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**A Qualitative Investigation of Family Perceptions, Experiences and Management  
of Childhood Fussy Eating Behaviours**

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Thesis submitted to the National University of Ireland, Galway in fulfilment of the  
requirements for the Degree of Doctor of Philosophy (Psychology)

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## Table of Contents

Declaration.....	viii
Publications Relating to this Research .....	ix
Conference Presentations Relating to this Research .....	ix
Funding.....	x
Acknowledgements .....	xi
Abstract.....	xii
List of Tables.....	xiv
List of Figures.....	xv
List of Appendices.....	xvi
List of Abbreviations .....	xvii
Quote .....	xviii
Thesis Overview .....	1
<b>Chapter 1. Introduction and Literature Review .....</b>	<b>3</b>
Chapter Overview .....	3
Context.....	3
Defining Fussy Eating .....	4
Fussy Eating Prevalence and Trajectories .....	8
Impact and Consequences of Fussy Eating.....	10
Diet, nutrient intake and health. ....	11
Weight and growth. ....	12
Social and psychological wellbeing. ....	13
Summary of impact and consequences. ....	14
Development, Maintenance and Management of Fussy Eating Behaviours .....	14
Genetics and other child factors. ....	15
Parent factors.....	16
Family factors.....	27

Social and cultural factors.....	28
Summary of the development, maintenance and management of fussy eating. ....	28
Fussy Eating Intervention .....	29
Theoretical Perspectives .....	32
Adopting a dialectical approach to studying fussy eating.....	32
Social relational theory.....	34
Family systems/process theory. ....	38
Conclusion.....	39
Existing Qualitative Research on Fussy Eating and Relevant Methods .....	40
Research Gaps, Rationale and Thesis Aims .....	41
<b>Chapter 2. Research Design and Methods .....</b>	<b>44</b>
Chapter Overview .....	44
Overall Research Design and Methodology .....	44
Epistemology .....	45
Selecting a Qualitative Evidence Synthesis Approach for Study 1 (Chapter 3).....	45
Overview of Meta-Ethnography Approach Used in Study 1 (Chapter 3) .....	47
Recruitment and Data Collection for Studies 2 & 3 (Chapters 4 - 6).....	48
Recruiting families. ....	48
Sample characteristics .....	52
Interviews vs focus groups and multiple perspective research. ....	55
Developing interview guides and materials. ....	56
Data collection procedure and ethical considerations. ....	58
Selecting a Qualitative Analysis Method for Studies 2 & 3 (Chapters 4 - 6).....	60
Analysing multiple perspectives: parent and child data.....	61
Thematic Analysis Approach Used for Studies 2 & 3 (Chapters 4-6).....	62
Inductive/deductive. ....	62
Experiential/critical. ....	62

Essentialist/constructionist.....	63
Analysis steps.....	63
Consideration of the limitations of thematic analysis.....	66
Considering criteria for good qualitative research.....	66
Researcher’s Reflexive Statement .....	67
Conclusion .....	69
<b>Chapter 3. Childhood Fussy/Picky Eating Behaviours: A Systematic Review and Synthesis of Qualitative Studies (Study 1).....</b>	<b>70</b>
Chapter Overview .....	70
Introduction.....	70
Using Meta-Ethnography to Synthesise Qualitative Studies on Fussy Eating .....	72
Analysis steps.....	77
Results.....	83
Study characteristics.....	83
Line-of-argument synthesis (building a whole picture from the individual parts). .....	89
Discussion.....	103
Limitations of the qualitative literature on fussy eating.....	107
Strengths and limitations of the qualitative synthesis.....	108
Recommendations for future research and practice.....	109
Conclusions.....	109
<b>Chapter 4. Parents’ Experiences and Management of Fussy Eating Behaviours: Response Patterns in Parents of School-Aged Children (Study 2A) .....</b>	<b>111</b>
Chapter Overview .....	111
Introduction.....	111
Results.....	113
Family processes.....	114
Parent response patterns.....	121
Discussion.....	128

Strengths and limitations.....	130
Recommendations for future research and practice. ....	130
Conclusions.....	132
<b>Chapter 5. Parents’ Perceptions: Beliefs about the Development and Management of Fussy Eating (Study 2B) .....</b>	<b>133</b>
Chapter Overview .....	133
Introduction.....	133
Results.....	136
Discussion .....	150
Strengths and limitations.....	156
Recommendations for future research and practice. ....	156
Conclusions.....	157
<b>Chapter 6. Fussy Eating Behaviours: Children’s Perceptions, Experiences and Strategies (Study 3).....</b>	<b>159</b>
Chapter Overview .....	159
Introduction.....	159
Results.....	162
Discussion.....	174
Methodological, ethical and pragmatic limitations and recommendations for future research.....	177
Conclusions.....	179
<b>Chapter 7. Discussion .....</b>	<b>181</b>
Chapter Overview .....	181
Summary of Findings.....	181
Contribution of this Research .....	185
Perceptions and beliefs about fussy eating.....	186
Management of fussy eating: Goals, practices and strategies.....	191
Experiences of fussy eating: Perceived impact and trajectories. ....	196

Theoretical implications: developing our knowledge of fussy eating from a dialectical theoretical perspective. ....	201
Advancing qualitative research methods in fussy eating research. ....	202
Strengths and Limitations of the Research .....	204
Recommendations for Future Research .....	208
Recommendations for Practice .....	209
Conclusions.....	211
<b>References.....</b>	<b>213</b>
<b>Appendices .....</b>	<b>238</b>



## Declaration

I declare that this thesis has not been submitted as an exercise at this or any other University. I declare that this thesis is entirely my own work.

Signed: *Hazel Wobsterholme*

### **Publications Relating to this Research**

Wolstenholme, H., Heary, C., & Kelly, C. (2019). Fussy eating behaviours: Response patterns in families of school-aged children. *Appetite*, 136, 93-102.  
(See Chapter 4)

Wolstenholme, H., Kelly, C., Hennessy, M., Heary, C. (2020). Childhood fussy eating: Systematic review and synthesis of qualitative studies. *International Journal of Behavioural Nutrition and Physical Activity*. (See Chapter 3)

### **Conference Presentations Relating to this Research**

Wolstenholme, H., Kelly, C., & Heary, C. (2019, March). “*It’s like I’m eating brains*”: *Children’s perceptions and experiences of fussy eating behaviour*. Oral presentation presented at the International Conference on Children’s Eating Behaviour, Birmingham, UK.

Wolstenholme, H., Kelly, C., Hennessy, M., Heary, C. (2019, March). *Fussy Eating Perceptions, Experiences and Practices: A Review and Synthesis of Qualitative Studies*. Poster presented at the International Conference on Children’s Eating Behaviour, Birmingham, UK

Wolstenholme, H., Heary, C., & Kelly, C. (2018, August). *The family response to fussy eating in school-aged children: A qualitative study*. Oral presentation presented at the European Health Psychology Society Conference, Galway, Ireland.

Wolstenholme, H., Heary, C., & Kelly, C. (2017, September). *Fussy eating in school-aged children: A mixed method study*. Oral presentation presented at the European Health Psychology Society Conference, Padua, Italy.

Wolstenholme, H., Kelly, C., Heary, C. (2017, April). *Perceptions and experiences of fussy eating: A qualitative synthesis*. Oral presentation presented at the British Feeding and Drinking Group Annual Meeting, Reading, UK.

Wolstenholme, H., Kelly, C., Heary, C. (2016, September). *Picky eating experiences and perceptions: An overview of the literature and research plan*. Oral presentation at the Children’s Research Network of Ireland PhD Symposium, Maynooth, Ireland.

**Note:** Additional dissemination activities are listed in Appendix K.

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## Abstract

**Background:** Fussy eating refers to the consumption of an inadequate variety or quantity of food. Childhood fussy eating can impact nutritional intake and has been associated with family stress and conflict at mealtimes. A range of child, parent, family, social and cultural factors contribute to the development and management of fussy eating behaviours. Much research has focused on the role of parents. However, this research has focused on parent feeding practices and less is known about other factors that are important to consider in relation to behaviour change intervention (such as beliefs, emotions and goals). In addition, the majority of research on fussy eating to date is quantitative, relies on parent-report and is focused on pre-school children.

**Aims:** Using a qualitative research design, this thesis aims to: 1) explore family perceptions (descriptions and beliefs), experiences (impact and emotions) and management (goals and practices) of fussy eating behaviours, 2) explore these constructs in families of school-aged children, 3) account for both parent and child perspectives and 4) explore how family perceptions, experiences and management strategies relate to each other.

**Method:** This thesis presents a systematic review and synthesis of ten published qualitative studies on family perceptions, experiences and management of fussy eating using the meta-ethnography qualitative synthesis method (Study 1). In addition it presents a qualitative interview study with 20 parents of school-aged children (Study 2A and 2B) and a qualitative interview study with 16 school children between the age of seven and ten years (Study 3). Interviews were analysed using thematic analysis.

