years childcare settings (EYS)</u> Participants engaged with their child's EYS about healthy eating and reported that conversations were limited to identifying and addressing individual food-related issues or concerns. Participants reported having one-to-one meetings with 'key workers' from nurseries to discuss their child's food related needs and progress, but it was informal or ad hoc, which was a concern for some. However, for some their EYS had open-door policy, which was an opportunity to work together to address their child's nutritional needs. *"… some days it was so hard to get anything in [my child] apart from a yogurt, that's all he would eat. When I went there and spoke to [the nursery manager] she really did put my mind at ease. She said, 'we'll just try loads of different things and the stuff that he does start trying and eating we can just give it to him more and more and more, then slowly adding other things for him"* (Parent 9) [Quote: page 3] How parents received information also varied, where some received written notes, others received information through an app, and some had to get this information from their child directly. *"… that's the one thing I'm annoyed about, I find that, by the time I get there, [the nursery staff are] just very dismissive … and they just want you to just, leave [and say] 'Oh, she was okay today.' You know, and that would be it…So, that is an actual problem I am having at the moment, so I find out from [my daughter] that, you know, what she's eaten throughout the day"* (Parent 11) [Quote: page 4]

Participants wanted clearer and more communication with the EYS so that they could align home food practices with those in the EYS. Those participants who reported satisfaction with their experience described clear, two-way conversation where parental feedback and participation was encouraged and a strong relationship of trust. Some expressed a lack of trust in the information provided from the EYS because of the type and amount of food their child consumed.

"I'm assuming that [my childminder's] giving [my child] at least two or three [portions of fruit and vegetables], but she might not…I think that she buys sort of cheap food because she's got lots of kids to feed… Fruit and vegetables are expensive and she's … she's not charging us for it, for food, so she's probably just giving [my child] toast and sausage rolls and pizza and bread" (Parent 6) [Quote: page 4]

<u>Food quality and practices</u>

Participants in this study reported on their own knowledge of healthy eating within in the principles of variety and balance (for example, 5 portions of fruit and vegetables a day, limiting foods high in salt or sugar). They wanted the EYS to give high-quality, freshly prepared meals that resembled what their children at at home. Participants also spoke about the social benefits of eating that children developed in EYS and spoke positively about perpetuating routine structures for meal and snack times. However, others felt limited by the facilities that their EYS had (for example, no in house kitchen), worried about the lack of variety in the menu, and complained about the food being 'quite bland' for their child. Some parents considered that the EYS would improve their child's eating habits, for example if their child was a 'fussy' eater.

"He still leaves it [his food]. We are actually debating whether to move him away because he's becoming [like his older brother who is a fussy eater] ….maybe [the EYS] needs to look to accommodate all children as opposed to a percentage" (Parent 16) [Quote: page 4]

Other parents discussed the variation in portion sizes given to their children, where some reported their child getting too much and others though it was not enough, as their child 'came home starving'.

"In terms of portions I don't actually know what size. I have asked once about what size they have because my son […] likes to eat and [the nursery] often say he's had seconds, and at one point they said, 'oh he wanted thirds' and I said, 'well shall we not give him thirds because I think he would just eat and eat' …, like I don't know how it compares to our portions …" (Parent 53). [Quote: page 4]

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Serious concerns *(Lack of justification for recruitment strategy; data were collected through a secondary agency which may have introduced bias; no information provided on researcher participant relationship; and no details reported on whether ethical issues were considered.)*
Overall risk of bias and relevance	Relevance	Highly relevant

Zhang, 2019

Bibliographic Reference	Zhang X; Benton L; The Association of Acculturation and Complementary Infant and Young Child Feeding Practices Among New Chinese Immigrant Mothers in England: A Mixed Methods Study; International Journal of Environmental Research and Public Health; 2019; vol. 16; 471-79

Study Characteristics

Study type	General qualitative inquiry Study used mixed methods but only data for qualitative component extracted.
Country/ies where study was carried out	United Kingdom
Setting	**Setting** A mutually convenient location for researcher and participant. **Aim** To explore the association of acculturation and infant and young child feeding among new Chinese immigrant mothers.

Data collection and analysis	**Data collection** Open-ended questions and prompts were used in semi-structured interviews to gather data from participants. The participants were taken from the population who had completed the quantitative part of the mixed methods study. All interviews were audio-recorded and conducted in the preferred language of the participant. Interviews ranged from 30 to 70 minutes. **Data analysis** Thematic analysis was used to analyse the data. Data analysis was conducted by more than one researcher in order to triangulate findings. Note: all participants received first cards for completing the study (£10 for the quantitative questionnaire and £5 for participating in the interview).
Recruitment strategy	Purposive snowball sampling was used to recruit participants from informal community organisations (for example, Chinese churches in central London) and through social media apps (for example, WeChat). Interested participants contacted the researcher through apps, by telephone, or face-to-face.
Study dates	June 2017 to March 2018
Sources of funding	Not industry funded
Inclusion criteria	• Those who self-identified as Chinese and who immigrated from mainland China • Those who settled in England for at least one year as first-generation immigrants • Those who had at least one child aged 6 to 24 months during the study • Carried their child to full term
Exclusion criteria	• Mothers and/or children of mixed backgrounds (such as, White and Chinese, black and Chinese, Asian and Chinese or other combinations) • Participants with any self-reported medical complications
Sample size	N=15 women
Participant characteristics	Mean maternal age (SD): 33.06 (5.39)

Results	Author's themes: 1. Relationship of Integration with Responsive and Pressure Feeding 2. Relationship of Marginalisation with Indulgence 3. Relationship of Separation with Restrictive Diet Quality 4. Relationship of Assimilation with complementary infant and young child feeding practices (CIYCFP) 5. Acculturation and Feeding Conflict <u>Relationship of Integration with Responsive and Pressure Feeding</u> Participants discussed integration related to responsive satiety and responsive finishing. Participants were concerned about food portions and reported using feeding bowls to restrict portion sizes, which is a Chinese cultural practice. *"My children understand that when they are full, they will not eat. If I feed them more, they would spit out and shake their heads to tell me that they do not want to eat." (id 15)* [Quote: page 13] *"I do not give them too much food to eat, keeping it under control. Any foods they eat are served in a bowl. They have their own feeding bowl, so no regardless of whether it is noodles or rice or any other foods, they eat a similar amount. Even if they'd like to eat more, I do not give them. They only eat what fits in a bowl."* (id 16) [Quote: page 13] <u>Relationship of Marginalisation with Indulgence</u> The theme reported that marginalisation was related to indulgence and permissive feeding. Those who had not fully assimilated into UK culture reported not using social media apps and choosing food from advertisements aimed at children (for example, from TVs or newspapers). One participant reported using tradition Chinese medicine, cooking complicated traditional Chinese food, and allowing her children to eat unhealthy food if they wanted. Many participants did not follow updated feeding practices and followed some traditional Chinese practices instead. One participant reported only receiving and following information from a Chinese church, which had outdated information on feeding practices, such as withholding food from her child if they did not eat at regular times. *"When we go out to have dinner with our friends' children, some children would like to eat a hamburger while others prefer Chinese food. We buy hamburgers and take it to Chinese restaurants to eat."* (id 13) [Quote: page 13] <u>Relationship of Separation with Restrictive Diet Quality</u>

	Many participants reported maintaining their traditional diets because they found it hard to adjust to British dietary culture. For example, participants stated preferences for hot foods or water and generally avoided cold foods or water, as they believed that this was healthier and viewed it as 'light' and nutritious. *"I control my children to eat light they grow up, I cannot continue to control this but, if I could, I would try to keep them eating light foods."* (id 8) *"It is important for my children to eat healthy foods, such as fruits and vegetables, which affect their health in the future. I do not allow them to choose food by themselves."* (id 22) *"I do not give my children fried foods, such as fries and hamburgers. I have to cook food to take along when we are outside and rarely give them junk foods, except in the situation where we cannot cook."* (id 16) *"I only buy some high-quality meat. I will not buy 3 for £10 – I choose more expensive food. I also particularly buy organic food."* (id 22) [Quotes: page 14] <u>Relationship of Assimilation with CIYCFP</u> The majority of participants reported following western heath professionals' advice for feeding, particularly when dealing with their child's fussy eating behaviour. *"Fussy eating is a big problem. The health visitor taught us to constantly let children try food, not force them, and keep food in front of children. The Chinese method is to force children or mix food with sugar or other foods that children like—anything, as long as the food ends up in the children's mouth."* (id 27) [Quote: page 14] <u>Acculturation and Feeding Conflict</u> Some participants felt that Chinese physiology was different to British physiology, and therefore they could not adjust to British dietary practices. They preferred to make their own food at home, and preferred to take it out with them in order to avoid unhealthy British food. *"We did not grow up in England. Though I gave birth to my child in England, I think his physique is Chinese. We are different to the British, especially our diet and culture."* (id 12)

	“Though I have been living in England for decades, I still think the Chinese diet is relatively healthier. Because the physique of my children is di *erent from the British, I must cook Chinese food to take with us when we go outside and rarely feed my children junk food.”* (id 16) [Quotes: page 15] Note: the authors report data on the theme 'Balancing Western and Chinese Feeding Practices', which was not extracted as there were no relevant findings.

D: standard deviation.

Critical appraisal - Qualitative Critical Appraisal Skills Programme (CASP) checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	No or very minor concerns
Overall risk of bias and relevance	Relevance	Highly relevant

Appendix E Forest plots

Forest plots for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

No meta-analysis was conducted for this review question and so there are no forest plots.

Appendix F GRADE-CERQual tables

GRADE-CERQual tables for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years in appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months?