**Findings:** The synthesis (Study 1) provides a comprehensive description and definition of fussy eating behaviours as well as a conceptual model which illustrates the relationships between five key constructs in the qualitative fussy eating literature: fussy eating, parent feeding practices, parent feeding beliefs, emotional climate, and parent awareness of food preference development. Thematic analysis of parent interviews (Study 2A) generated three themes that explain how parents experience and manage fussy eating behaviours (Dynamic and Evolving Feeding Goals, Managing Negative Emotions and Parenting Practices: Figuring out what Works) and three distinct response patterns in relation to how parent responses change over time (Resistance-to-Acceptance Response, Fluctuating Response and Consistent Response). In Study 2B, thematic analysis of parent

interviews generated four themes explaining parent feeding beliefs and how they relate to feeding practices: 1) Beliefs about the Development of Fussy Eating and the Perceived Role of Parents, 2) Perceived Relational-Efficacy Beliefs: Parents' Confidence that they can Positively Influence their Child's Fussy Eating Behaviours, 3) A Hopeful or Worrying Future, and 4) Beliefs put into Practice. Finally, thematic analysis of child interviews (Study 3) produced three themes in relation to children's perceptions of fussy eating behaviours and their experiences of family processes in the context of fussy eating: 1) Typical Individual Differences or Bad Behaviour? 2) Different Motivations, Goals and Mealtime Emotions and 3) Dealing with Dislikes.

**Conclusions:** Family perceptions, experiences and management of fussy eating behaviours are complex, dynamic and contextual. Parents and children are both active agents with their own conceptualisations of fussy eating, constructed beliefs, mealtime motivations, emotions and strategies. Contradicting goals of parents and children can create conflict in relation to fussy eating. Future research and intervention for fussy eating should consider both the parent's and child's point of view, should take the broader context into account, and should target family goals, beliefs and emotions alongside feeding practices.

## List of Tables

### Chapter 2. Research Design and Methodology

**Table 2.1.** *Characteristics of Participating Schools for Studies 2 & 3*

**Table 2.2.** *Sample Characteristics for Studies 2 & 3*

### Chapter 3. Qualitative Synthesis (Study 1)

**Table 3.1.** *Meta-Ethnography Phases, Steps, and Tools/Software used to Review and Synthesise Studies*

**Table 3.2.** *Search Strategy Used to Identify Qualitative Studies on Fussy Eating in Childhood Published Since 2008*

**Table 3.3.** *Inclusion and Exclusion Criteria for Title and Abstract and Full Text Screening*

**Table 3.4.** *Characteristics of Original Qualitative Studies Synthesised in this Review*

**Table 3.5.** *GRADE-CERQual Assessment: Confidence that Relationships in the Model are a Reasonable Representation of the Phenomenon of Interest*

### Chapter 4. Parent Interviews (Study 2A)

**Table 4.1.** *Additional Quotes to Support Family Process Themes*

**Table 4.2.** *Additional Quotes to Support Response Pattern Themes*

### Chapter 5. Parent Interviews (Study 2B)

**Table 5.1.** *Factors Parents Believe Contribute to Fussy Eating Behaviours and Supporting Quotes*

### Chapter 6. Child Interviews (Study 3)

**Table 6.1.** *Children's Perspective on Fussy Eating: Additional Quotes to Support Themes and Subthemes*

## List of Figures

### Chapter 1. Introduction and Literature Review

**Figure 1.2.** Transactional model of parent-child relationships embedded in culture (adapted from Kuczynski & De Mol (2015) pg 25)

**Figure 1.2.** Psychological processes underlying causality in dialectical systems (adapted from Kuczynski & De Mol (2015), pg 37)

### Chapter 2. Research design and methodology

**Figure 2.1.** Recruitment and participant selection process for Studies 2 & 3

### Chapter 3. Qualitative Synthesis (Study 1)

**Figure 3.1.** Flow chart illustrating selection of studies through database searches, screening, team discussions and supplementary searches

**Figure. 3.2.** Conceptual model illustrating 5 constructs (and how they relate to one another) generated by a secondary analysis of findings in recent qualitative studies

### Chapter 4. Parent Interviews (Experiences and Management)(Study 2A)

**Figure 4.1.** Parent response patterns to fussy eating behaviours characterised by differences in family process themes

### Chapter 5. Parent Interviews (Perceptions) (Study 2B)

**Figure 5.1.** Social relational model of parent feeding beliefs and feeding practices

**Figure 5.2.** Relationships between findings of Study 2A and Study 2B

### Chapter 7. Discussion

**Figure 7.1.** Dialectical model of family perceptions, experiences and management of fussy eating



## **List of Appendices**

**Appendix A:** School Recruitment Letter and Information Sheet

**Appendix B:** Parent Invitation Letter and Study Information Brochure

**Appendix C:** Family Screening Questionnaire

**Appendix D:** Parent Interview Guide

**Appendix E:** Child Interview Materials and Interview Guide

**Appendix F:** Ethical Approval Letter and Statement of Compliance

**Appendix G:** Participant Information Sheets

**Appendix H:** Participant Consent/Assent Forms

**Appendix I:** Debriefing Letters

**Appendix J:** Distressed Participant Protocol

**Appendix K:** Additional Outputs and Dissemination Activities

## **List of Abbreviations**

ADHD – Attention Deficit Hyperactivity Disorder

BMI – Body Mass Index

CEBQ – Children’s Eating Behaviour Questionnaire

DOR – Satter’s Division of Responsibility in Feeding

DSM-V – Diagnostic and Statistical Manual of Mental Disorders, 5th Edition

IPA – Interpretative Phenomenological Analysis

JBI – Joanna Briggs Institute

SES – Socio-Economic Status

WHO – World Health Organisation

## Quote

“You buy clothes, you buy gold, you can have a car, you have a house, nothing is yours. But the moment you are sharing food with somebody, and you sit down and talk, and you eat that food, that is yours. Nobody can take it from you”

– Mother, Interview Participant

## Thesis Overview

Chapter 1 provides an overview and review of the current literature on fussy eating. Firstly, this chapter reviews the definitions, prevalence, trajectories and consequences of fussy eating. Following this, child, parent, family and sociocultural factors that contribute to the development, maintenance and management of fussy eating behaviours are discussed, as well as current intervention approaches. Two theories that are drawn upon in this thesis are outlined (social relational theory and family systems/process theory). Finally, this chapter discusses the key gaps in the current literature and the aims of this thesis. The aims of this thesis are to:

- 1) Qualitatively explore family perceptions (e.g. descriptions, beliefs), experiences (e.g. impact and emotions) and management (e.g. goals and practices) of fussy eating behaviours across childhood (Study 1)
- 2) Explore these constructs in families of school-aged children (Study 2 & 3)
- 3) Account for both parent (Study 2) and child perspectives (Study 3)
- 4) Explore how family perceptions, experiences and management strategies relate to one another, as indicated by qualitative accounts (Study 1, 2 & 3)

Chapter 2 outlines the qualitative research design and methods used for Studies 1, 2 and 3. The meta-ethnography approach used to synthesise published qualitative studies in Study 1 is introduced. Following this, details are provided in relation to participant recruitment, development of data collection tools, data collection procedures, ethical considerations and thematic analysis approach used to analyse data in Studies 2 and 3.

Chapter 3 (Study 1) is a systematic review and synthesis of recent qualitative studies on perceptions, experiences and practices in relation to non-clinical fussy eating, food neophobia and food refusal in children aged one year to young adult. A systematic search of relevant databases identified ten studies which were synthesised using a meta-ethnography approach (France, Uny et al., 2019; Noblit and Hare, 1988). This chapter provides a brief introduction to the study, details regarding the meta-ethnography approach, synthesis findings, and a discussion of findings in relation to previous research.

Chapter 4 (Study 2A) explores how parents experience and manage fussy eating behaviours in school-aged children and, based on parents' retrospective accounts,

investigates how their responses have changed over time. This study is based on semi-structured qualitative interviews with 20 parents from 17 families of school-aged children (6-10 years). This chapter presents a brief introduction to the study, research findings and a discussion of findings in relation to previous research.

Chapter 5 (Study 2B) investigates parents' beliefs about fussy eating, how these beliefs develop, and how they relate to parent feeding practices. Thematic analysis was carried out using the same dataset as Study 2A. This chapter presents an introduction to the study, research findings, and a discussion of findings in relation to previous research, as well as how they relate to the findings of Study 2A.

Chapter 6 (Study 3) investigates children's perspectives on fussy eating, specifically their perceptions of fussy eating behaviours and their experiences of family processes relating to fussy eating. Thematic analysis was carried out on 16 qualitative interviews with children aged 7-10 years. An introduction to the study is provided, followed by research findings. Findings are then discussed in the context of previous research, and methodological, ethical and pragmatic challenges are considered.

Chapter 7 summarises the key findings from each study and discusses how these findings contribute to the literature on fussy eating. In addition, theoretical implications of the research are considered. The strengths and limitations of the research are discussed and recommendations are made for future research and practice.

## **Chapter 1. Introduction and Literature Review**

### **Chapter Overview**

This chapter provides the context and background for the research presented in this thesis. An introduction to fussy eating and other key concepts is provided. The impact of fussy eating on physical and psychological wellbeing is outlined. A review of the literature on the development and management of fussy eating is provided, followed by a brief overview of current intervention strategies. Theoretical approaches to studying fussy eating are discussed and two theories drawn upon in this thesis are described (social relational theory and family systems/process theory). Finally, this chapter highlights the gaps in the current literature on fussy eating and outlines the aims of this thesis.