Table 7: Evidence profile for facilitators for increasing the uptake of government advice on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Theme A1. Adequate knowledge and information						
Subtheme A1.1 Knowledge of guidance around weaning, weaning signs and appropriate foods						
3 studies Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers Garcia 2019 General qualitative inquiry with structured interviews N = 21 parents	Parents reported having knowledge of the guidance recommending that infants are introduced to solids at 6 months of age, as well as the signs of developmental readiness for weaning such as infant being able to sit up unsupported, grasp items and bring food to mouth. In addition, some parents referred to knowledge gained from weaning classes about the differences between commercial and homemade foods, and others discussed how they adapted family meals to reduce salt, sugar, and fat contents, while increasing variety and nutrient content to make meals suitable and balanced for infants. However, some participants were not aware of weaning classes. *"I wanted to follow guidelines. I also felt that it would be easier as he would be able to eat almost everything straight away, for example bread. I did want to have an element of BLW also and would only be able to do this at 6 months."* [Quote: Arden 2015, p. 837] *"It has improved the quality of our family meals as I prefer him to eat healthy nutritious meals which means we have to do the same"* [Quote: Brown 2013, p. 236]	Serious concerns[1]	Minor concerns[2]	Minor concerns[3]	No or very minor concerns	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Subtheme A1.2 Knowledge of healthy eating and its benefits						
2 studies Caton 2011 General qualitative inquiry with semi-structured interviews N = 13 mothers Lakhanpaul 2020 General qualitative inquiry with focus groups and semi-structured interviews N = 141 parents, caregivers and key informants	Having some knowledge of healthy eating, its benefits and harms guided parents in making decisions around foods offered to infants during weaning. Foods with better nutritional values in terms of the salt and sugar levels, organic or 'natural' produce and home-cooked meals were preferred over commercially produced infant foods. Parents also highlighted the negative effect of sugary drinks on oral health as a decision-making factor in infant foods and drinks choices. *'Even the xxx baby food for weaning and stuff has still got sugar in it – it's got concentrated ingredients in which contain sugar and stuff and they say that is quite bad for their teeth so they said the best thing to do is just to stew your own fruit and mash this up...'* [Quote: Caton 2011, p. 821]	Moderate concerns[4]	No or very minor concerns	Minor concerns[3]	Minor concerns[5]	MODERATE
Subtheme A1.3 Information/advice from health care professionals and external sources						
5 studies Garcia 2019 General qualitative inquiry with structured interviews N = 21 parents Goldthorpe 2018 General qualitative inquiry with semi-structured interviews N = 20 parents/caregivers Lakhanpaul 2020 General qualitative inquiry with focus	Parents reported seeking information from different sources including weaning classes, online groups, community groups, friends and family, health professionals and other published materials, such as First Fun Foods booklet provided in Scotland before making decisions on introducing solids to their infants. In particular, parents demonstrated high regard for advice received from health professionals and sometimes referred to health professionals as 'experts' delivering the official guidance information. Parents reported adhering to weaning guidance such as waiting until infant was 6 months of age before introducing solid because they had been advised to do so by their health professionals. They also verified information from other sources with their health professionals before acting on them, or simply combined the information.	Serious concerns[1]	Minor concerns[2]	No or very minor concerns	Minor concerns[5]	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
groups and semi-structured interviews N = 141 parents, caregivers and key informants Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents McDougall 2003 General qualitative inquiry with focus groups and in-depth interviews N = 10 parents	However, parents were not always fully trusting of advice from health professionals and sometimes sought information from other sources for example online or verified information with peers or family members. Mothers who proactively sought information by knowing various sources of information and engaging with them reported feeling more relaxed and confident. *'I take her (health visitor) advice because she deals with kids and knows what she is doing, and obviously that's the person to listen to. People say- oh well I've brought five kids up and I've done this and I've done that. But what's going to happen to them in years to come? I mean people are getting Crohn's disease and all sorts, and lots of other things what they're just finding out about now.'* [Quote: McDougall 2003, p. 26]					
Theme A2. Factors relating to acceptability						
2 studies Caton 2011 General qualitative inquiry with semi-structured interviews N = 13 mothers Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	Mothers reported a number of techniques use to encourage their infants to eat healthier foods such as vegetables. These techniques included modifying the texture of food by pureeing or chopping into bits, modifying taste by using dips and sauces or by masking them with more liked foods and offering foods to infants frequently and repeatedly to get them used to the food. *"well when I first tried him with this pasta sauce thing that I make he spat the peppers out so then I decided to make it into a smooth one. So rather than the lumps of the pepper and mushrooms I blended it and then put it on his pasta – so I did that. I blended it all up and then once he got used to the taste of it now he will eat it in big lumps."* [Quote: Caton 2011, p. 820]	Moderate concerns[4]	No or very minor concerns	Minor concerns[3]	Minor concerns[5]	MODERATE
Theme A3. Motivational factors including child characteristics						
Subtheme A3.1 Trusting the infant to lead (Baby-led weaning)						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	**Coherence of finding**	**Adequacy**	**Relevance of evidence**	**Overall confidence**
3 studies Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers Cook 2021 General qualitative inquiry with focus groups N = 110 parents	Mothers adopting the baby-led weaning approach discussed the need to trust their infants to guide the weaning process. They discussed being guided by the infant in decision around when to start the weaning process, what to eat, how much to eat and self-feeding, explaining that this enabled infants to explore different flavours and textures of foods as well as giving infants the opportunity to further develop coordination skills and independence, learn food tastes and textures and develop their feeding habits and preferences at a pace that aligned with their nutritional needs such as there were instances of eating very little, playing with food and reduced appetite but mothers felt positive that their infants would eat as much or as little as their bodies required. Mothers adopting this approach expressed some aversion to the traditional spoon-feeding approach to weaning explaining that it often led to force-feeding, but maintained flexibility to incorporate spoon-feeding where necessary, based on the infant's needs and preferences, still referring to it as baby-led weaning. Parents believed that allowing the infant to guide their feeding may lead to longer term healthier eating habits. *"My daughter was clearly not ready to eat at 6 months, but if I had followed the traditional weaning route (and she took a spoon!) I would have been forcing food into her before she was ready, and that really doesn't seem right. We don't force our children to do other things before they are ready (for example walking), so why should food be any different, as long as they are healthy and gaining weight."* [Quote: Arden 2015, p.837]	Moderate concerns[4]	No or very minor concerns	Minor concerns[3]	No or very minor concerns	MODERATE
Subtheme A3.2 Family meals and eating together to encourage healthy eating						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	Mothers discussed including infants in family meals and mealtimes and aligning mealtimes with infants natural hunger pattern to keep them included. They explained it could be cost and time saving, less stressful and more pleasurable for everyone, especially as infants could participate by self-feeding and did not need to be fed by someone else who also needed to eat. However, the mothers also noted the importance of maintaining flexibility as it may not always be possible for the family to eat together due to changing lifestyle schedules and changing hunger patterns of the infant. *"I think it saves a lot of time and money being able to feed the baby what the rest of the family is enjoying and they feel included in mealtimes. You can all eat a meal while it's hot rather than having to feed the baby with a spoon instead of eating your own meal."* [Quote: Brown 2013, p.238]	Minor concerns[6]	No or very minor concerns	Minor concerns[3]	No or very minor concerns	HIGH
Theme A4. Thoughts, views, and perceptions of parents/carers						
Subtheme A4.1 Feelings of responsibility						
5 studies Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers Caton 2011 General qualitative inquiry with semi-structured interviews N = 13 mothers Cook 2021	Mothers showed awareness of playing a primary role in shaping their child's food and eating habits and preferences and described various ways they felt responsible. This included provision - making healthier foods available, restriction – controlling what their infants were exposed to, and role modelling – eating healthily for children to imitate. Mothers generally felt that the period of weaning was a crucial time to establish healthy eating habits in their children and felt the need to expose their children to a wide variety of foods and limit the unhealthy foods consumed. However, some mothers also expressed thoughts around instilling healthy eating habit prior to the weaning phase, during pregnancy and lactation, when infants get exposed to the flavours consumed by their mothers.	Moderate concerns[4]	Minor concerns[2]	No or very minor concerns	Minor concerns[5]	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
General qualitative inquiry with focus groups N = 110 parents Maslin 2015 General qualitative inquiry with focus groups N=24 mothers Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	Provision of healthy meals included preparing homemade foods for their infants, which parents expressed a preference for despite the effort required. Some mothers began the weaning phase with the enthusiasm of making home-made foods for their infants, mainly because they were unable to get single ingredient baby food to buy. But this was short-lived. On the contrary, some other parents cooked homemade foods later on during weaning, when the initial challenges had been overcome, and considered it worthwhile. *"You want to kick things off in the first stage - simple and single"* [Quote: Maslin 2015, p. 4] *"And now we started to basically cook on our own, we made ourselves some groats, we'd make them with some vegetables. We also invested in a blender and we basically made things ourselves. Most things. So, hmm, let's say that it required a lot of input and effort, but it was worth it"* [Quote: Cook 2002, p. 7] *"*[weaning is] *the one time in their life you have complete control over what they eat"* [Quote: Spyreli 2019, p. 7]					
Subtheme A4.2 Views about food variety and fussy eating						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	**Coherence of finding**	**Adequacy**	**Relevance of evidence**	**Overall confidence**
2 studies Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	Generally, mothers believed that the more variety of food a child is exposed to during the weaning phase, the more balanced their diets and nutrition was, and the less fussy they were with eating, therefore developing healthier food habits as they grew. *"I think that if he is offered lots of tastes then that is what he will grow up expecting to eat. Start as you mean to go on"* [Quote: Brown 2013, p. 236]	Minor concerns[6]	No or very minor concerns	Minor concerns[3]	No or very minor concerns	HIGH
Subtheme A4.3 Perception of breastfeeding						
1 study Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers	Mothers discussed the importance of breastfeed milk as part of their infants weaning diet and phase, explaining that breastfeeding was not just a method of feeding but made up part of a parenting style. The mothers felt that breast milk should be offered to infants for the first year of life. *"I believe that a baby shouldn't be rushed into eating solid food. Milk is enough for them until they are 1."* [Quote: Arden 2015, p. 838]	Moderate concerns[4]	No or very minor concerns	Moderate concerns[7]	No or very minor concerns	LOW
Subtheme A4.4 Need for additional support						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
1 study McInnes 2013 General qualitative inquiry using semi-structured interviews N=73 women and nominated significant others	Mothers expressed a desire for additional support from their parents or significant others (anyone with the greatest influence on their infant feeding) in providing practical help during weaning such house completing household chores and offering advice. However, mothers felt that some of this advice could be outdated and so were not necessarily adhered to. In addition, support from health professionals was sought after, where participants wanted health professionals to show more interest and make them feel important. While they acknowledged that this was possible, the participants felt that the support received was not consistent with all health professionals and it depended on the individual. *"I can't sing her [health visitor's] praises enough, … she's always open to listen to anything really, and she will not be negative if, for instance, I've said, "I don't really know how much longer I can feed him" or whatever, and she'll just chat with you, you know, she won't sort of preach to you kind of thing. She's really good."* [Quote: McInnes 2013, p. 8]	Minor concerns[6]	No or very minor concerns	Moderate concerns[7]	No or very minor concerns	MODERATE
Subtheme A4.5 Dealing with challenges – tackling mess						
1 study Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers	Whilst mess was considered a challenge during weaning, mothers developed effective strategies to mitigate this challenge by using large long-sleeved bibs, covering the floor underneath the infant's highchair, and learning foods that are messier to avoid offering infants when out and about. This ensured that infants could still be offered a wide range of foods and maintain their independent eating whether within the home or without. *"We soon learnt what he would eat up immediately and what he seemed to particularly like smearing about. And what stained and what didn't. And what you would be picking out of your carpet for months on end. Those foods were not given at Grandma's!"*	Minor concerns[6]	No or very minor concerns	Moderate concerns[7]	No or very minor concerns	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
	[Quote: Brown 2013, p. 238]					
Theme A5. Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating						
2 studies Cook 2021 General qualitative inquiry with focus groups N = 110 parents Goldthorpe 2018 General qualitative inquiry with semi-structured interviews N = 20 parents/caregivers	Parents and caregivers discussed their cultural and traditional practices that encouraged healthy eating and appropriate weaning practices. Generally, they considered weaning as a period to slowly transition infants from milk into the family's cultural diet. Therefore, efforts were either made to ensure that family meals were appropriate to the infant or that the infant got accustomed to the family meals as they were especially as it related to spices. Additionally, African mothers, according to their custom did not introduce solids to infants before 6 months as it was thought that the infants were not ready to swallow their traditional foods. Similarly, family traditions around making homemade meals from scratch were discussed as a preference. *"I think even culturally 6 months; because where I come from, from Nigeria, you start weaning – although with African food, like with okra, we give that to them so that they can swallow"* [Quote: Cook 2021, p. 5]	Moderate concerns[4]	No or very minor concerns	Minor concerns[3]	No or very minor concerns	MODERATE

1 Major concerns about methodological limitations as per CASP qualitative checklist
2 Some evidence is ambiguous or contradictory without a credible explanation for differences (Minor concerns relating to range of opinions expressed incorporated into both facilitators and barriers)
3 Studies together offered moderately rich data
4 Moderate concerns about methodological limitations as per CASP qualitative checklist
5 Some evidence is from a substantially different context to the review question (study population in Lakhanpaul 2020 includes community members, who were not mothers or carers of infants; study population in Caton 2020 combines all children under 5 years)
6 Minor concerns about methodological limitations as per CASP qualitative checklist
7 Studies together offered some rich data

Table 8: Evidence profile for barriers to increasing the uptake of government advice on appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Theme B1. Conflicts of opinions						
Subtheme B1.1 Child's feeding choices/decisions						
2 studies Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	Parents described conflicts of opinions between their desire to follow best practice adhering to the complementary feeding guidance and their desire to trust the infant to guide the timing and process of weaning. Mothers reported taking a different line of action from what they had planned, and when solids were introduced earlier than 6 months, mothers validated this as "trusting the infant". Parents also reported that children develop their own preferences while young and they make the choices of what they like or dislike irrespective of external efforts. *"I planned to commence solids at 6 months as per WHO guidelines. However the baby had other ideas and stole food off of [the] plate aged just over 5 months . . . I was initially concerned that we had not reached to recommended 26 weeks, but as he decided for himself I was not too worried."* [Quote: Arden 2015, p. 837]	Moderate concerns[1]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	MODERATE
Subtheme B1.2 Poor collaboration between parents and early years' professionals						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
1 study Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers	Similarly, there were conflicts reported between parents and early years professionals where parents who took the baby-led weaning approach to weaning felt that they could not impose the same approach on the staff in a nursery setting due to the amount of food wasted and very little food eaten. Therefore, different approaches to weaning were followed in the home and in the nursery. *"I didn't ask nursery to do BLW at that stage a lot of food was being thrown around and not much was being eaten. I would have been embarrassed to ask them to do this if she wasn't eating anything."* [Quote: Arden 2015, p. 839]	Moderate concerns[1]	No or very minor concerns	Moderate concerns[3]	No or very minor concerns	MODERATE
Subtheme B1.3 Pressure from family and friends						
1 study Cook 2021 General qualitative inquiry with focus groups N = 110 parents	Parents also discussed conflicts between their views and practices of healthy eating and that of the older generation. They described feeling pressured by the older generation to offer infants traditional foods, which they sometimes felt were unhealthy, leading to confrontation. While some parents felt positive about the healthy eating practices of the older generation, other parents particularly younger parents from South Asia and Britain felt that the views of healthy eating from the older generations were outdated. *"It stems from the pressure of our parents, if you try to say "We want to try to give our child XYZ" or we want to try and give them some healthy options, your father will say "what's wrong with the dal and Roti that we've been eating for the last 30/40 years? Nothing happened to us"* [Quote: Cook 2021, p. 8]	Moderate concerns[1]	No or very minor concerns	Moderate concerns[3]	No or very minor concerns	MODERATE
Theme B2. Issues relating to accessibility						
Subtheme B2.1 Cost of healthier foods						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
1 study Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers	Some mothers explained that although they desired to offer their infants a range of tastes and textures of foods, certain foods were considered expensive, especially as the child may end up not eating the food and wasting it. These mothers were therefore reluctant to offer such foods to their infants. *"He really likes raspberries but they are very expensive. When he was first starting he did eat some but he also threw some, squashed some and smeared some in his hair. It was very hard not to get tense and think that's £1 you just wasted... £1.50... £2.00. When you are on a tight budget it is hard."* [Quote: Brown 2013, p. 238]	Minor concerns[4]	No or very minor concerns	Moderate concerns[3]	No or very minor concerns	HIGH
Subtheme B2.2 Parental factors influencing diet						
1 study Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	Parents reported that the foods offered to their infants was often limited by their own individual preferences, such that children were not offered foods that their parents disliked mainly because the parents wouldn't buy such foods. However, some parents made the effort to expose their children to foods they disliked. *". . . I won't buy things, you know, that I won't eat."* [Quote: Spyreli 2019, p.10]	No or very minor concerns	No or very minor concerns	Moderate concerns[3]	No or very minor concerns	MODERATE
Subtheme B2.3 Accessibility to health professionals						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	**Coherence of finding**	**Adequacy**	**Relevance of evidence**	**Overall confidence**
1 study Garcia 2019 General qualitative inquiry with structured interviews N = 21 parents	Parents reported that health professionals were not as accessible, which resulted in them seeking advice from online groups and other sources because they found it easier and quicker than it was to access a health professional. '*"It's easier to access as well, its quicker to access information online than it is to contact a health professional about it and wait until they get back to you"* [Quote: Garcia 2019, p. 10]	Serious concerns[5]	No or very minor concerns	Moderate concerns[3]	No or very minor concerns	VERY LOW
Subtheme B2.4 Time and convenience						
3 studies Cook 2021 General qualitative inquiry with focus groups N = 110 parents Maslin 2015 General qualitative inquiry with focus groups N=24 mothers Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	Participants across studies described the convenience of using pre-made commercial baby foods especially when outside the home. One study referred to parents using commercial foods mostly in the early stages of weaning when trying to transition the infant from breasts to solid foods, 1 study described instances when family meals was not suitable for the infant and 2 studies reported parents using them when there were time constraints. *"But I'll feed her anywhere, like the other day me and [infant's name] were going into town and we were waiting on the bus and she was like right I need to feed her so I just fed her sitting at the bus stop one of her wee jars of food just feed her everywhere."* [Quote: Spyreli 2019, p. 11]	Moderate concerns[1]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	MODERATE
Theme B3. Issues relating to misinformation or a lack of information and communication of information, including food marketing and other commercial determinants						
Subtheme B3.1 Insufficient knowledge and information about weaning and healthy eating						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
9 studies Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers Caton 2011 General qualitative inquiry with semi-structured interviews N = 13 mothers Cook 2021 General qualitative inquiry with focus groups N = 110 parents Garcia 2019 General qualitative inquiry with structured interviews N = 21 parents Lakhanpaul 2020 General qualitative inquiry with focus groups and semi-structured interviews N = 141 parents, caregivers and key informants Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents	Parents expressed concerns about the weaning information they received from health professionals being insufficient, causing them to turn to other sources of information, in particular online peers. Some parents also reported not being aware of available weaning classes. Mothers discussed feelings of worry and anxiety from lack of sufficient information, especially when they felt their child was a 'fussy eater', whereas mothers who were more proactive in seeking information were more relaxed and confident. Parents expressed a desire for more information possibly as part of the Healthy start vouchers, on websites or through health professionals. Discussions around appropriate weaning foods and infant's readiness for weaning showed that parents were unaware of the appropriate signs of infant's readiness for weaning, as well as age-appropriate weaning foods for the infant. Parents cited hunger, an interest in foods, putting fingers in mouth, chewing, finishing milk quickly, being irritable or lack of sleep as reasons to start weaning. Mothers in one study considered the mother's intuition as the most important factor in determining infant's readiness for solid foods. Parents reported adapting meal contents to make food suitable for infants but used herbs and spices as they usually would when preparing an adult's food. Additionally, parents offered high-energy foods, in particular rise-based foods, and sugary snacks to infants. *". . . (the HV) spoke to us about, like, weaning him on to things but didn't talk in much detail and then we spoke to family members and just read books and things . . ."* [Quote: Lovelace 2015, p. 873] *"Well she wouldn't settle on a night time, so I couldn't wait to get her on solids so she'd sleep longer. It was better."*	Moderate concerns[1]	No or very minor concerns	No or very minor concerns	Minor concerns[6]	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Lucas 2013 General qualitative inquiry with interviews N = 107 parents Maslin 2015 General qualitative inquiry with focus groups N=24 mothers McDougall 2003 General qualitative inquiry with focus groups and in-depth interviews N = 10 parents	[Quote: McDougall 2003, p. 26] *"I never know, my husband always says that's enough, don't give no more. He likes you know Asians make this thing called Kheer, it is milk with rice and sugar and it is really sweet and it is really nice. He absolutely loves it. Any time of day you feed him that he'll eat it."* [Quote: Lakhanpaul 2002, p.6]					
Subtheme B3.2 Conflicting information and guidance around weaning						
4 studies Garcia 2019 General qualitative inquiry with structured interviews N = 21 parents Lakhanpaul 2020 General qualitative inquiry with focus groups and semi-structured interviews N = 141 parents, caregivers and key informants Lovelace 2015 Phenomenological study with semi-structured interviews	Two studies described the constantly changing information about weaning, explaining that health professionals may not always have the most current information to hand. Therefore, the parents were often verified information from other sources. Similarly, 2 studies reported health professionals providing women with conflicting information around the timing of introduction of solids. *"The NHS website is very up to date, but I just think there's a wee bit of, maybe the people who are out in the community do need to catch up with the current information a wee bit because it doesn't seem to marry up."* [Quote: Garcia 2019, p. 9] *"She (HV) told me it was a bit too early . . . so I went to the doctor and I said 'look I can't fill him up and she told me some children go on to solids earlier . . . "*	Serious concerns[5]	No or very minor concerns	No or very minor concerns	Minor concerns[6]	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N=11 parents McDougall 2003 General qualitative inquiry with focus groups and in-depth interviews N = 10 parents	[Quote: Lovelace 2015, p. 874]					