### **Context**

Shared family meals have been associated with a range of health and well-being outcomes including language development, academic achievement, reduced risk of obesity and reduced risk of substance abuse (Fiese & Schwartz, 2008). However, the quality of family meals is important. Responsive, well organised, and well-regulated mealtimes are related to more optimal child outcomes (Fiese & Schwartz, 2008). Fussy eating is associated with mealtime stress and conflict, increased workload for parents, and tricky parent-child relationships (Goh & Jacob, 2012; Rubio & Rigal, 2017; Trofholz, Schulte, & Berge, 2017). In addition, parents' frustration with children's fussy eating behaviours has been reported as a barrier to having family meals (Fulkerson et al., 2011) and parents of children with higher levels of fussy eating are less likely to report having family meals (Rahill, Kennedy, Walton, McNulty, & Kearney, 2018). Therefore, fussy eating is associated with less frequent and poorer quality family meals which are important for a range of health and well-being outcomes.

The World Health Organisation (WHO) recommends that adults and children eat at least five portions of fruit and vegetables per day as part of a healthy diet to reduce the risk of non-communicable diseases (WHO, 2018). However, nationally representative data from the Health Behaviour in School-aged Children Study shows that only one third of Irish school-aged children report eating fruit more than once a day and vegetables more than once a day (Gavin et al., 2014). Similarly, the National Children's Food Survey in

Ireland reported that fruit and vegetable consumption of 5-12 year olds was low (approximately 3 servings per day). They also reported that 70% of parents sometimes find it difficult to provide a healthy diet for their child, with the most commonly reported barrier being the child's likes or dislikes. Parents who reported likes and dislikes as a barrier to providing a healthy diet also reported higher levels of fussy eating in their child (Irish Universities Nutrition Alliance, 2019). In line with this finding, Dovey, Staples, Gibson, & Halford (2008) suggest that fussy eating is a significant psychological barrier to improving the quality of children's diets, particularly in relation to fruit and vegetable intake.

Although fussy eating is a barrier to meeting dietary recommendations and enjoyment of family meals, there is limited reliable and evidence based advice available to parents. National and international healthy eating guidelines for families (e.g. provided by the Health Service Executive, Food Safety Authority of Ireland and the World Health Organisation) provide detailed information on nutrition requirements and *what* to feed children, but provide limited information on *how* to feed children and how best to respond to typical challenges such as food refusal (Mitchell, Farrow, Haycraft, & Meyer, 2013). A better understanding of families' perceptions and experiences of fussy eating behaviours, as well as the practices families use in the context of fussy eating is required so that useful and relevant advice can be provided to families.

### **Defining Fussy Eating**

Definitions of fussy eating vary widely and a concise, consistent, operational definition of fussy eating is lacking (Boquin, Moskowitz, Donovan, & Lee, 2014; Harris, Ria-Searle, Jansen, & Thorpe, 2018; Taylor, Wernimont, Northstone, & Emmett, 2015; Trofholz et al., 2017). In addition, numerous terms are used interchangeably (such as fussy, picky, faddy, choosey, and selective eating). Fussy eating is frequently defined as the consumption of an inadequate variety or quantity of foods through the rejection of foods that are both familiar and unfamiliar (Dovey et al., 2008; Galloway, Fiorito, Lee, & Birch, 2005). Food neophobia is considered a distinct, but overlapping, concept and refers to the avoidance of new foods (Dovey et al., 2008). Other definitions account for the impact of fussy eating on the family. For example, it has been defined as the restricted intake of food, especially of vegetables, and strong food preferences, leading parents to provide a different meal from the rest of the family (Mascola, Bryson, & Agras, 2010;

Taylor, Wernimont, et al., 2015). Similarly it has been defined as the unwillingness to eat familiar foods or try new foods, severe enough to interfere with daily routines to an extent that is problematic to the parent, child, or parent-child relationship (Ekstein, Laniado, & Glick, 2010; Taylor, Wernimont, et al., 2015).

Due to the broad nature of fussy eating and the challenges associated with providing a concise definition, other studies have focused on describing fussy eating characteristics. Characteristics of fussy eating include slow eating, only eating preferred foods, drinking the majority of one's energy intake, eating disguised foods, and using distractions at mealtimes (Taylor, Wernimont, et al., 2015). Qualitative studies have found that not all parents define or experience fussy eating in the same way. A mixed-method study by Boquin and colleagues (2014) reported that there are different types of fussy eating (The Sensory Dependent, The General Perfectionists, The Behavioural Responders, and The Preferential Eaters). Furthermore, a qualitative study found that parents' definition of fussy eating varied from the rejection of just one or a few foods, to the rejection of entire food categories, textures, or very limited intake (Trofholz et al., 2017).

Some studies adopt a dichotomous or categorical definition of fussy eating ('fussy eaters' versus 'non-fussy eaters'), whereas other studies define and measure fussy eating continuously (degree of fussy eating) (Cole, An, Lee, & Donovan, 2017; Tharner et al., 2014). For example, Tharner and colleagues (2014) used a categorical approach, and identified a distinct fussy eater behaviour profile characterised by high food fussiness, slowness in eating, high satiety responsiveness (responsiveness to internal cues of hunger and fullness), low food enjoyment and low food responsiveness (attraction to food and eating in the absence of hunger). In contrast, other studies define and measure fussy eating on a continuous scale with mild forms at one end and more severe feeding difficulties at the other (Brown & Lee, 2015; Cole et al., 2017).

When viewing fussy eating continuously, more severe forms of fussy eating may meet the criteria of a feeding disorder such as Avoidant Restrictive Food Intake Disorder (Cardona Cano, Hoek, & Bryant-Waugh, 2015). Therefore it is important to consider the point at which fussy eating behaviours become clinically significant, requiring professional intervention. In line with the DSM-V, in order to meet the diagnosis of a feeding disorder, feeding difficulties must have a significant impact on weight loss or



nutrient deficiency, be associated with reliance on supplementation, or interfere with psychosocial functioning. It has been suggested that feeding disorders may be differentiated from more typical fussy eating by the degree to which children can distinguish between similar foods, for example by accepting one brand of white bread, but not another (Harris, Blissett, & Johnson, 2000), or by the number of accepted foods (e.g. less than 20 foods) (Rowell & McGlothlin, 2015). Kerzner and colleagues (2015) developed a classification of feeding difficulties, proposing different categories of difficulties (limited appetite, selective intake and fear of feeding), but considers each of these on a spectrum from normal to severe. Kerzner and colleagues (2015) also highlight that 'normal' eating behaviours can be misperceived by parents as feeding difficulties. In any case, professional intervention should be provided if the medical, nutritional, or psychological state of the child or family is affected by food refusal (Dovey, Farrow, Martin, Isherwood, & Halford, 2009; Kerzner et al., 2015).

There are many limitations to current definitions. Often, definitions do not capture the wide range of behaviours that are considered characteristic of fussy eating (e.g. characteristics and behaviours identified by Boquin et al. (2014)). Many definitions do not consider the aetiology of fussy eating, for example it is not clear whether 'fussy eating' includes food refusal on medical grounds and whether it is distinct from more severe forms of food refusal consistent with feeding disorder diagnoses. Current definitions of food neophobia and fussy eating (and whether these are distinct concepts) are ambiguous and depend on subjective perceptions of what may be considered a 'familiar' food (Lafraire, Rioux, Giboreau, & Picard, 2016) or an 'inadequate' diet. It has also been suggested that defining fussy eating as an 'unwillingness to eat' conceptualises fussy eating as a defiant behaviour, increasing concern and stress for families, and that reconceptualising fussy eating as agency in relation to food preferences would support more cooperative family mealtime interactions (Walton, Kuczynski, Haycraft, Breen, & Haines, 2017). To date this term has only been defined by researchers and parents, and it is not known what relevance and meaning this term has for children. A more comprehensive and widely accepted definition of fussy eating would enable the comparison of findings across studies, the identification of children who are at risk, better understanding of health and wellbeing outcomes associated with fussy eating behaviours and the development of appropriate interventions (Taylor, Wernimont et al., 2015). More qualitative work similar to that by Boquin and colleagues (2014) and Trofholz and

colleagues (2017) would help to develop a more inclusive and widely accepted definition of fussy eating in line with parents' use of the term.

Throughout this thesis the terms 'fussy eating' and 'fussy eating behaviours' are used to refer to a spectrum of behaviours that range from typical rejection of one or a few foods, to more severe and persistent rejection of entire food groups or textures that may be more characteristic of feeding disorders. Fussy eating is conceptualised on a continuum, in order to capture the complexity and diversity of family perceptions (Boquin et al., 2014; Kerzner et al., 2015; Trofholz et al., 2017). In addition, this broad and inclusive definition is adopted, as previous qualitative findings from Boquin (2014) and Trofholz (2017) show that not all parents define and experience fussy eating the same way and that some parents use the term to describe the rejection of one or a few foods. The inclusive definition of fussy eating used throughout this thesis reflects the broad and diverse nature of definitions used in other similar published studies. For instance similar qualitative studies have defined fussy eating as challenging mealtime behaviour including consumption of an inadequate variety or quantity of foods, rejection of familiar foods, and food neophobia (Boquin, 2014, Rubio, 2017), the rejection of food textures, smells, temperature or slowness in eating (Trofholz, 2017) and parents expressing ongoing difficulties feeding solid foods (Harris, 2018). In addition, other similar studies have defined neophobia as the reluctance of a child to try new foods (Jarman, 2015) and as a normal adaptive response (Russell, 2013) and rejected foods have been defined as foods that a child has been served at least once and indicated they did not like or did not want to eat (Goodell, 2017). In line with Cardona Cano et al. (2015), fussy eating is used to describe an eating behaviour in line with general usage of the term by parents, but it is acknowledged that more severe forms may meet a diagnosis of a feeding disorder. The definition used throughout this thesis is distinct from, but may include, more severe feeding disorders such as ARFID (an eating or feeding disturbance as manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with significant weight loss, significant nutritional deficiency, dependence on enteral feeding or nutritional supplements and/or marked interference with psychosocial functioning) (American Psychiatric Association, 2013), or the recently proposed Pediatric Feeding Disorder (A disturbance in oral intake of nutrients, inappropriate for age, lasting at least 2 weeks and associated with medical dysfunction, nutritional dysfunction, feeding skill dysfunction, and/or psychosocial dysfunction) (Goday et al., 2019).