Subtheme B3.3 Misinformation from family						
2 studies Maslin 2015 General qualitative inquiry with focus groups N=24 mothers McDougall 2003 General qualitative inquiry with focus groups and in-depth interviews N = 10 parents	The influence of friends and family in the decision-making process around introducing solids to infants and weaning was discussed. Mothers reported following advice from their own mothers, sisters or other relatives who had experience with weaning, a lot of which was misleading information. One study highlighted that mothers in the higher socioeconomic groups are more likely to seek information from health professionals, but mothers generally had varying sources of information including the internet, books, health professionals and relatives that they needed to navigate. *"My mum said start at 4 months - she said she started with me at 3 months but I am waiting I have seen the health visitor and I am going to start at 18 weeks"* [Quote: Maslin 2015, p. 3] *'I had no worries about giving them because my sister said her babies were fine on half a rusk, so I thought there's no harm in trying mine on it, I can't see her being any different.'* [Quote: McDougall 2003, p.26]	Serious concerns[5]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	LOW
Subtheme B3.4 Marketing of commercial baby foods						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Lakhanpaul 2020 General qualitative inquiry with focus groups and semi-structured interviews N = 141 parents, caregivers and key informants Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents	Parents reported that the marketing information of baby foods was confusing. They felt that 4 months was an ideal time to introduce solid foods because the baby foods were marketed as being suitable for infants aged 4 months and above. The availability of formula milk for hungrier babies also made parents believe that some infants need more food or energy-dense meals than others. Parents also reported giving no thoughts to the nutritional contents of foods marketed as being for baby as they assumed it had to have the right nutrients suitable for babies. *"[…] I think anyway if you go to the supermarket and you see something that says four months then you should be doing that because the packaging, if the baby food companies are telling you that you should be feeding your baby at four months why wouldn't you, why would you wait until they were six months, because even though it is not that much of a difference but when you have had a baby they are growing so quickly you think that two months is a big deal and that you should be giving that extra food, but definitely I do not think many families that I have seen will wait until six months."* [Quote: Lakhanpaul 2020, p. 9]	Moderate concerns[1]	No or very minor concerns	No or very minor concerns	Minor concerns[6]	MODERATE
Theme B4. Thoughts, views and perceptions of women or parents/carers						
Subtheme B4.1 Feelings of lack of control						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	Participants described an attempt to control or monitor their infants' eating during the weaning period but experienced difficulties achieving this. One study reported that the mum, the child themselves and the immediate environment were factors that prevented mothers from exercising such control. *"The negative side of baby led weaning is that it's hard to measure how much food he has eaten."* [Quote: Arden 2015, p. 835]	Moderate concerns[1]	No or very minor concerns	Moderate concerns[3]	No or very minor concerns	LOW
Subtheme B4.2 Feelings of worry and anxiety						
5 studies Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers Garcia 2019 General qualitative inquiry with structured interviews N = 21 parents Lakhanpaul 2020 General qualitative inquiry with focus groups and semi-structured interviews	Four studies discussed mothers expressing worry and anxiety about the process of weaning their infants. Two studies described the concerns of mothers around the amount of food their infants took and whether it met their nutritional needs, one of which involved mothers adopting the baby-led weaning approach. One study described the worries of mothers about the possibility of choking and 2 studies highlighted concerns about introducing new foods, one of which mentioned allergies as a concern. Mothers adopted strategies to manage their concerns about allergies, which involved either introducing new foods slowly or choosing to completely avoid allergenic foods. Some mothers in one study who expressed concerns about introducing new foods were however quick to get over their concern and offer their child commercially made foods. Mothers in one study were anxious about attending social events for fear of being judged or criticised about the skinny or chubby appearance of their infants, or of challenging social practices that they did not engage in, such as offering infants treats. *"However, I am now more concerned that she is not getting all she needs from a nutritional point of*	Serious concerns[5]	No or very minor concerns	No or very minor concerns	Minor concerns[6]	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N = 141 parents, caregivers and key informants Maslin 2015 General qualitative inquiry with focus groups N=24 mothers	*view from breast milk and the very little amount of solid food she eats...I worried particularly that she would not be getting enough iron."* [Quote: Arden 2015, p. 836]					
Subtheme B4.3 Limitations around messy eating						
2 studies Arden 2015 General qualitative inquiry with semi-structured interviews N =15 mothers Brown 2013 General qualitative inquiry with semi-structured interviews N = 36 mothers	Mothers adopting the baby-led weaning approach considered the mess infants created during feeding as challenging, especially when they were outside the home where there was an expectation that babies should be neatly fed. This sometimes led parents to adopting spoon-feeding approaches as reported in one study. *"Lydia tends to drop quite a lot and have it handed back but we can't do this on the train, so I'll give her a pot of food on a spoon and a little square of sandwich or some banana to go with it."* [Quote: Arden 2015, p. 839]	Moderate concerns[1]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	MODERATE
Subtheme B4.4 Guidelines as a guide, not instruction						
1 study Caton 2011 General qualitative inquiry with semi-structured interviews N = 13 mothers	Mothers expressed thoughts that guidelines are too structured and restrictive and instead should be flexible, taking into account individual child differences. *"I'm not just going to wean her because I feel as though I should be because she's over six months old – every baby is different. Not every baby is the same at six months are they?"* [Quote: Caton 2011, p. 822]	Moderate concerns[1]	No or very minor concerns	Moderate concerns[2]	Minor concerns[6]	LOW
Subtheme B4.5 Perception of infant's needs around feeding						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Lakhanpaul 2020 General qualitative inquiry with focus groups and semi-structured interviews N = 141 parents, caregivers and key informants Spyreli 2019 General qualitative inquiry with focus groups and semi-structured interviews N=37 mothers	One study reported on mothers perceptions of their infants need for additional meals. Although parents reported having scheduled mealtimes, parents left an allowance for infants to be fed an additional meal, which could be milk or solid food at bedtime. Two studies discussed play at mealtimes and reported different attitudes to this. While some parents felt that playing while eating was beneficial in that it prevented messy eating and encouraged infants to be more receptive to food, others felt that it was a missed opportunity to interact with the infant. *'"The other thing is obviously a lot of the people say right in our community, which is true, people eat up to the brim of their neck and even sometimes you will see people eating just after 15 min before they go to bed which is not good because you have not digested your food yet, it is still in your chest."* [Quote: Lakhanpaul 2020, p. 6] *'. . . she stares at the TV, but I have her high chair like pointing at the TV and I'm kind of sitting in front of it so she's still and I just put the spoon in her mouth and she just opens her mouth automatically . . .'* [Quote: Spyreli 2019, p. 11]	No or very minor concerns	No or very minor concerns	Minor concerns[2]	Minor concerns[6]	HIGH
Subtheme B4.6 Preferred timing for weaning						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	**Coherence of finding**	**Adequacy**	**Relevance of evidence**	**Overall confidence**
3 studies Cook 2021 General qualitative inquiry with focus groups N = 110 parents Garcia 2019 General qualitative inquiry with structured interviews N = 21 parents McDougall 2003 General qualitative inquiry with focus groups and in-depth interviews N = 10 parents	Three studies reported that some parents made personal choices on when they wanted to begin weaning their infant, irrespective of their awareness of the guidance around weaning or information from health professionals. *'The health visitor said to wait, but that wasn't what I wanted to hear. I had already decided. I ask their (the health visitor) opinion on something, but if I don't like it I follow my own road. I know what she can and can't eat. I'll do what I want but I ask the health visitor anyway, just to make her feel (pause) wanted.'* [Quote: McDougall 2003, p. 26]	Serious concerns[5]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	LOW
Subtheme B4.7 Force-feeding						
1 study Lakhanpaul 2020 General qualitative inquiry with focus groups and semi-structured interviews N = 141 parents, caregivers and key informants	Parents reported concerns around force-feeding expressing that it is a stressful and unpleasant process, that is associated with a risk of children becoming afraid of food. *No supporting quotes*	No or very minor concerns	No or very minor concerns	Serious concerns[7]	Minor concerns[6]	LOW
Theme B5. Parent/carer thoughts on discourse, ethnic and cultural attitudes healthy eating						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Cook 2021 General qualitative inquiry with focus groups N = 110 parents Lakhanpaul 2020 General qualitative inquiry with focus groups and semi-structured interviews N = 141 parents, caregivers and key informants	Two studies reported on parent's traditional values and beliefs that prevented them from taking up government advice regarding complementary feeding of infants. These values were associated with South Asian cultures in both studies. These included conflicting personal views about infant's readiness being based on intuition, home country tradition of early weaning around 1 to 2 months, customary traditions of giving sugar to infants, customs around prolonged feeding of infants with hands or spoon, and quintessential societal image of a chubby baby equating a healthy baby. *"you slowly introduce solids like even at the age 1 or 2 months, 2 months if you feed them right, but again it's in our culture isn't it, because rice is there and then you feed them that"* [Quote: Cook 2021, p. 5]	Moderate concerns[1]	No or very minor concerns	Minor concerns[2]	Minor concerns[6]	MODERATE