## **Fussy Eating Prevalence and Trajectories**

Estimates of the prevalence of fussy eating typically use a dichotomous measure of fussy eating (categorising ‘fussy eaters’ and ‘non-fussy eaters’) and report the percentage of children who fall within the ‘fussy eater’ category. However, the inconsistent use of definitions and measurements of fussy eating have led to a wide range of prevalence estimates and the trajectory of fussy eating across childhood is largely unknown (Lafraire, et al., 2016; Taylor, Wernimont et al., 2015). For instance, Tharner and colleague’s (2014) distinct fussy eating behaviour profile (characterised by high food fussiness, slowness in eating, high satiety responsiveness, low food enjoyment and low food responsiveness) was identified in 5.6% of children in a large study of 4,914 four year old children. However, when a broader definition of fussy eating is used, prevalence estimates are higher. For instance, Xue, Zhao, et al. (2015) reported that 56% of pre-schoolers were perceived to be fussy, when including children who were perceived as being somewhat and always picky. In addition, definitions of fussy eating may differ between researchers and parents, impacting prevalence estimates. One cross-sectional survey found that 25.1% of parents reported that their child (aged 1-10 years) was picky all the time. However, when these parents were asked about typical fussy eating behaviours (such as eating slowly, holding food in the mouth, refusing food, eating sweets and fatty foods instead of healthy foods and not liking to try new foods), the prevalence of picky eating behaviours occurring all the time was reported to be 49.6% (Goh & Jacob, 2012).

A number of diverse studies have estimated that the prevalence of fussy eating in early childhood is between 22-26% (Benjasuwantep, Chaithirayanon, & Eiamudomkan, 2013; Cole et al., 2017; Machado, Dias, Lima, Campos, & Gonçalves, 2016; Steinsbekk, Bonneville-Roussy, Fildes, Llewellyn, & Wichstrøm, 2017). These included a meta-analysis of five studies using dichotomous definitions of fussy eating in children aged four months to 30 months (Cole et al., 2017), detailed interviews with parents of children aged one to four years (Benjasuwantep et al., 2013), a relatively large study of 959 one to six year olds in which a child was defined as fussy if they sometimes or always “does not eat well” and “refuses to eat” (Machado et al., 2016), and a longitudinal study of 997 pre-schoolers measured using the *Preschool-Age Psychiatric Assessment* at age four and six years (Steinsbekk, Bonneville-Roussy et al., 2017). It has been estimated that 1-5% of children are at the more severe end of the spectrum meeting the criteria for a feeding disorder (Kerzner et al., 2015). This figure is more similar to the prevalence estimate of

5.6% reported by Tharner and colleagues (2014) above, suggesting that their fussy eating behaviour profile is more representative of clinically significant eating difficulties. The majority of studies report prevalence rates in pre-school children and there is less consensus in relation to the prevalence of fussy eating in school-aged children.

Both cross-sectional and longitudinal studies have reported that fussy eating increases in infancy and toddler years (Carruth, Ziegler, Gordon, & Barr, 2004; Hafstad, Abebe, Torgersen, & von Soest, 2013; Orun, Erdil, Cetinkaya, Tufan, & Yalcin, 2012). In contrast, other longitudinal studies have reported that the proportion of children perceived to be fussy is relatively consistent across early childhood (Dubois, Farmer, Girard, Peterson, & Tatone-tokuda, 2007; Farrow & Blissett, 2012). Farrow and Blissett (2012) also reported that individual levels of fussy eating were relatively stable, with children's food fussiness scores at two years highly correlated with their scores at five years. In contrast, although Dubois and colleagues (2007) found that the proportion of children reported as being picky eaters was relatively stable across early childhood, only 5.5 % of children were perceived as picky at all three time points (2.5, 3.5, and 4.5 years) suggesting that for many children at this age fussy eating is transitory. This transitory nature of fussy eating is supported by findings of Cardona Cano, Tiemeier et al. (2015) who found that prevalence of fussy eating declined from 27.6% at three years to 13.2% at six years and that 32% of young children had fussy eating that remitted (usually within three years). However, this study found 4% of children had late-onset fussy eating starting at six years, and 4% had persistent fussy eating at all ages. Similarly, in a large sample of over 7,000 children, Taylor, Wernimont and colleagues (2015) reported that prevalence rates varied from between 9.7 to 14.7 at 24, 38, 54, 65 months of age, peaking at 38 months, with 3.5% of children reported to be fussy at all time points. These studies suggest that although fussy eating in early childhood can be transitory, for a small but significant group of children fussy eating is persistent across early childhood.

Given the focus on pre-school children, the ongoing trajectory in later childhood is unclear. Prevalence estimates in school-aged children range from 10.7% in nine year olds referring to children who were often 'fussy about food' (Dubois et al., 2013) to 59% of seven to twelve year old children were reported to be somewhat picky or always picky when asked 'do you consider your child as having picky eating behaviour?' (Xue, Lee, et al., 2015). In a study of 120 children followed from 2-11 years (Mascola et al., 2010), incidence of fussy eating (occurrence of new cases) decreased from 13% to 2%, levelling

off at about 3% at 6 years of age, whereas prevalence (proportion of cases at a given time) increased from 13% to 22% by 11 years of age. Again, this indicates that although there are fewer new cases after six years of age, for some children picky eating persists throughout childhood. This study also reported that children with more persistent fussy eating were less likely to accept new foods and showed stronger likes and dislikes than children with shorter-duration fussy eating. In contrast, Marchi & Cohen (1990) found that picky eating prevalence decreases with age, however they also found that fussy eating in childhood (1-10 years) correlated significantly with fussy eating in adolescence (9-18 years and 11-21 years), indicating that fussy eating can persist into adolescence and possibly even adulthood.

In summary, prevalence estimates vary considerably across studies depending on how fussy eating is defined and the trajectory of fussy eating across childhood is largely unknown. Although it is estimated that between 22% and 25% of young children are fussy eaters, with between 1-5% of children meeting the diagnosis of a feeding disorder, there is less consensus in relation to the prevalence of eating difficulties in school-aged children. Longitudinal studies suggest that for many children fussy eating is likely to be transitory, but for a small but significant group of children it can persist into later childhood, adolescence and even adulthood. In addition, more persistent fussy eating may be associated with more severe fussy eating characteristics. Given that the trajectory of fussy eating is unclear, and older, or more persistent, fussy eaters may be at increased risk of negative consequences, families of school-aged children should not be neglected by research or intervention. More research is required to understand the extent to which fussy eating impacts families of older children.

### **Impact and Consequences of Fussy Eating**

In general, typical fussy eating behaviours do not pose serious or immediate health consequences (Gibson & Cooke, 2017; Mitchell et al., 2013). However, as mentioned at the beginning of this chapter, fussy eating can be a barrier to meeting dietary requirements and the enjoyment of family meals (Dovey et al., 2008; Fulkerson et al., 2011). This section will review the evidence for the impact of fussy eating on the child's diet quality, nutrition intake, weight, and health, as well as the impact of fussy eating on the social and psychological wellbeing of the child and family.

**Diet, nutrient intake and health.** It has been reported that both pre-school and school-aged fussy eaters eat less fruit and vegetables than non-fussy eaters (Galloway et al., 2005; Haszard, Skidmore, Williams, & Taylor, 2015; Horodyski, Stommel, Brophy-Herb, Xie, & Weatherspoon, 2010). However, Galloway et al. (2005) did not find any significant differences between intake of grains and meat in picky and non-picky eaters. Carruth and colleagues (2004) did not find any major differences in consumption of major food groups between picky eaters and non-picky eaters aged 4-24 months, other than fussy eaters eating more sweetened cereal. Although there may not be significant differences between consumption of major food groups, it has been reported that fussy eaters eat fewer food items (less variety) than non-picky eaters (Cardona Cano, Tiemeier et al., 2015; Jacobi, Rof, Sych, Agras, & Bryson, 2003; Northstone & Emmett, 2013). Low food variety has been reported to be relatively stable from pre-school age to school-age (Vilela, Hetherington, Oliveira, & Lopes, 2018).