NHS: National Health Service; WHO: World Health Organization.
1 Moderate concerns about methodological limitations as per CASP qualitative checklist
2 Studies together offered moderately rich data
3 Studies together offered some rich data
4 Minor concerns about methodological limitations as per CASP qualitative checklist
5 Major concerns about methodological limitations as per CASP qualitative checklist
6 Some evidence is from a substantially different context to the review question (study population in Lakhanpaul 2020 includes 46% non-parents or carers; study population in Caton 2020 combines all children under 5 years)
7 Studies together did not offer rich data

GRADE-CERQual tables for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years in healthy eating and drinking in children from 12 months to 5 years?

Table 9: Evidence profile for facilitators to increasing the uptake of government advice on healthy eating and drinking in children from 12 months to 5 years

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Theme A1 Adequate knowledge and information						
Subtheme A1.1 Educating children on healthy eating						
1 study Lloyd-Williams 2011 Ethnographic study with semi-structured interviews N = 12 parents	Early years professionals in nurseries implemented tasks and used characters to educate children about healthy eating and develop social skills. Tasks included setting tables, serving one another, preparing ingredients, and bringing food to the table. *'[Charlie the Healthy Eating Chef] This is a lovely soft toy with a chef's cap, whites and apron. Using Charlie the EYP explains all about healthy eating and how Charlie is a healthy eating chef. She then gets out two soft toy plates, one in green and one in orange, and then a bag of different foods (soft toys). She then asks the children to take out a food from the bag, decide whether it should be on the green plate or the orange plate. The green plate signifies foods that are good and can be eaten at any time; the orange plate signifies foods that can be eaten but only occasionally as a treat. The children take turns deciding which food goes on to which plate. One child whenever he picks out a cake, sweet or chips because he likes them thinks they should go on the green plate. X uses this to explain the difference between what you like and what is good for you.'* [Quote: Lloyd-Williams 2011, p. 1863]	Minor concerns[1]	No or very minor concerns	Moderate concerns[2]	No or very minor concerns	MODERATE
Subtheme A1.2 Sources of information						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
1 study Lucas 2013 General qualitative inquiry with interviews N=107 parents	Parents reported getting information about healthy start vouchers from different sources such as health professionals, friends and family, leaflets, health clinics, children's centres and the job centre. However, most participants received the information from health professionals. *'It's good that midwives are the ones that raise Healthy Start because they know what keeps you and the baby healthy, so them telling you makes you think you should use them.'* [Quote: Lucas 2013, p. 43]	Moderate concerns[3]	No or very minor concerns	Moderate concerns[2]	No or very minor concerns	LOW
Subtheme A1.3 Cooking knowledge and skill						
1 study Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers)	Some families who had either attended community cookery classes or belong to families who cook were able to cook healthier foods for their children, even if they were not getting any and were proud of this. Moreso among those attending university. *"Living with students and what have you, so I've picked up skills"* [Quote: Khanom 2015, p.7]	Minor concerns[1]	No or very minor concerns	Serious concerns[4]	No or very minor concerns	LOW
Subtheme A1.4 Knowledge of healthy eating and benefits						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
3 studies Carnell 2011 General qualitative inquiry with semi-structured interviews with food diaries N = 14 parents Lloyd-Williams 2011 Ethnography with semi-structured interviews N = 39 parents and nursery staff Williams 2022 General qualitative inquiry with semi-structured interviews N = 51 parents	Two studies reported on parents knowledge of a healthy balanced diet as a motivating factor for providing healthy foods to their children, one of which referred to 5 portions of fruits and vegetables a day and limiting foods high in fats and sugar. One study reported parents knowledge of the health-related effects of healthy eating for example teeth protection and undesirable foods for children for example salt and preservatives. One study highlighted that parents expressing that determining whether foods are appropriate to children is dependent on whether they were prepared from fresh unprocessed ingredients or from processed ingredients. *"I've said to her in the past I suppose that it's very important that she eats certain things to have healthy bones."* [Quote: Carnell 2011, p. 18]	Serious concerns[5]	No or very minor concerns	Moderate concerns[2]	No or very minor concerns	MODERATE
Theme A2 Factors relating to acceptability						
Subtheme A2.1 Positive strategies to encourage healthy eating						
5 studies Carnell 2011 General qualitative inquiry with semi-structured interviews with food diaries N = 14 parents Goldsborough 2016 Ethnography with semi-structured interviews N = 8 childminders Goldthorpe 2018	Two studies reported on parents' approaches to encourage healthy eating habits in children. One study reported on strategies directed at the child's acceptance of the food offered such as modifying tastes and textures of foods by pureeing or mixing with other liked foods, more attractive presentations of the foods, arranging food into pictures, playing eating games, verbal and physical encouragement, repeated exposure and providing a structured feeding environment. One study reported on the parents attempt to ensure foods offered to the child are healthy, such as reducing salt and sugar in foods, replacing frying with grilling or baking, homemade alternatives to takeaways, disguising vegetables to ensure acceptability and methods to increase calories in underweight children. Exposure to foods was highlighted in 2 studies as a strategy parents adopted and this was based on	Moderate concerns[3]	No or very minor concerns	No or very minor concerns	No or very minor concerns	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
General qualitative inquiry with semi-structured interviews N = 20 parents/caregivers Lloyd-Williams 2011 Ethnography with semi-structured interviews N = 39 parents and nursery staff Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents	parents' observation that their children consumed a wider variety of foods when in other children's settings such as toddler groups, nurseries, or children's centres. This led the parents to increase their children's exposure to the foods they had observed the child eat in other settings. Two studies discussed approaches taken by early years practitioners such as childminders and nurseries to improve acceptance of healthier foods in children. The studies discussed strategies such as hiding vegetables, creative presentations, verbal encouragements, using brightly coloured cutlery and cookery, using play and having themes weeks and activities around cooking. *"She used to be funny about carrots and bread sticks but they give them a snack of that at 10 o'clock every day and she comes home and asks for bread sticks now . . . she'll eat carrots and she'll eat bread sticks which she wouldn't eat before which is good"* [Quote: Lovelace 2015, p. 877] *'One little girl wouldn't eat her carrots so X [EYP] played a clever game with her. X said to her 'I bet you can't eat this carrot? Oh you've eaten it!' General laughter from the child and the other children. X then said that she was going to eat the carrots and put a carrot on a fork and turned her head to speak to the rest of the children while pointing [to] the carrots near to the child. There was then great laughter as the child ate the carrot and X pretended to be surprised.' (NE diary)* [Quote: Lloyd-Williams 2011, p. 1863]					
Theme A3 Factors relating to accessibility						
Subtheme A3.1 Availability of cheaper options						
2 studies Isaacs 2022	Parents, especially those of lower socioeconomic status reported that the cost of purchasing healthier foods such as fresh vegetables was high and found strategies to manage within their	Moderate concerns[3]	No or very minor concerns	Minor concerns[6]	Minor concerns[7]	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Ethnography with semi-structured interviews, shop-along interviews and photo elicitation N = 60 parents Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents	budgets and still have healthy meals. One study reported visiting multiple shops to find the cheapest prices for foods, and switching stores whenever an even cheaper option was found elsewhere. The study also reported parents frequenting discount shops and shopping together to split taxi fares back home. Another study reported mothers purchasing frozen vegetables rather than fresh as these were considered to be a cheaper alternative. *"If you are money conscious you have to, like me I know the where to get certain things, I know where I can get them cheaper. I know that I can get this, so I tend to do that."* [Quote: Isaacs 2022, p. 5]					
Subtheme A3.2 Local initiatives						
1 study Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers)	Parents reported local initiatives encouraging healthy eating behaviours delivered in some areas where fruits and vegetables were sold at affordable rates and could be delivered to residents or where subsidised healthy meals were offered to families in church-run facilities. *"We are quite lucky…because a van comes round once a week with fresh fruit and veg"* [Quote: Khanom 2015, p. 9]	Minor concerns[1]	No or very minor concerns	Moderate concerns[2]	No or very minor concerns	MODERATE
Subtheme A3.3 Availability of Healthy Start vouchers						
4 studies Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers) Lovelace 2015 Phenomenological study with semi-structured interviews	Parents across the 4 studies reported how Healthy Start vouchers impacted positively on their healthy eating by improving their purchasing power for fruits and vegetables, thereby making it possible for them to offer their children an increased variety of fresh fruits and vegetables. *'If I couldn't have the vouchers I couldn't get fruit - do you understand? Because it's expensive, so they wouldn't get fruit.'* [Quote: Lucas 2013, p. 50]	Moderate concerns[3]	No or very minor concerns	Minor concerns[6]	No or very minor concerns	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N=11 parents Lucas 2013 General qualitative inquiry with interviews N=107 parents McFadden 2014 General qualitative inquiry using workshops, focus groups and telephone interviews N = 109 parents						
Subtheme A3.4 Closeness to shops						
1 study Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents	Study reported that parents did not highlight distance to shops as in issue possibly because all participants lived within 2 miles of the shops. *"It's all from the supermarket . . . that's just down the road. If I do a massive shop I get a taxi back"* [Quote: Lovelace 2015, p.877]	Moderate concerns[3]	No or very minor concerns	Moderate concerns[2]	No or very minor concerns	MODERATE
Subtheme A3.5 Environmental/country factors						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
1 study Condon 2017 General qualitative inquiry with focus groups N = 28 parents	Parents discussed the possibility of an improved lifestyle in the UK for children and access to a wider range of facilities and care as positive factors that helped them to keep their children healthy in the UK, despite the difficulties of living away from their homes of origin. However, some parents expressed that some aspects of healthy eating were difficult to maintain in the UK when compared with their countries of origin, some participants believing that healthy foods were more accessible in their countries of origin *"I feel the life is much better here especially for the children; there are a lot of facilities for the children, there is more care here than back home."* [Quote: Condon 2017, p. 457]	Moderate concerns[3]	Minor concerns[8]	Moderate concerns[2]	Minor concerns[7]	LOW
Theme A4 Motivational factors						
Subtheme A4.1 External influences from early years professionals and peers						
4 studies Hayter 2015 General qualitative inquiry with semi-structured interviews and focus groups N = 39 parents Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers) Lloyd-Williams 2011 Ethnography with semi-structured interviews	Three studies reported on the influence of peers on the eating habits of children, such that when children attended nurseries or other children's settings, they were encouraged to try new foods that they had observed their peers eat. One study reported that parents and childcare providers collaboration was essential to foster healthy eating habits in children by ensuring that what children had eaten at home and in a childcare setting was known to both parties. The study also reported that parents actively sought advice from the nursery staff and cooks on preparing different foods. *"[my daughter] is eating a lot more vegetables now since she's started school dinners because she's seeing other children around her eating them (CW1) and she's slightly better at school because they've got all their friends. And they're all [eating], aren't they?"* [Quote: Hayter 2015, p.378]	Moderate concerns[3]	No or very minor concerns	No or very minor concerns	No or very minor concerns	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N = 39 parents and nursery staff Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents	*'When X [child] first started here, they were giving him things that I hadn't yet tried him with y wouldn't have known to or was a bit wary of giving him. So when I said 'Oh he hasn't had that before', and they were like 'Oh are we doing wrong?'; so I said no, as long as I know that he is fine with it now I can give it to him myself.'* [Quote: Lloyd-Williams 2011, p. 1863]					
Subtheme A4.2 Attractive food packaging						
1 study Tang 2022 General qualitative inquiry with semi-structured interviews N = 21 mothers	Mothers reported that children were motivated to eat healthy foods that had attractive packaging such as games or puzzles, even when it was not a preferred food. *"I buy (dry) fruit snacks that come in small portions... They are animals' paw shapes. He (MU03S:36 m) likes playing the matching game on the back of the packaging. He always takes one out and finds out whose the "paw" is before he eats it, even if he is hungry. It is a very small bag. The game slows down his eating otherwise, he would swallow them down very quickly and it helps him learn the animals and their paw shapes… if they are without the games on the packaging, he can eat two and three bags…"* [Quote: Tang 2022, p. 9]	Minor concerns[1]	No or very minor concerns	Moderate concerns[2]	No or very minor concerns	MODERATE
Subtheme A4.3 Menu planning available to parents						
1 study Lloyd-Williams 2011 Ethnography with semi-structured interviews N = 39 parents and nursery staff	One study reported about nurseries making menus available to parents. Some of the nurseries had more detailed menus than others, for example menus showing age-specific meals or how balance is achieved from the different food groups. The menus helped the parents to know what their children were eating at nursery. *No supporting quotes*	Minor concerns[1]	No or very minor concerns	Serious concerns[4]	No or very minor concerns	LOW
Theme A5 Thoughts, views, and perceptions of parents/carers						
Subtheme A5.1 Feelings of responsibility						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	**Coherence of finding**	**Adequacy**	**Relevance of evidence**	**Overall confidence**
6 studies Carnell 2011 General qualitative inquiry with semi-structured interviews with food diaries N = 14 parents Goldsborough 2016 Ethnography with semi-structured interviews N = 8 childminders Goldthorpe 2018 General qualitative inquiry with semi-structured interviews N = 20 parents/caregivers Hayter 2015 General qualitative inquiry with semi-structured interviews and focus groups N = 39 parents Jones 2023 General qualitative inquiry with semi-structured interviews N = 8 mothers Khanom 2015 General qualitative inquiry with semi-structured interviews	Parents and childcare providers expressed their views on the roles they play in ensuring children consume healthy foods and explained the approached they took to ensure this. Approaches reported include providing healthy foods, restricting unhealthy foods and role modelling. One study reported on parents' strong desire to provide healthy foods despite having limited financial access to such foods. Two studies reported on parents restricting unhealthy foods and sometimes, this was done in accordance to the child's appetite and weight status. One study reported on childminders restricting children's unhealthy food intake either by supervising intake of parent-provided foods or by discouraging parents from providing food to their children when attending the childcare setting. Three studies reported on parents role in modelling healthy eating to their children. *"First day she turned up with yoghurt and a packet of crisps – I says I can't give her the crisps cos I've not got a packet of crisps for everybody else and I don't provide those"* [Quote: Goldsborough 2016, p.8] *"We want our children to have the best food and I've learned that children do copy us . . . when your husband is having chocolate it's not fair to expect your child to have banana or fruit"* [Quote: Hayter 2015, p. 378]	Moderate concerns[3]	No or very minor concerns	No or very minor concerns	Minor concerns[7]	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N=61 mothers (35 included fathers)						
Theme A6 Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating						
3 studies Hayter 2015 General qualitative inquiry with semi-structured interviews and focus groups N = 39 parents Isaacs 2022 Ethnography with semi-structured interviews, shop-along interviews and photo elicitation N = 60 parents Zhang 2019 General qualitative inquiry with semi-structured interviews N = 15 women	Three studies reported on how culture influenced healthy eating practices. For example, one study associated acquiring cooking skills with culture and upbringing as parents explained gaining knowledge of healthy foods and cooking skills from their childhood experiences. One study referred to the cultural value parents placed on certain foods which were considered of better value-for-money because they were thought of as being healthier in their culture. One study on Chinese immigrants reported challenges adjusting to the British dietary practices due to beliefs that the Chinese physiology was different from the British physiology and that the Chinese diet is healthier and is preferable to eating unhealthy foods bought outside the home. *"We're traditional, I like to spend a lot of time cooking. I'm always cooking' (CW2) and 'my mum used to cook all the time . . . so we know how to cook, it's just I think a lot of it is down to laziness as well isn't it?"* [Quote: Hayter 2015, p. 377]	Moderate concerns[3]	No or very minor concerns	Minor concerns[6]	Minor concerns[7]	MODERATE

1 Minor concerns about methodological limitations as per CASP qualitative checklist
2 Studies together offered some rich data
3 Moderate concerns about methodological limitations as per CASP qualitative checklist
4 Studies together did not offer rich data
5 Major concerns about methodological limitations as per CASP qualitative checklist
6 Studies together offered moderately rich data
7 Some evidence is from a substantially different context to the review question (population in Isaacs 2022 included parents of children in school and nursery; population in Condon 2017 were all migrants from EU ascension countries)

8 Some evidence is ambiguous or contradictory without a credible explanation for differences

Table 10: Evidence profile for barriers to increasing the uptake of government advice on healthy eating and drinking in children from 12 months to 5 years