There are also contradictory findings in relation to the impact of fussy eating on nutrition intake. Cardona Cano, Tiemeier et al. (2015) reported less energy intake in fussy eaters than non-fussy eaters at 14 months. Other studies have also reported lower intakes of macronutrients as well as micronutrients. For instance, in a survey of 793 7-12 year olds, picky eaters had lower intake of energy, protein, carbohydrates, magnesium, iron and copper (Xue, Lee, et al., 2015). In contrast, Galloway et al. (2005) found no difference in protein, fat or carbohydrate intake as a percentage of energy intake, but did report lower intakes of vitamin E, folate, and fibre in nine year old picky eaters in comparison to non-picky eaters. Similarly, Carruth et al. (1998) found no significant difference in nutrient intake by picky eating status. Nutrient deficiencies may not always be a consequence of fussy eating, but may contribute to the development of fussy eating behaviours. For example, anaemia can lead to reduced appetite, and treatment with iron can increase appetite and weight gain (Aukett, Parks, Scott, & Wharton, 1986; Harris et al., 2000).

Lower levels of certain nutrients may lead to cell damage, immunological weaknesses and digestive problems (Dovey et al., 2008). Fussy eating has been associated with digestive problems such as constipation, which is likely related to decreased intake of fibre (Galloway et al., 2005; Taylor, Northstone, Wernimont, & Emmett, 2015). The relationship between fussy eating and constipation is bidirectional (Tharner et al., 2015) as the discomfort associated with digestive issues may lead to reduced appetite and less desire to eat.

Overall, it appears that fussy eating can have an impact on diet, nutrient intake and health, but evidence is contradictory. The majority of research on diet, nutrient intake and health uses a dichotomous measure of fussy eating, comparing outcomes between ‘fussy eaters’ and ‘non-fussy eaters’. The fussy eater group in many of these studies (Carruth et al., 2004; Galloway et al., 2005; Haszard et al., 2014; Jacobi et al., 2003; Xue, Lee, et al., 2015) is based on a mean or median split of a continuous measure in a typically developing population, or includes children perceived as somewhat picky and very picky. Therefore the ‘picky eater’ group likely represents a broad range of fussy eating behaviours, which may explain contradictory findings. To better understand the impact of fussy eating on health, continuous measures, or comparisons across more specific groups (e.g. not fussy, somewhat fussy and very fussy) may be useful (e.g. as done by Horodyski et al., 2010; Northstone & Emmett, 2013). In addition, qualitative studies may provide more insight into family experiences and health concerns.

**Weight and growth.** Weight is often a major concern for parents and health professionals in the context of fussy eating. However, research on fussy eating and weight is inconclusive. Some studies report fussy eating to be associated with being underweight and having poor growth (Dubois et al., 2007; Ekstein et al., 2010; Jansen et al., 2012; Viljakainen, Figueiredo, Rounge, & Weiderpass, 2019; Tharner et al., 2014) whereas other studies associate fussy eating with being overweight (Finistrella et al., 2012; Haszard et al., 2014). One longitudinal study reported that from 5 to 15 years, persistent picky eaters had a lower BMI than non-picky eaters. However, this study reported that their weight was in the 50<sup>th</sup> percentile rather than the 65<sup>th</sup> percentile, indicating that persistent picky eaters were less likely to be overweight into adolescence (Berger, Hohman, Marini, Savage, & Birch, 2016). In a recent systematic review, no association was found between food neophobia and weight, and results were unclear for fussy eating due to heterogeneous definitions (Brown, Vander Schaaf, Cohen, Irby, & Skelton, 2016). It is likely that the impact of fussy eating on weight varies from child to child and is dependent on the severity of fussy eating, as well as the quantity and types of foods consumed. In addition, the association between weight and fussy eating is bi-directional. If a child has low weight or slow weight gain, pressure to eat from parents and health professionals in order to increase weight may contribute to fussy eating behaviours. Several longitudinal studies have associated fussy eating in toddlers and pre-schoolers

with lower birth weight (Blissett & Farrow, 2007; Taylor, Wernimont et al., 2015; Tharner et al., 2014).

**Social and psychological wellbeing.** Finally, fussy eating is associated with social and psychological consequences. Adult fussy eaters report negative emotions, distress, alienation and difficulty eating in social situations (Fox, Coulthard, Williamson, & Wallis, 2018; Thompson, Cummins, Brown, & Kyle, 2015). Parent reports of their children's fussy eating indicate negative physical and emotional responses to foods such as crying, gagging, anxiety, disgust, and being overwhelmed (Boquin et al., 2014; Johnson, Goodell, Williams, Power, & Hughes, 2015). These 'consequences' are likely to be bi-directionally associated with fussy eating. For example, children who have anxious or cautious personalities, or who are more sensitive or reactive to disgust stimuli, may be more likely to reject new foods (Dovey et al., 2008). Very few studies have investigated child experiences of fussy eating. However, in one study pre-schoolers reported negative emotions such as fear in relation to trying new foods (Johnson, Moding, Maloney, & Bellows, 2018). In relation to the psychological wellbeing of the child, in some cases fussy eating may be an indicator of more severe psychological disorders. For instance, Marchi & Cohen (1990) identified fussy eating in childhood as a predictor of eating disorder symptoms in adolescence. However, digestive issues in childhood were found to be a stronger predictor than fussy eating (Marchi & Cohen, 1990). In addition, Cardona Cano, Hoek et al. (2015) suggest that fussy eating could be a precursor for Avoidant Restrictive Food Intake Disorder. However, the development of eating disorders is complex involving a wide range of genetic, biological, and psychosocial factors (Connan, Campbell, Katzman, Lightman, & Treasure, 2003) and other studies have found no link between childhood eating behaviours (including picky eating) and eating disorder psychopathology in adulthood (Micali et al., 2007; Van Tine, McNicholas, Safer, & Agras, 2017).

Research has also reported the negative impact of fussy eating on parent wellbeing. For example, qualitative studies have reported that fussy eating in both pre-schoolers and school-aged children contributes to parent stress, concern and increased workload (Rubio & Rigal, 2017; Trofholz et al., 2017). Quantitative research has associated fussy eating with parent concern (Harris, Jansen, Mallan, Daniels, & Thorpe, 2018), stress in relation to family meals (Goh & Jacob, 2012; Ramos-Paúl et al., 2014) and a negative impact on family relationships (Goh & Jacob, 2012). However, Trofholz



et al. (2017) found that not all parents found fussy eating to be disruptive. It is possible that whether fussy eating impacts wellbeing depends on the severity of the fussy eating behaviours, and how the family adapts and manages these behaviours. More qualitative research would help to understand the contexts in which fussy eating impacts the family's wellbeing and when it does not.

**Summary of impact and consequences.** In summary, fussy eating can impact diet, nutrient intake, weight, and psychological wellbeing but findings are inconsistent across studies. It is likely that this depends on the severity of the fussy eating behaviour, yet many studies categorise fussy eating dichotomously resulting in a broad spectrum of fussy eating in the 'fussy eater' group. Qualitative research would be useful for understanding the contexts in which fussy eating impacts the child and family. In addition, very little research has investigated the impact of fussy eating on the child from the child's own point of view. It is unclear whether children consider fussy eating to have a negative impact on their lives. More research has focused on the physical health of fussy eaters, and limited research has investigated the impact that fussy eating has on social and psychological wellbeing. It is important to understand the extent to which fussy eating impacts family stress and family relationships because adequate nutrient intake and normal growth of many fussy eaters may result in the problem being overlooked by health professionals, resulting in families not receiving sufficient support for the social and psychological impacts.

### **Development, Maintenance and Management of Fussy Eating Behaviours**

Many factors impact the development and management of fussy eating behaviours. As discussed above, some of the 'consequences' of fussy eating (e.g. nutrient deficiency, weight, constipation, family stress) are also factors that may contribute to the development or maintenance of fussy eating. This section outlines other factors relating to the child, parent, family, society and culture. Firstly, this section outlines the role of genetics and other child factors. Then the role of parents (e.g. parent preferences, beliefs, practices) is discussed, as well as other family factors. Finally societal and cultural influences are outlined. Given that many studies in this area are cross-sectional and many relationships are likely to be bidirectional, factors that contribute to the development of fussy eating and factors that are involved in the management or improvement of fussy eating behaviours are discussed together.

**Genetics and other child factors.** A study using adult family members in Finland and adult twins in the UK found that approximately two thirds of the variation in food neophobia was genetically determined in both samples (Knaapila et al., 2007). Similarly, a study with 1,921 families of 16 month old twins reported that neophobia and fussy eating were strongly correlated. Food fussiness was equally explained by genetic and environmental influences, whereas the role of genetics was even higher for neophobia than for food fussiness (Smith et al., 2017). The genetic influence on fussy eating behaviours is likely explained by the influence of genetics on factors that relate to fussy eating such as weight, appetite, satiety responsiveness, specific food preferences, and sensitivity to bitter tastes (Mennella, Pepino, & Reed, 2005; Wardle, Carnell, Haworth, & Plomin, 2008).

A review of the correlates of picky eating in early childhood indicated that most studies do not report differences in fussy eating between sexes (Cole et al., 2017), although Cao and colleagues (2012) found that 12-18 month old girls had a higher food fussiness score than boys and Cardona Cano, Tiemeier et al. (2015) found that boys were more likely to be persistent picky eaters across early childhood.

Psychological factors such as cognitive ability, personality and temperament also play a role in food fussiness. For instance, developing the ability to categorise and reason about food at two or three years of age may explain the expression of neophobia and fussy eating behaviours at this age (Lafraire et al., 2016). Personality traits such as anxiety and low sensation seeking are related to higher levels of neophobia (Galloway, Lee, & Birch, 2003; Pliner & Hobden, 1992), and emotional temperaments have been associated with higher levels of fussy eating in young children (Haycraft, Farrow, Meyer, Powell, & Blissett, 2011; Powell, Farrow, & Meyer, 2011). In a population based study of pre-schoolers, Machado et al. (2016) found that fussy eaters had significantly higher scores in relation to a range of emotional and behavioural problems, including emotional reactivity, anxiety/depression, somatic complaints, being withdrawn, having sleep problems, attention problems and aggressive behaviour. This indicates that fussy eating is not an isolated behaviour but may relate to a range of other difficulties.

In addition it has been reported that tactile defensiveness (an overreaction to the experience of touch or aversion to certain types of sensory stimuli) can result in fussy eating and the rejection of foods with certain textures (Smith, Roux, Naidoo, & Venter,

2005; Steinsbekk, Bonneville-Roussy et al., 2017). Sensory sensitivity has been found to fully mediate the relationship between anxiety and selective eating in 5-10 year old children (Farrow & Coulthard, 2012), 8-17 year old children and college undergraduates (Zickgraf & Elkins, 2018). This relationship was greater for children than young adults suggesting that selective eating is also driven by developmental differences (Zickgraf & Elkins, 2018). Finally, fussy eating behaviours (as well as more severe feeding problems) may arise due to medical conditions, illness, disruptions to normal development, and poor oral-motor skills (Dovey et al., 2009; Harris et al., 2000).

Again, few studies have investigated child reported influences on fussy eating behaviours. Some studies have explored children's food preferences and food choices more broadly, and findings are in line with parent reports. Children report that their food choices are influenced by a range of factors including sensory aspects of the food, familiarity, health beliefs, whether the food is fun to eat, curiosity, family and school influence, advertising and cost (Alm & Olsen, 2017; Atik & Ozdamar Ertekin, 2013; Ishak, Shohaimi, & Kandiah, 2013; Johnson et al., 2018; Sick, Højer, & Olsen, 2019; Waddingham, Shaw, Dam, & Bettioli, 2018). It would be useful for future research with children to explore these factors in more depth in relation to food rejections and food dislikes, to understand more about children's sensory and emotional experiences in the context of fussy eating.

While many child factors impact fussy eating behaviours, child characteristics also impact how fussy eating behaviours are managed, and how children respond to intervention strategies. For instance, a qualitative study with parents reported that child factors such as age, hunger and temperament influence whether or not vegetables are offered by parents (Holley, Farrow, & Haycraft, 2016a). Child characteristics also impact their responsiveness to parent feeding practices, for instance one study found that children high in reward sensitivity responded more to rewards when asked to try a disliked vegetable, whereas children low in reward sensitivity responded more to verbal encouragement (Vandeweghe, Verbeken, Moens, Vervoort, & Braet, 2016).

**Parent factors.** Parents (or caregivers) are the primary socialisation agents and are responsible for feeding children, purchasing and preparing foods. Therefore, their own preferences, emotional well-being, feeding beliefs and feeding practices impact the

feeding relationship and may exacerbate or minimise challenges associated with fussy eating behaviours in their children.

***Parent diet and nutrition knowledge.*** It has been suggested that a parent's diet is one of the strongest predictors of their child's diet (Cooke et al., 2004; Gibson & Cooke, 2017). Picky eating and fruit and vegetable consumption in pre-school and school-aged children has been associated with parent's consumption of fruit and vegetables in numerous studies (Galloway et al., 2005; Gibson, Wardle, & Watts, 1998; Horodyski et al., 2010). As well as parent diet, parent eating behaviours can also impact the child's approach to food, for example maternal dietary restraint has been associated with child fussy eating (Powell et al., 2011). This association between parent and child diet is likely related to the effects of exposure, familiarity and role-modelling (Aldridge, Dovey, & Halford, 2009). It has been reported that maternal diet during pregnancy can influence the offspring's appetite and food choices and that exposure to flavours in the amniotic fluid is associated with more positive responses to the same flavour during the infant's first meals (Mennella, Jagnow, & Beauchamp, 2001; Ross & Desai, 2013). In addition, Gibson, Wardle, & Watts (1998) reported that mothers' nutritional knowledge, and beliefs about disease prevention predicted fruit and vegetable intake.

***Parent wellbeing.*** Factors such as maternal anxiety, depression, temperamental fearfulness and temperamental distress have been associated with feeding difficulties including fussy eating (Blissett, Meyer, Farrow, Bryant-Waugh, & Nicholls, 2005; Hafstad et al., 2013). However, findings are not completely conclusive and studies have reported different findings by child sex, or time point. For instance maternal symptoms of depression and anxiety were predictors of feeding difficulties in boys, and maternal symptoms of bulimia and depression predicted food refusal in girls in a non-clinical population (Blissett, Mayer, & Haycraft, 2007). Another study found that maternal anxiety (but not depression) at eight weeks postpartum was associated with fussy eating at 38 months, but neither anxiety nor depression at eight months postpartum had an effect (Emmett, Hays, & Taylor, 2018). This relationship between parental wellbeing and feeding difficulties may be explained by less responsive feeding practices. Maternal symptoms of depression have been related to observations of more verbal and physical pressure to eat as well as the use of rewards with three to four year old children (Haycraft, Farrow, & Blissett, 2013) and poorer parental mental health when their child is six months

of age has predicted more use of controlling feeding practices at one and two years of age (Blissett & Farrow, 2007).

***Parent infant feeding practices.*** Breastfed infants have been shown to accept fruits and vegetables more readily than formula-fed babies (Forestell & Mennella, 2007) and breastfed infants had greater intake of a vegetable following exposure than formula-fed infants (Sullivan & Birch, 1994). In a longitudinal study of 298 infants, longer breastfeeding duration was associated with less food fussiness at 18-24 months (Brown & Lee, 2015). Breastfeeding may be protective against fussy eating through exposure to flavours in breastmilk (Mennella et al., 2001). In addition, it is possible that breastfeeding facilitates more responsive and child-led feeding as Blissett & Farrow (2007) reported that longer breastfeeding duration was associated with less pressuring and restrictive practices at one and two years of age in comparison to formula feeding. It has also been found that breastfeeding predicted less negative mealtime interactions and less conflict at one year, and that this relationship was mediated by less controlling feeding practices (Farrow & Blissett, 2006). However, findings are contradictory and other studies have found no relationship between breastfeeding and fussy eating or food neophobia (Cassells et al., 2014).

Baby-led weaning (infants self-feed foods in their whole form) at 6-12 months has been associated with less food fussiness at 18-24 months in comparison to standard weaning (spoon-feeding purees) (Brown & Lee, 2015). This supports findings from a randomised controlled trial of baby-led weaning in which infants in the baby-led weaning group showed less food fussiness and more enjoyment of food than in the control group (Taylor et al., 2017). However, in Brown & Lee's (2015) study, this finding was explained by less controlling feeding associated with baby-led weaning, again suggesting that more responsive and child-led infant feeding is associated with less fussy eating. It has been proposed that the age of introduction to solid foods also relates to fussy eating, but again, findings are inconclusive. Brown & Lee (2015) reported a negative correlation between timing of introduction to complementary foods and picky eating indicating that earlier introduction (reported at Time 1 when the child was between six and 12 months) was associated with higher fussy eating (reported at Time 2 between 18 and 24 months). However, it was unclear how early solid foods were introduced. In contrast, Cooke et al. (2004) reported that the earlier children were introduced to fruit and vegetables (introduction to fruit mean age = 4.77 months; introduction to veg mean age = 6.21

months) the greater their intake at two to six years. However, the age of introduction was recalled by parents retrospectively and may not have been remembered accurately. Finally, Northstone and colleagues (2001), found that introduction of lumpy solids at ten months or older was associated with feeding difficulties and more definite likes and dislikes.

Although some longitudinal studies demonstrate a relationship between early feeding practices and fussy eating later in childhood, there is insufficient information reported in relation to the motivations and context behind these practices. It is important to recognise that early feeding practices (such as shorter breast feeding duration, or introduction of solids after ten months) may not cause fussy eating, but may be early signs of a feeding difficulty. For instance, it has been shown that fussy eating in pre-schoolers was associated with fewer sucks per feeding session at two and four weeks of age (Jacobi et al., 2003) and fussy eating has been associated with birth complications (Machado et al., 2016), suggesting that problems may be present prior to infant feeding.

***Parent child feeding practices.*** Much research has focused on the role of parent feeding practices in the development and management of fussy eating. In general, responsive feeding practices (such as providing structured mealtimes, being responsive to the child's hunger and fullness cues, repeated exposure to a variety of foods, and role modelling desired eating behaviours) have been associated with less fussy eating behaviours. On the other hand, coercive practices (such as pressuring a child to eat, restriction, using rewards or incentives, and hiding or disguising foods) can sometimes increase intake in the short term but are associated with more fussy eating behaviours in the long term (Cardona Cano, Hoek et al., 2015; Cole et al., 2017; Satter, 1986). The relationship between fussy eating and parent feeding practices is bidirectional. Feeding practices influence, and are influenced by, child fussy eating behaviours (Jansen, Williams, Mallan, Nicholson, & Daniels, 2018; Jansen et al., 2017; Mallan et al., 2018). Parents' feeding practices even differ between siblings and twins with different levels of fussiness (Farrow, Galloway, & Fraser, 2009; Harris, Fildes, Mallan, & Llewellyn, 2016).