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Theme B1 Conflicts of opinions						
Subtheme B1.1 Poor collaboration between parents and early years professionals						
3 studies Buttivant 2011 General qualitative inquiry with semi-structured interviews N = 13 childcare staff and advisors Goldsborough 2016 Ethnography with semi-structured interviews N = 8 childminders McSweeney 2016 Grounded theory with food map exercise N = 15 parents	Participants across studies expressed thoughts around parents and early years professionals working in collaboration but the views varied. While all studies discussed childcare providers working in partnership with parents to encourage healthy eating in children, one study presented concerns from childcare providers about their role in providing such support and education. This study highlighted the potential tension that may arise between childcare provider and parents, particularly in private-funded settings where parents were considered customers who hold the power to influence food decisions, and providers felt disempowered to influence parents' choices for fear of losing their customers. In public-funded settings, it was thought that parents appeared to be more willing to discuss with the childcare providers but still with some concerns. Similarly, one study reported parents' reactions to preschool centres providing healthy eating advice to them, which was mixed. Some parents thought it was a good idea, while others were not keen about being given instructions on what to do. One study reported that while childminders usually had inductions about food preferences and policies with parents, some held opinions that the parents had the ultimate authority and responsibility for providing healthy foods to their children and were therefore not as explicit in their discussions with parents.	Serious concerns[1]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
	"it's a bit of a problem talking to the parents... some of the children really need to be here and some parents ... need support and... if you're too judgemental I think then you'll put a lot of people off" [Quote: Buttivant 2011, p. 557]					
Subtheme B1.2 Influence of family and friends						
2 studies Carnell 2011 General qualitative inquiry with semi-structured interviews with food diaries N = 14 parents Hayter 2015 General qualitative inquiry with semi-structured interviews and focus groups N = 39 parents	Parents reported the influence of family and friends on their children's eating habits explaining that children get offered treats and unhealthy foods by family and friends even when they as parents are doing their best to restrict unhealthy eating in their children. One study reported parents adopting a flexible approach to this by letting their children have more treats when guest were present and sticking to the usual restrictions otherwise. One study discussed the frustrations parents feel about external parties offering treat to their children which interfered with their efforts to model healthy eating behaviours. *"Obviously when there's guests here and there's other kids eating [chocolate bars] I don't say to her Oh no you can't have nothing because you've had your quota for the day'. She will be allowed to eat a bit more…but it's only for one day"* [Quote: Carnell 2011, p. 20]	Moderate concerns[3]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	MODERATE
Theme B2 Issues relating to acceptability						
Subtheme B2.1 Child's food preferences						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
5 studies Goldsborough 2016 Ethnography with semi-structured interviews N = 8 childminders Goldthorpe 2018 General qualitative inquiry with semi-structured interviews N = 20 parents/caregivers Hayter 2015 General qualitative inquiry with semi-structured interviews and focus groups N = 39 parents Jolly 2018 General qualitative inquiry with semi-structured interviews N = 7 parents Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers)	Four studies described children's food preferences in the light of children either refusing to eat healthier foods or preferring to eat unhealthy foods. One study reported a childminders perspective, suggesting that children's food preferences drives what they are offered in childcare settings. Two studies reported that parents responded to children's food preferences by offering them what they were more likely to eat, which was usually foods high in fat, sugar, and salt, with one study highlighting that children's preference for unhealthy food was mostly observed in the home and they were more willing to eat some healthy foods when they were eating with other children. One study reported children pressuring their parents to buy food from fast food restaurants. Although the parents in this study considered it an unplanned additional expense, they often responded to this demand by considering some benefit that could come out of the purchase, such as the opportunity to enjoy an outing experience with limited funds. Two studies discussed child's preferences in the context of fussy eating, expressing concerns about children refusing to eat anything and food waste when on a limited budget. One study reported that parents approach to dealing with fussy eating was to stop offering foods that had been refused previously. *"I try to mix it up, you know and erm so either fish fingers or cos to be honest I think well yeah you could prepare the most healthy meal in the world and they'll just sit and look at it and think what on earth is that and they just wouldn't eat it."* [Quote: Goldsborough 2016, p. 9]	Moderate concerns[3]	No or very minor concerns	No or very minor concerns	No or very minor concerns	MODERATE
Subtheme B2.2 Special dietary requirements						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Goldthorpe 2018 General qualitative inquiry with semi-structured interviews N = 20 parents/caregivers Lucas 2013 General qualitative inquiry with interviews N=107 parents	Parents reported difficulty in maintaining a healthy balanced diet in children with special dietary requirements or behavioural reactions to attempts to encourage healthy eating. One study reported that parents needed to adjust their preferences and be more accepting of different approaches to feeding the child. Another study referred to parents getting limited benefit from Healthy start vouchers because the products eligible under the vouchers did not align with the dietary needs of their children. *Has [feeding child fruit and veg] been difficult? (Interviewer)* *It sort of has, I mean, she's an autistic child as well so she knows what she wants and if she doesn't get it then it can be hard work (participant 7)* *Have you had any help with that, with managing that? (Interviewer)* *We've been to them, the weight management clinic, but it's alright people telling you what to give them, but her doing it and her wanting to do it is different (participant 7)* [Quote: Goldthorpe 2018, p. 5]	Moderate concerns[3]	No or very minor concerns	Moderate concerns[4]	No or very minor concerns	LOW
Subtheme B2.3 Unfamiliar foods from food banks						
1 study Jolly 2018 General qualitative inquiry with semi-structured interviews N = 7 parents	Parents, especially those of lower socioeconomic status reported relying on food banks to supplement their daily meals. However, the random selection of foods they got meant that sometimes they got food that they were not familiar with and had to accept them regardless. *"You get a voucher to go and get some tinned stuff, and the tinned stuff they're giving you, we don't even, we've never ate them before, it's like [sigh] you've just got to take what you've been given, we've got no choice."* [Quote: Jolly 2018, p. 105]	Moderate concerns[3]	No or very minor concerns	Moderate concerns[4]	No or very minor concerns	LOW
Theme B3 Issues relating to accessibility						
Subtheme B3.1 Reduced financial stability and cost of healthy food						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
7 studies Condon 2017 General qualitative inquiry with focus groups N = 28 parents Hayter 2015 General qualitative inquiry with semi-structured interviews and focus groups N = 39 parents Isaacs 2022 Ethnography with semi-structured interviews, shop-along interviews and photo elicitation N = 60 parents Jolly 2018 General qualitative inquiry with semi-structured interviews N = 7 parents Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers) Lloyd-Williams 2011 Ethnography with semi-structured interviews	One of the main issues raised as a limitation to accessing healthy foods for children was low financial resources. One study reported parents' concerns about providing nutritious meals for their children and expressed thoughts about a better diet if their finances were improved. Parents across all studies discussed the importance of improved finances to achieving a healthy diet for children in the UK and explained that parents on very low income or those receiving benefits found it challenging to afford food and needed to manage on a very limited budget. These families developed various strategies to cope with the challenges of limited finances. One study reported that parents prioritised unavoidable expenses such as nappies and rent. Another study indicated that some parents managed the financial pressure by looking out for deals and offers buy preferred foods, which they stored up until they had all the ingredients required to make the meal they wanted. Others supplemented their food with food from food banks and surplus food stores, especially towards the end of the month when resources were depleted. For parents receiving benefits in England, the change to receiving them monthly further heightened their financial challenges. Three studies expressed views of parents feeling limited when they desired a social aspirational activity which proved unattainable. In such instances, they resorted to purchasing unhealthy foods and making use of the place of purchase as a route to getting an alternative for the desired social experience. Two studies reported parents choosing to skip meals so that their children could eat. One of these studies however indicated that some mothers were able to find more resourceful ways to make the little they had go a bit longer, and the other study reported that mothers opted for frozen foods to get more value for their money.	Moderate concerns[3]	No or very minor concerns	No or very minor concerns	Minor concerns[5]	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N = 39 parents and nursery staff Lucas 2013 General qualitative inquiry with interviews N=107 parents	Participants from two studies explained how their budget for food limited the quality of their foods and how challenging it was was to keep food exciting for children when the options for food are limited and monotonous because that was what was affordable to them. Only one study reported on the use of Healthy Start vouchers to mitigate the effect of their limited budget. Whilst some parents reported the vouchers as making a large difference to their budget for food, others felt that the difference was minimal. *"A typical diet is just a bellyful, it can't be something where you're gonna think healthy options, it's just something to fill you up really"* [Quote: Jolly 2017, p. 101] *"I'll make a list, and I'm thinking, and I'll go in, oh, that isn't on offer this week is it, so I'll sack that, I'm not buying that. When I buy things like, if I saw the Dolmio [on offer], I will buy that, and then maybe the following week I'll go get some mincemeat. I'll say, oh, I've got them jars of Dolmio so I do use them"* [Quote: Isaacs 2022, p. 5] *"If I've got to spend £20 on nappies, the food has to suffer that week"* [Quote: Hayter 2015, p. 375]					
Subtheme B3.2 Challenges with Healthy Start Vouchers						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
2 studies Lucas 2013 General qualitative inquiry with interviews N=107 parents McFadden 2014 General qualitative inquiry using workshops, focus groups and telephone interviews N = 109 parents	Participants discussed various challenges with the healthy start vouchers from accessing the vouchers to using them. Challenges with accessing the Healthy Start vouchers included obtaining/accessing the forms, completing the forms especially among those who did not speak English and getting the forms signed by a health professional. Challenges with using the Healthy Start vouchers included finding stores that accept the vouchers, approaches of different stores with the use of the vouchers and the inability to get refunded on amounts of the voucher not spent. Participants suggested that the eligibility criteria for the vouchers should be extended to include children up to the age of 5, and value of vouchers should increase in tandem with the rising cost of living. *'I don't think a lot of the local ones take them, back when I was in London quite a lot take them but up here I found it really, really hard to get anywhere to take them, you have to go and use the big stores.'* [Quote: Lucas 2013, p. 47]	Moderate concern[3]	No or very minor concerns	Minor concerns[4]	No or very minor concerns	MODERATE
Subtheme B3.3 Access to appropriate services and facilities						
4 studies Isaacs 2022 Ethnography with semi-structured interviews, shop-along interviews and photo elicitation N = 60 parents Jolly 2018 General qualitative inquiry with semi-structured interviews N = 7 parents Khanom 2015	Two studies referred to accessibility to suitable shops as a challenge to accessing healthy foods. Participants in one study referred to the differences in foods accessible to them based on what was prevalent in the markets accessible to them. For some participants, their local markets were important to them because they were able their traditional foods from there, while others found that foods readily accessible in their local markets were snacks more popular with tourist. Three studies reported challenges accessing the nearest full-service supermarket where fresher foods and cheaper alternatives could be purchased. This was because the supermarkets were not close enough to be accessed on foot, and participants were limited on funds to buy bus tickets.	Serious concerns[3]	No or very minor concerns	Minor concerns[2]	Minor concerns[5]	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers) Williams 2022 General qualitative inquiry with semi-structured interviews N = 51 parents	One study described barriers to accessing healthcare services such as the lack of a regular address, official documents or utility bills, which led to inappropriate acute hospital admissions. Another study expressed parents concerns about health professionals not responding to parents request or concerns in a timely manner, which left families with very minimal sustenance during the wait. One study reported on the lack of appropriate facilities to encourage healthier eating such as living conditions (for example living in a single room) that did not encourage home-cooking or early years services lacking appropriate facilities to prepare and encourage healthy eating among children. *"I can't get everything on the buggy on my own so we do go without, we eat terribly [rely on takeaways]"* [Quote: Khanom 2015, p. 7] *"When I say I cook, it sounds hard to cook in a room, but trust me, I cook in that room - it's hard to live in, and sleep in and using the toilet and cooking in the one room…"* [Quote: Jolly 2017, p. 104]					
Subtheme B3.4 Parental factors influencing diet						
5 studies Buttivant 2011 General qualitative inquiry with semi-structured interviews N = 13 childcare staff and advisors Goldsborough 2016	Two studies described parental food preferences that influence children's exposure to healthy foods. One study highlighted parents who did not eat fruits or vegetables and therefore did not offer them to their children. The other study reported on parents who were not interested in changing their diets. Therefore, upon receipt of the Healthy Start vouchers, rather than purchase fruits and vegetables, they chose instead to purchase formula milk instead, leaving their diets unchanged. However, some parents were	Serious concerns[1]	Minor concerns[6]	No or very minor concerns	No or very minor concerns	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Ethnography with semi-structured interviews N = 8 childminders Jones 2023 General qualitative inquiry with semi-structured interviews N = 8 mothers Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents Lucas 2013 General qualitative inquiry with interviews N=107 parents	reported to prioritise healthy eating and cut costs in other areas. Parents and childcare providers, in particular childminders discussed the time pressured they experienced working, caring for children and having to plan meals and cook foods. One study reported that many childcare settings lacked the patience to introduce new foods to children and 1 study reported that childminders found it challenging to deal with the day-to-day pressures of routinely caring for children and planning meals ahead of time or cooking. They therefore resorted quick and easy foods such as fish fingers. Two studies reported a similar challenge with working parents who were unable to find the time to cook from scratch because of their busy working schedules, and 1 study referred to parents having to make practical choices regarding their choice of foods, going for foods that were quick and easy but often unsuitable for to their preferred diet – vegan/vegetarian. *"I don't know about sprouts, I've never try her with sprouts, I don't like them myself"* [Quote: Lovelace 2015, p. 876]					
Theme B4 Issues relating to misinformation or lack of information						
Subtheme B4.1 Suboptimal communication of information						
6 studies Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers) Lloyd-Williams 2011 Ethnography with semi-structured interviews	One study reported that parents lacked sufficient information about healthy eating messages. For example, some parents were aware of the 'Eat 5 a day' message but did not seem aware of the Change4Life campaign. Two studies reported that parents discussed not receiving sufficient information about Healthy Start vouchers and other benefits, and suggested that the vouchers could be better promoted by health professionals. Additionally, parents reported misconceptions or confusing information about the vouchers such as thoughts that the vouchers were only for single mothers. Some	Moderate concerns[3]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	MODERATE