Parent-reported feeding practices have been found to be relatively stable from two to five years (Farrow & Blissett 2012) and preadolescent reports of their parents' feeding practices was also reported to be stable over a 12 month period (Houldcroft, Farrow, & Haycraft, 2016). In contrast, Garcia et al. (2018) reported that observed and self-report

parent feeding practices were only moderately stable across three recorded meals at home over a two to three week period, and across two meals in a laboratory setting 18 months apart. Others have suggested that parent feeding practices may change with age (Lumeng, Miller, Appugliese, Rosenblum, & Kaciroti, 2018). Some qualitative studies report that parents of older children give up trying to change their child's diet (Boquin et al., 2014) and Jarman et al. (2015) reported that as children get older mothers either use overt control or relinquish control and cater to their children's preferences. However, qualitative research on fussy eating with parents of older children is limited. Ecological momentary assessment is another method which is useful for capturing the dynamic and fluctuating nature of feeding practices that is difficult to measure using survey-based quantitative research designs. Ecological momentary assessment allows the study of micro processes and contextual factors that influence behaviours in real-world contexts. Using this method, Berge et al. (2018) found that parents who used restrictive and pressured feeding practices used these practices approximately every second day and the use of these practices was associated with contextual factors including who had prepared the meal, the setting, and the number of people at the meal. More research using qualitative methods and ecological momentary assessment would help understand how parents' feeding practices remain stable, or change, across childhood. These methods would also help to identify contexts in which feeding practices change and motivations underpinning the use of different practices.

*Responsive feeding.* Responsive feeding practices are embedded in a responsive parenting framework. Responsive parenting involves creating structure, expectations and an emotionally supportive context as well as recognising and responding promptly to child signals in a developmentally appropriate and emotionally supportive manner (Black & Aboud, 2011). Under this framework, responsive feeding involves creating a pleasant and positive environment, clearly communicating expectations, providing developmentally appropriate and healthy foods on a predictable schedule and encouraging and responding to a child's hunger and satiety cues in an emotionally supportive and developmentally appropriate manner (Black & Aboud, 2011). In contrast, non-responsive feeding is characterised by a lack of reciprocity between the parent and child in which the parent is either overly controlling, indulging or uninvolved (Black & Aboud, 2011). In line with a responsive feeding framework, there is evidence that structured mealtimes are associated with fewer fussy eating behaviours. For instance one

observational study found that structured mealtimes distinguished children with higher and lower fussy eating, and when parents ate with their child and ate the same food there were less food refusals (Powell, Farrow, Meyer, & Haycraft, 2017). Furthermore, a longitudinal study found that parental structuring (teaching and helping the child while acknowledging their autonomy) at 4 years was associated with reduced risk of picky eating at 6 years (Steinsbekk, Bonneville-Roussy et al., 2017). Satter's division of responsibility (DOR) model fits within a responsive feeding framework. This model states that it is the parents' role to determine the *what*, *when* and *where* of mealtimes and it is the child's role to decide *how much* and *whether* to eat (Satter, 1995).

*Repeated exposure and modelling.* Repeated exposure to foods is an important factor influencing acceptance of new foods (Holley, Farrow, & Haycraft, 2017; Nekitsing, Blundell-Birtill, Cockroft, & Hetherington, 2018). Children may require a minimum of 8-10 exposures of a new food before accepting it (Nekitsing, et al., 2018). However, the quality of the exposure (e.g. positive and social) is important as well as the quantity (Birch & Marlin, 1982). Visual exposure to foods (for example, through picture books) increases visual preference, increasing the likelihood that the child will taste the food (Owen, Kennedy, Hill, & Houston-Price, 2018; Rioux, Lafraire, & Picard, 2018). However, taste exposure is required to significantly enhance taste preferences (Birch et al., 1987). Modelling, or learning through observation is also associated with food intake. It has been found that repeated exposure is more effective when paired with modelling (Nekitsing, et al., 2018). In addition, parents' physical prompts to eat a new food with no modelling was associated with greater food refusal than physical prompts with modelling (Blissett, Bennett, Fogel, Harris, & Higgs, 2016). This study also found that the effectiveness of parental modelling may depend on child characteristics such as food responsiveness (the tendency to want to eat when food cues are present). In sum, responsive (non-coercive) practices such as role-modelling desired eating behaviours and increasing children's familiarity with foods through pictures, can increase the likelihood that children will taste and accept new foods.

*Coercive practices: pressure, rewards and restriction.* Pressure to eat can be in the form of verbal or physical prompts and the use of incentives or rewards (Mitchell et al., 2013). The relationship between pressure to eat and higher levels of fussy eating has been demonstrated in cross-sectional studies (e.g. Finnane, Elena, Mallan, Kimberley, & Daniels, 2017), longitudinal studies (e.g. Jansen et al., 2017) and experimental lab studies



(e.g. Galloway, Fiorito, Francis, & Birch, 2006). The Generation R study identified bi-directional relationships between pressure to eat (measured at four years of age) and fussy eating (measured at 1.5, three and six years of age) in a sample of 4845 mother-child dyads (Jansen et al., 2017). However, this study did not include a baseline measure of pressuring practices so the potential role of coercive practices in infancy is unclear. In support of a bi-directional relationship, Harris et al., (2016) found that mothers used more pressuring feeding practices with their fussier twin. However, some level of prompting and encouragement is useful for encouraging food acceptance (Edelson, Mokdad, & Martin, 2016). A limitation of the literature on feeding practices is that the distinction between pressure and encouragement is blurred. What is perceived as pressure is likely to vary from child to child depending on their individual characteristics.

Although the use of rewards has been reported to reduce children's enthusiasm for a task (Gibson & Cooke, 2017), the use of tangible rewards such as stickers has been shown to be effective for encouraging children to taste new foods in interventions (Holley et al., 2017; Horne et al., 2004). However, cross-sectional and longitudinal studies have associated the use of food rewards for eating, and the use of food rewards for behaviour, with fussy eating and food refusal (Byrne, Jansen, & Daniels, 2017; Mallan et al., 2018; Rigal, Chabanet, Issanchou, & Monnery-patris, 2012). Byrne et al. (2017) reported that the perceived fussy eating at 14 months of age was associated with using rewards at two years. In addition, Mallan et al. (2018) found that using food as a reward for behaviour at 3.7 years was associated with fussy eating at five years (Mallan et al., 2018). In support of these findings, an observational study of family mealtimes found that using another food as a reward to prompt acceptance of a new food worked less well than other types of strategies such as role-modelling (Edelson et al., 2016).

Several cross-sectional studies have demonstrated a relationship between parent restriction and fussy eating, however findings differ depending on the type of restriction. For example cross-sectional studies have found that parents of picky eaters are more likely to restrict for health (limiting less healthy foods and sweets), than for weight (controlling intake to maintain weight) (Powell et al., 2011; Tan & Holub, 2012). Findings also differ in relation to overt restriction (that the child is aware of) and covert restriction (that the child is unaware of). Higher fussy eating at two years was found to predict less covert restriction at 3.7 years (Mallan et al., 2018). While overt restriction and food fussiness were correlated at five years of age, cross-lagged relationships (e.g. fussy eating

at two years and overt restriction at 3.7 years, or overt restriction at 3.7 years and fussy eating at five years) were not significant.

Overall, coercive practices are bi-directionally associated with fussy eating behaviours. More qualitative research would contribute to our understanding of the complex, dynamic nature of these feeding practices, the contexts in which coercive practices are used and parents' motivations for using them. Children's perceptions and experiences of their parents' pressuring practices in the context of food refusal has not been investigated, so it is unclear what impact these practices have on children.

*Modifying meals and offering alternatives.* Hiding or disguising foods is a common strategy parents use to increase intake of fruits and vegetables or other rejected foods (Caton, Ahern, & Hetherington, 2011). Many parents also report cooking a separate meal for picky eaters (Boquin et al., 2014). Although these strategies might increase nutrient intake and reduce parent-child conflict in the short term, they reduce opportunities for exposure and learning to like new foods in the long term (Daniels, 2019; Pescud & Pettigrew, 2014).

*Parent perceived self-efficacy.* Self-efficacy refers to judgements of personal capability in relation to specific tasks (Bandura, 1997). Higher levels of parent feeding self-efficacy have been associated with increased variety of fruit and vegetable intake in infancy (Koh et al., 2014) and more positive parent feeding behaviour with pre-school children (Campbell, Hesketh, Silverii, & Abbott, 2010; Ernawati, Sudargo, & Lusmilasari, 2016). In addition, a cross-sectional study reported that parents with low feeding self-efficacy are more likely to perceive their toddler as fussy than high self-efficacy parents (Horodyski et al., 2010). Qualitative research has also reported that parents of children with unhealthy and neophobic preferences have lower self-efficacy and perceive less control than parents of children with healthy preferences (Russell & Worsley, 2013). However, the nature of feeding self-efficacy beliefs specific to managing fussy eating are poorly understood, and little is known about how self-efficacy beliefs develop in the context of fussy eating. It is likely that there is a bi-directional relationship between fussy eating and self-efficacy, in which a child's fussy eating behaviours contribute to feelings of low self-efficacy in a parent, and in turn the parent's low self-efficacy impacts how effectively fussy eating behaviours are managed, but this requires further investigation. It has also been suggested that parents' feeding self-efficacy

diminishes during the first few years of life (Campbell et al., 2010). However, self-efficacy and fussy eating has not been investigated in parents of school-aged children so it is unclear how parents' self-efficacy develops or changes in later childhood.