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N = 39 parents and nursery staff Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents Lucas 2013 General qualitative inquiry with interviews N=107 parents McFadden 2014 General qualitative inquiry with workshops, focus groups and telephone interviews N=109 parents McSweeney 2016 Grounded theory with food map exercise N = 15 parents	parents in one study reported not being aware of the vouchers until their child was 2 years old. Two studies alluded to parents not having a clear understanding of what foods and drinks were considered healthy for their children. One study reported parents increasing the value of vouchers to purchase formula milk. Another study reported that parents offered their children diluting juices because they thought it was good for them or a way to encourage children to drink. The study also reported that parents knew that children should avoid foods high in salt but did not know what foods were high in salt. Similarly, among childcare providers, one study reported that nurseries offered children ready-made snacks from packets that were likely to be processed foods. The study also reported that nurseries lacked sufficient information on government guidance and policies relating to healthy eating in young children. One study reported on conflicting guidelines arising from preschool staff offering information to parents about healthy eating at home but not considering the same information within the preschool environment. One study reported that teenage mothers were more likely to obtain information from parents partners and carers and rarely referred to health professionals as a source of information. *'We provide cookies or sponge cake with custard which is to me, is quite high in sugar, although I use a lot less sugar. I halve the sugar content that I put in anything, and the fat in the crumble as well I tend to halve.'* [Quote: Lloyd-Williams 2011, p. 1862] *"I don't put salt in nor nothing . . . She wants proper food, like chicken nuggets, waffles . . . "* [Quote: Lovelace 2015, p. 875]					
Subtheme B4.2 Insufficient training and support for early years professionals						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	**Coherence of finding**	**Adequacy**	**Relevance of evidence**	**Overall confidence**
2 studies Buttivant 2011 General qualitative inquiry with semi-structured interviews N = 13 childcare staff and advisors Lloyd-Williams 2011 Ethnography with semi-structured interviews N = 39 parents and nursery staff	Two studies reported on a lack of sufficient information and training for nursery staff to adequately plan the meals of children in their care. One study reported that although the nurseries attempted to plan their menus, they had little control over the planning either because a dedicated nursery cook had the autonomy or they relied on external catering providers. Two study reported the need for skill development and specialist training in relation to the role of food and eating within the context of early years' setting, but very minimal training opportunities existed. Early years' practitioners reported referring to childminding magazines, the internet, and parents as their sources of information. *"all these kids' nutrition is reliant on me and I'm just fumbling in the dark"* [Quote: Buttivant 2011, p.557]	Serious concern[1]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	LOW
Subtheme B 4.3 Lack of cooking knowledge and skills						
3 studies Hayter 2015 General qualitative inquiry with semi-structured interviews and focus groups N = 39 parents Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers) Lovelace 2015 Phenomenological study with semi-structured interviews N=11 parents	Parents reported not having sufficient cooking skills and knowledge which resulted in them reverting to ready-made foods store bought foods, not buying fresh foods as they were unable to cook them and/or using premade sauces sold in jars in their home cooking. One study reported that when fathers did the cooking, it was mostly easy-make foods such as waffles, noodles, pizza, chips and curries made from jars of sauces. *"The confidence I think could be [a barrier to providing healthy food], yeah, thinking, oh my goodness I'm going to mess that meal up, I'm going to go for the easy option"* [Quote: Hayter 2015, p. 377]	Moderate concerns[3]	No or very minor concerns	Moderate concerns[4]	No or very minor concerns	LOW

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
Subtheme B4.4 Food marketing targeted at children						
3 studies Hayter 2015 General qualitative inquiry with semi-structured interviews and focus groups N = 39 parents Isaacs 2022 Ethnography with semi-structured interviews, shop-along interviews and photo elicitation N = 60 parents Khanom 2015 General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers)	Parents from 3 studies referred to the influence of food marketing and advertising on their children. The resulting effect was that the children made demands on their parents for the advertised, usually unhealthy foods and parents expressed concerns that such marketing are not usually targeted at fruits and vegetables. Parents from 1 study reported having to give into the demands of their children to avoid tantrums. *"I think when [sweets are] obviously in the shops and advertising them and [the children] can see them, it makes it very hard obviously to get away from that with them demanding things like that"* [Quote: Hayter 2015, p. 377]	Moderate concerns[3]	No or very minor concerns	Minor concerns[2]	Minor concerns[5]	MODERATE
Theme B5 Thoughts, views and perceptions of women or parents/carers						
Subtheme B5.1 Food as contingency or reward						

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
3 studies Carnell 2011 General qualitative inquiry with semi-structured interviews with food diaries N = 14 parents Goldsborough 2016 Ethnography with semi-structured interviews N = 8 childminders Goldthorpe 2018 General qualitative inquiry with semi-structured interviews N = 20 parents/caregivers	Parents across 3 studies reported using children's preferred usually unhealthy foods as a contingency to improve behaviour or as a reward for good behaviour or for eating a healthier food. *"She then asked for a chocolate from the Christmas tree. I said she could have one if she ate a satsuma first, which she did."* [Quote: Carnell 2011, p. 19]	Minor concerns[7]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	HIGH
Subtheme B5.2 Concerns about perceptions of others						
3 studies Goldthorpe 2018 General qualitative inquiry with semi-structured interviews N = 20 parents/caregivers Jolly 2018 General qualitative inquiry with semi-structured interviews N = 7 parents Jones 2023 General qualitative inquiry with semi-structured interviews	Parents reported feelings of worry about how others perceived them, their eating preferences or how they fed their children. One study reported feelings of unease among parents who accessed emergency food aid. Another study reported fear of judgement among parents who were vegan and offered their children a vegan diet. One study reported that parents took strategies such as offering treats to avoid potential judgement or attention from strangers when children threw a tantrum or cried in public. *"It [accessing food aid] wasn't something that I ever thought I'd have to do...I think how the public who doesn't have to go through it portray it makes you - even when you want the help - wouldn't want to go there"* [Quote: Jolly 2017, p. 104]	Minor concerns[7]	No or very minor concerns	Minor concerns[2]	No or very minor concerns	HIGH

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
N = 8 mothers						
Subtheme B5.3 Perception of inconsistent policies						
1 study Lloyd-Williams 2011 Ethnographic study with semi-structured interviews N = 12 parents	One study discussed the Ofsted strategy of rolling snacks where snacks were provided throughout the day and explained parent's perception of this working against other healthy eating messages. *'No we don't, there is a bit of emphasis coming through about giving them the choice and you know this freedom of whatever. But how on earth do you monitor what they are eating, how do you interact, how do they interact with each other? If someone is playing in a sand pit while someone is having their toast or what have you, how is that a learning experience? It's almost like just pulling into a petrol station.'* [Quote: Lloyd-Williams 2011, p. 1861]	Minor concerns[7]	No or very minor concerns	Moderate concerns[4]	No or very minor concerns	MODERATE
Theme B6 Parent/carer thoughts on discourse, ethnic and cultural attitudes to healthy eating						
3 studies Isaacs 2022 Ethnography with semi-structured interviews, shop-along interviews and photo elicitation N = 60 parents Khanom 2015	Two studies reported that parents felt it was the easier approach to follow their family traditional practices and habits. One study referred to family norms, cultural backgrounds, and transmission of values as reasons for their food choices, which involved the use of pre-prepared meals and snacks along with home-cooked meals. *"…it's not healthy actually its oily, it's our traditional food that we have grown up with…we are not trying to eat healthy. We are just following*	Minor concerns[7]	No or very minor concerns	Minor concerns[2]	Minor concerns[5]	HIGH

Study information	Description of review finding	CERQual Quality Assessment				
		Methodological limitations	Coherence of finding	Adequacy	Relevance of evidence	Overall confidence
General qualitative inquiry with semi-structured interviews N=61 mothers (35 included fathers) Zhang 2019 General qualitative inquiry with semi-structured interviews N = 15 women	*the past generations…we are just carrying on not thinking about our health"* [Quote: Khanom 2015, p. 6]					

1 Major concerns about methodological limitations as per CASP qualitative checklist
2 Studies together offered moderately rich data
3 Moderate concerns about methodological limitations as per CASP qualitative checklist
4 Studies together offered some rich data
5 Some evidence is from a substantially different context to the review question (population in Isaacs 2022 included parents of children in school and nursery; population in Condon 2017 were all migrants from EU ascension countries)
6 Studies together did not offer rich data
7 Minor concerns about methodological limitations as per CASP qualitative checklist

Appendix G Economic evidence study selection

Study selection for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

This was a qualitative review question, therefore economic evidence was not relevant and thus no economic evidence searches were conducted.

Appendix H Economic evidence tables

Economic evidence tables for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

This was a qualitative review question, therefore economic evidence was not relevant.

Appendix I Economic model

Economic model for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

No economic analysis was conducted for this review question.

Appendix J Excluded studies

Excluded studies for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

The excluded studies list below includes references for both appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years sections of the review question.

Excluded qualitative studies

Table 11: Excluded studies and reasons for their exclusion

Study	Code [Reason]
Acolatse, Lena, Pourshahidi, L Kirsty, Logue, Caomhan et al. (2023) Child food portion sizes in the home environment: how do parents decide?. The Proceedings of the Nutrition Society 82(3): 386-393	- Review article but not a systematic review *Narrative review*
Allcutt, C. and Sweeney, M.R. (2010) An exploration of knowledge, attitudes and advice given by health professionals to parents in Ireland about the introduction of solid foods. A pilot study. BMC public health 10: 201	- Study not conducted in the UK *Study conducted in Ireland*
Bell, Zoe, Scott, Steph, Visram, Shelina et al. (2023) Children's nutritional health and wellbeing in food insecure households in Europe: A qualitative meta-ethnography. PloS one 18(9): e0292178	- Systematic review used as source of primary studies *Included studies assessed for relevance. Eligible studies included as individual studies in this review*
Bergmeier, Heidi J., Skouteris, Helen, Hetherington, Marion M. et al. (2017) Do maternal perceptions of child eating and feeding help to explain the disconnect between reported and observed feeding practices?: A follow-up study. Maternal & Child Nutrition 13(4): na-npag	- Study not conducted in the UK *Study conducted in Australia*
Bryant, Maria, Burton, Wendy, O'Kane, Niamh et al. (2023) Understanding school food systems to support the development and implementation of food based policies and interventions. The international journal of behavioral nutrition and physical activity 20(1): 29	- Population not relevant to this review protocol *Study included whole school approach with no age reported. No relevant themes identified*

Study	Code [Reason]
Carroll, C., Booth, A., Campbell, F. et al. (2020) Qualitative evidence synthesis of values and preferences to inform infant feeding in the context of non-HIV transmission risk. PLoS ONE 15(12december): e0242669	- Systematic review used as source of primary studies *No relevant studies identified for inclusion*
Carstairs, Sharon A, Craig, Leone C A, Marais, Debbi et al. (2017) Factors influencing mothers' decisions on whether to provide seafood during early years' feeding: A qualitative study. Appetite 108: 277-287	- Study does not contain a phenomenon of interest relevant to this review protocol *Study focused on provision of seafood as a weaning food, which is not highlighted as part of the government advice for introducing complementary foods*
Cason-Wilkerson, Rochelle, Scott, Shauna Goldberg, Albright, Karen et al. (2022) Exploration of Changes in Low-Income Latino Families' Beliefs about Obesity, Nutrition, and Physical Activity: A Qualitative Post-Intervention Study. Behavioral sciences (Basel, Switzerland) 12(3)	- Study not conducted in the UK *Study conducted in the US and focus on parent beliefs following interventions for obesity treatment*
Dattilo, Anne M, Carvalho, Ryan S, Feferbaum, Rubens et al. (2020) Hidden Realities of Infant Feeding: Systematic Review of Qualitative Findings from Parents. Behavioral sciences (Basel, Switzerland) 10(5)	- Systematic review used as source of primary studies *Individual studies assessed for inclusion*
Davies, Emyr; Vannoni, Matia; Steele, Sarah (2023) Caregiver perceptions of England's universal infant school meal provision during the COVID-19 pandemic. Journal of public health policy 44(1): 47-58	- Study design not relevant to this review protocol *Quantitative study using questionnaires*
Ditlevsen, Kia and Nielsen, Annemette (2016) Setting limits in uneasy times – healthy diets in underprivileged families. International Journal of Migration, Health & Social Care 12(4): 225-237	- Population not relevant to this review protocol *Denmark population*
Foster, Emma, Hawkins, Adrian, Barton, Karen L et al. (2017) Development of food photographs for use with children aged 18 months to 16 years: Comparison against weighed food diaries - The Young Person's Food Atlas (UK). PloS one 12(2): e0169084	- Study design not relevant to this review protocol *Quantitative study to develop food photographs as a dietary assessment tool*
Gallagher-Squires, C, Isaacs, A, Reynolds, C et al. (2023) Snacking practices from infancy to adolescence: parental perspectives from	- Review article but not a systematic review

Study	Code [Reason]
longitudinal lived experience research in England. The Proceedings of the Nutrition Society: 1-9	*Included studies assessed for relevance. No relevant studies identified.*
Goldthorpe, Joanna, Epton, Tracy, Keyworth, Chris et al. (2020) What do children, parents and staff think about a healthy lifestyles intervention delivered in primary schools? a qualitative study. BMJ open 10(8): e038625	- Population not relevant to this review protocol *Included a mixed population from 4 to 11 years of age*
Guell, Cornelia, Whittle, Fiona, Ong, Ken K et al. (2018) Toward Understanding How Social Factors Shaped a Behavioral Intervention on Healthier Infant Formula-Feeding. Qualitative health research 28(8): 1320-1329	- Study does not contain a phenomenon of interest relevant to this review protocol *Study focuses on experiences of formula-feeding but not in the context of complementary feeding*
Hoddinott, Pat, Craig, Leone C A, Britten, Jane et al. (2012) A serial qualitative interview study of infant feeding experiences: idealism meets realism. BMJ open 2(2): e000504	- Study does not contain a phenomenon of interest relevant to this review protocol *Study focuses on breastfeeding and formula feeding. Included in RQ 3.3*
Hufton, Emily and Raven, Joanna (2016) Exploring the infant feeding practices of immigrant women in the North West of England: a case study of asylum seekers and refugees in Liverpool and Manchester. Maternal & child nutrition 12(2): 299-313	- Study does not contain a phenomenon of interest relevant to this review protocol *Study focuses on infant feeding practices - breastfeeding and formula feeding. Not on complementary feeding or healthy eating*
Isaacs, Anna; Neve, Kimberley; Hawkes, Corinna (2022) Why do parents use packaged infant foods when starting complementary feeding? Findings from phase one of a longitudinal qualitative study. BMC public health 22(1): 2328	- Study does not contain a phenomenon of interest relevant to this review protocol *Study focuses on the use of shop bought foods and snacks which is not included in the government advice for introducing solids and complementary feeding.*
Jackson, Jessica Eve; Giles, Dave; Gerrard, Clarabelle (2019) Using figured worlds to explore parents' attitudes and influences for choosing the content of primary school packed lunches. British Journal of School Nursing 14(7): 335-341	- Population not relevant to this review protocol *Population includes children in school and no age was specified. Unable to determine age of children included*
Kairey, L, Matvienko-Sikar, K, Kelly, C et al. (2018) Plating up appropriate portion sizes for children: a systematic review of parental food and beverage portioning practices. Obesity reviews : an official journal of the International	- Systematic review used as source of primary studies *individual studies assessed for inclusion*

Study	Code [Reason]
Association for the Study of Obesity 19(12): 1667-1678	
Lakshman, R, Landsbaugh, J R, Schiff, A et al. (2012) Developing a programme for healthy growth and nutrition during infancy: understanding user perspectives. Child: care, health and development 38(5): 675-82	- Study does not contain a phenomenon of interest relevant to this review protocol *Relates to bottle feeding but not in the context of complementary feeding and introducing solids*
Lovell, Jennifer L (2016) How parents process child health and nutrition information: A grounded theory model. Appetite 97: 138-45	- Study not conducted in the UK *Study conducted in the United States*
Matvienko-Sikar, K, Kelly, C, Sinnott, C et al. (2018) Parental experiences and perceptions of infant complementary feeding: a qualitative evidence synthesis. Obesity reviews : an official journal of the International Association for the Study of Obesity 19(4): 501-517	- Systematic review used as source of primary studies *3 relevant studies identified and included as individual studies in the review*
Mazarello Paes, Veena; Ong, Ken K; Lakshman, Rajalakshmi (2015) Factors influencing obesogenic dietary intake in young children (0-6 years): systematic review of qualitative evidence. BMJ open 5(9): e007396	- Systematic review used as source of primary studies *3 relevant studies identified and included as individual studies in the review*
McManus, Katherine E, Bertrand, Adrian, Snelling, Anastasia M et al. (2021) In Their Own Words: Parents and Key Informants' Views on Nutrition Education and Family Health Behaviors. International journal of environmental research and public health 18(15)	- Population not relevant to this review protocol *Included parents and children aged 7 to 13 years*
McNally J; Hugh-Jones S; Hetherington M (2020) “An invisible map”— maternal perceptions of hunger, satiation and ‘enough’ in the context of baby led and traditional complementary feeding practices. Appetite 148(104608)	- No relevant themes identified *The themes do not directly relate to government guidance and the study focuses on ensuring that children are not overeating*
Middleton, G; Keegan, R; Henderson, H (2012) A qualitative exploration of stakeholder perspectives on a school-based multi-component health promotion nutrition programme. Journal of human nutrition and dietetics : the official journal of the British Dietetic Association 25(6): 547-56	- Population not relevant to this review protocol *Involved stakeholders from both primary and secondary schools and results were not separated to identify population relevant to study.*

Study	Code [Reason]
Moonan, May, Maudsley, Gillian, Hanratty, Barbara et al. (2022) An exploration of the statutory Healthy Start vitamin supplementation scheme in North West England. BMC public health 22(1): 392	- Population not relevant to this review protocol *Population included mothers and the study focused on their uptake of healthy start vouchers, and not the uptake of healthy eating*
Moore, Amanda P, Nanthagopan, Kristina, Hammond, Grace et al. (2014) Influence of weaning timing advice and associated weaning behaviours in a survey of black and minority ethnic groups in the UK. Public health nutrition 17(9): 2094-103	- Study design not relevant to this review protocol *Questionnaire survey*
Murimi, Mary W, Moyeda-Carabaza, Ana Florencia, Nguyen, Bong et al. (2018) Factors that contribute to effective nutrition education interventions in children: a systematic review. Nutrition reviews 76(8): 553-580	- Systematic review used as source of primary studies *Systematic review involving a qualitative synthesis of quantitative studies*
O'Donnell, J.E.; Foskett-Tharby, R.; Gill, P.S. (2017) General practice views of managing childhood obesity in primary care: a qualitative analysis. JRSM Open 8(6)	- Domain not of interest *Study focused on obesity management which is outside the remit of this guideline*
Ochieng, B.M.N. (2011) Factors influencing the diet patterns and uptake of physical activity among Black families. International Journal of Health Promotion and Education 49(4): 140-145	- No relevant themes identified *Study focused on the diet patterns of adults and adolescents (no age specified)*
Ohly, Heather R, Hayter, Arabella, Pettinger, Clare et al. (2013) Developing a nutrition intervention in children's centres: exploring views of parents in rural/urban settings in the UK. Public health nutrition 16(8): 1516-21	- Study design not relevant to this review protocol *Study used questionnaires to elicit responses*
Ohly, Heather, Crossland, Nicola, Dykes, Fiona et al. (2017) A realist review to explore how low-income pregnant women use food vouchers from the UK's Healthy Start programme. BMJ open 7(4): e013731	- Systematic review used as source of primary studies *Identified 4 potentially relevant studies*
Peters, J., Parletta, N., Campbell, K. et al. (2014) Parental influences on the diets of 2- to 5-year-old children: Systematic review of qualitative research. Journal of Early Childhood Research 12(1): 3-19	- Study not conducted in the UK *Study conducted in Australia*

Study	Code [Reason]
Peters, Jacqueline, Parletta, Natalie, Lynch, John et al. (2014) A comparison of parental views of their pre-school children's 'healthy' versus 'unhealthy' diets. A qualitative study. Appetite 76: 129-36	- Study not conducted in the UK *Study conducted in Australia*
Pini, Simon, Goodman, William, Raby, Elizabeth et al. (2023) Development and initial qualitative evaluation of a novel school-based nutrition intervention - COOKKIT (Cooking Kit for Kids). BMC public health 23(1): 1742	- Population not relevant to this review protocol *Interviews were carried out among parents of children 6 to 10 years and children 8 to 9 years*
Porter, Alice, Langford, Rebecca, Summerbell, Carolyn et al. (2023) A qualitative exploration of food portion size practices and awareness of food portion size guidance in first-time parents of one- to two-year-olds living in the UK. BMC public health 23(1): 1779	- Study does not contain a phenomenon of interest relevant to this review protocol *Study is focused on portion sizes which is not included in the government guidance advice for complementary feeding or healthy eating in children*
Power, Maddy, Pybus, Katie J, Pickett, Kate E et al. (2021) "The reality is that on Universal Credit I cannot provide the recommended amount of fresh fruit and vegetables per day for my children": Moving from a behavioural to a systemic understanding of food practices [version 1; peer review: 2 approved]. Emerald open research 3: 3	- Population not relevant to this review protocol *Most of the population not within the age range specified in the protocol. Included children aged 4 to 11 years*
Redsell, Sarah A, Slater, Vicki, Rose, Jennie et al. (2021) Barriers and enablers to caregivers' responsive feeding behaviour: A systematic review to inform childhood obesity prevention. Obesity reviews : an official journal of the International Association for the Study of Obesity 22(7): e13228	- Systematic review used as source of primary studies *1 relevant study identified and has been included as an individual study*
Redsell, Sarah A, Swift, Judy A, Nathan, Dilip et al. (2013) UK health visitors' role in identifying and intervening with infants at risk of developing obesity. Maternal & child nutrition 9(3): 396-408	- Study does not contain a phenomenon of interest relevant to this review protocol *Obesity focused - Study focuses on health professionals' practices in intervening with infants at risk of obesity. Age of children not clearly defined.*
Smith, Mary A, Wells, Martha H, Scarbecz, Mark et al. (2019) Parents' Preferences and Perceptions of Their Children's Consumption of Sugar and Non-nutritive Sugar Substitutes. Pediatric dentistry 41(2): 119-128	- Study not conducted in the UK *Study conducted in the US*

Study	Code [Reason]
Soczynska, Izabela, da Costa, Bruno R, O'Connor, Deborah L et al. (2023) Parent and physician beliefs, perceptions and knowledge of plant milks for children. Nutrition and health: 2601060231171299	- Study not conducted in the UK *Study conducted in Canada*
Spyreli, Eleni; McKinley, Michelle C; Dean, Moira (2021) Parental considerations during complementary feeding in higher income countries: a systematic review of qualitative evidence. Public health nutrition 24(10): 2834-2847	- Systematic review used as source of primary studies *individual studies assessed for inclusion*
Stelle, Isabella; Kinshella, Mai-Lei Woo; Moore, Sophie E (2023) Caregiver perceptions of nutrition interventions in infants and children under 24 months of age: a systematic review. Public health nutrition 26(9): 1907-1916	- Systematic review used as source of primary studies *No primary study identified for inclusion. All studies were non-UK studies*
Warren, Emily; Williams, Lorraine; Knai, Cecile (2022) The "Cinderella sector": The challenges of promoting food and nutrition for young children in early years' settings in England. Ecology of food and nutrition 61(5): 576-594	- Population not relevant to this review protocol *Include other stakeholder not specified in the protocol*
Watson, P.M., Dugdill, L., Pickering, K. et al. (2021) Distinguishing factors that influence attendance and behaviour change in family-based treatment of childhood obesity: A qualitative study. British Journal of Health Psychology 26(1): 67-89	- Domain not of interest *Study focused on obesity treatment which is outside the remit of this guideline*
Watts, Simon, Lloyd-Williams, Ffion, Bromley, Helen et al. (2023) Putting a price on healthy eating: public perceptions of the need for further food pricing policies in the UK. Journal of public health (Oxford, England)	Population not relevant to this review protocol Age of the children not specified in the paper. Some participants did not have children.
Wittels, P; Kay, T; Mansfield, L (2022) Adopting and maintaining a healthy lifestyle in low SES families: How the experience of motherhood shapes responses to dietary and physical activity public health guidance. BMC public health 22(1): 1092	- No relevant themes identified *Mothers' experience rather than dietary choice of children*

Excluded economic studies

This was a qualitative review question, therefore economic evidence was not relevant.

Appendix K Research recommendations – full details

Research recommendations for review question: What are the facilitators and barriers to increasing the uptake of government advice for women and families with children up to five years for appropriate and timely introduction to solids (complementary feeding) for babies from 6 to 12 months and healthy eating in children from 12 months to 5 years?

No research recommendations were made for this review question.