***Parent attributions (beliefs about the influences/causes of fussy eating).*** Few studies have investigated parent attributions of fussy eating behaviours. However, two qualitative studies have reported that parents attribute fussy eating to a wide range of factors that are broadly in line with factors reported in the literature. Russell & Worsley (2013) found that parents of pre-school children attribute food preferences to child characteristics, sensory attributes of food and socialisation experiences. Rubio & Rigal (2017) found that parents of toddlers attribute fussy eating to assertiveness and opposition, development of food preferences, language improvement, temperament and sensory sensitivity (Rubio & Rigal, 2017). In line with Attribution Theory (Weiner, 1985) which states that the perceived cause of an event determines one's emotional and behavioural responses to the event, Russell & Worsley (2013) proposed that parents' attributions about what causes their child's food preferences impact their feeding practices. For instance, if parents attribute fussy eating to parent socialisation they may be more likely to use strategies such as role modelling and repeated exposure (Rubio & Rigal, 2017; Russell & Worsley, 2013). Russell & Worsley (2013) found that parent attributions and self-efficacy beliefs differed between parents of pre-school children with healthy, unhealthy and neophobic preferences. In a related paper (Russell, Worsley, & Campbell, 2015), parent feeding practices also differed between these groups, providing some evidence for a relationship between parent beliefs and feeding practices. However, these two studies did not report data demonstrating a clear relationship between attributions and parent feeding practices. Other than these two studies, very little is known about parent perceived attributions of fussy eating and these beliefs have not been investigated with parents of school-aged children.

***Parent mealtime emotions.*** As described earlier, in relation to the impact of fussy eating, qualitative studies and cross-sectional quantitative studies have reported associations between fussy eating and parent concern, frustrations, and stress at mealtimes in families of pre-schoolers and school-aged children (Goh & Jacob, 2012; Ramos-Paúl et al., 2014; Rubio & Rigal, 2017; Trofholz et al., 2017). Ramos-Paúl et al. (2014) suggest that higher levels of stress at mealtimes exacerbate feeding difficulties. However, this study classified a picky eater by eating less than 65% of the average

recommended intake for at least four out of six food groups. Given the contradictory evidence in relation to the association between fussy eating, consumption of major food groups and nutrient intake (Carruth et al., 1998; Carruth et al., 2004; Galloway et al., 2005; Taylor, Wernimont, et al., 2015), this study may not fully represent the phenomenon of fussy eating. Negative mealtime emotions can result in maladaptive parent strategies for managing fussy eating behaviours. For instance, one study found that parent concern about their child's fussy eating behaviours fully mediated the relationship between fussy eating and parents' non-responsive, or coercive feeding practices (Harris, Jansen et al., 2018). While it appears that negative mealtime emotions negatively impact fussy eating and parent feeding practices, there is little research investigating how parents manage the emotional climate at mealtimes, or how parents cope with their stress and concern relating to their child's fussy eating.

***Parent feeding goals.*** Parent feeding goals have been associated with child eating behaviour and parent feeding practices in obesity research (Carnell, Cooke, Cheng, Robbins, & Wardle, 2011; Hoffmann, Marx, Kiefner-Burmeister, & Musher-Eizenman, 2016; Kiefner-Burmeister, Hoffmann, Meers, Koball, & Musher-Eizenman, 2014). Parent feeding goals are also likely to influence the development and management of fussy eating behaviours, however, feeding goals in the context of fussy eating have not been explored. Some findings from obesity research are relevant to fussy eating. For instance, it has been reported that parents of pre-schoolers are mostly motivated by practical and health considerations and less by weight (Carnell et al., 2011). It has been reported that parents feeding goals differ between weekdays and weekends with feeding goals relating to promoting health and reducing price being less important on weekends (Hoffmann, Marx, Burmeister, & Musher-Eizenman, 2018). Goals also differ depending on maternal and child characteristics such as gender and weight (Goulding et al., 2015). Other studies have found that higher importance of convenience related goals and lower importance of health goals were related to less healthy eating behaviours in children (Hoffmann et al., 2016). This relationship between goals and children's unhealthy eating behaviour is mediated by negative parent feeding practices in 7-11 year old children (Hoffmann et al., 2016) and three to six year old children (Kiefner-Burmeister et al., 2014). However, these studies were based on the Food Choice Questionnaire (Steptoe, Pollard, & Wardle, 1995), which measures motives for food selection and does not

include goals relating to managing or overcoming fussy eating behaviours such as getting to like new foods, increasing variety, or increasing intake.

The importance of goals in influencing behaviour is widely accepted in the behaviour change and health intervention literature (Ajzen, 2011; Michie et al., 2011; Michie, Atkins, & West, 2014; Morrison & Bennett, 2012; Prochaska & Velicer, 1997). Despite this, research on feeding goals that relate to parent feeding practices in the context of fussy eating behaviours is limited. However, Moore, Tapper, & Murphy (2010) reported that parents' feeding goals included establishing a varied, well-balanced diet and avoiding the child becoming a fussy eater. They reported that parents expressed long term goals (such as a varied diet) for children who were easy to feed, and short term goals (such as consuming any food rather than no food) for children who were more challenging to feed. In addition, a recent study reported that parents of 3-11 year old children had both psychosocial feeding goals (e.g. have family meals to enhance family relationship) and nutrition-oriented feeding goals (e.g. increase fruit and vegetable consumption), some of which are relevant to fussy eating such as 'dietary variety and balance', 'foster healthful relationship with food' and 'avoid inadequate nutrient intake' (Schuster, Szpak, Klein, Sklar, & Dickin, 2019). This study found that nutrition-oriented and psychosocial goals were sometimes in conflict with each other, for example parents gave in to child preferences in order to avoid conflict, and different goals related to different feeding practices. This study also highlighted barriers to achieving feeding goals, including child preferences, life disruptions and financial constraints (Schuster et al., 2019).

Research on feeding goals in the context of fussy eating is in its infancy and little research has investigated the relationships between parents' feeding goals and practices when managing or overcoming fussy eating challenges. Qualitative research in this area would help to identify specific goals that parents have in relation to managing and overcoming fussy eating challenges, how these goals might change depending on context or the child's age, and whether feeding goals differ between family members (e.g. mothers, fathers, children).

***Summary of parent factors.*** In summary, many parent factors contribute to the development, and management of fussy eating behaviours including parents' diet, knowledge, beliefs, well-being, mealtime emotions, goals, and feeding practices. Much research has focused on parent feeding practices, and less attention has been given to

other factors such as feeding goals, beliefs and mealtime emotions. Research has identified bidirectional associations between parent factors and fussy eating, providing some insight into how parents' approach to managing fussy eating develops. However, relationships between variables are often decontextualized, failing to consider other contextual factors that may impact the parents' response, or the parents' previous experiences and interactions with their child that have led to their current approach. Much of the research cited in this section relates to pre-school aged children and more research is required exploring the role of parent factors in later childhood. Most of this research relies on parent-report measures. However, disparities between parent's reports of their feeding practices and observational measures of their feeding practices have been reported (Powell, Farrow, Meyer, & Haycraft, 2018) indicating the need for more diverse methods to fully understand parent feeding practices and other parent factors. Very little is known about the child's perception and experience of their parents' goals, emotions and practices. This is critical, for example to understand how pressure and coercion is perceived by children to help inform interventions. Qualitative research would help to build a more in-depth understanding of how parent factors (e.g. practices, beliefs, goals) develop, how they relate to each other, and how they relate to fussy eating, and how they are perceived by other family members.

**Family factors.** Some studies have found that factors relating to the family structure impact fussy eating. For instance Cardona Cano, Tiemeier et al. (2015) report less fussy eating in younger siblings in comparison to first born children. Similarly, Hafstad et al. (2013) reported that having siblings protected against the development of fussy eating. It has been suggested that siblings may have a protective effect through role modelling, or that maternal overprotection/monitoring decreases with the number of children (Cardona Cano, Tiemeier et al., 2015). However, other studies have not found an association between birth order and fussy eating (Powell et al., 2011; Carruth et al., 2004).

Regarding the parental relationship, numerous studies have not found an association between fussy eating and marital status (Carruth et al., 2004; Tharner et al., 2014). However, mothers are increasingly working outside the home and fathers are increasingly more involved in child feeding. A recent review on the influence of fathers on children's eating behaviours highlighted that fathers use more coercive feeding practices than mothers (Rahill, Kennedy, & Kearney, 2019). Jacobi et al. (2003) reported

that fussy eating was significantly associated with parents arguing with their spouse about the child's eating. Another study found that when both parents are concordant in avoiding non-responsive feeding practices, less fussy eating is reported (Harris, Jansen, Mallan, Daniels, Thorpe, et al., 2018), suggesting that when multiple caregivers are present, consistency between their practices is important.

While quantitative studies measure and control for family related factors, more qualitative work can help to understand parents' experiences with different siblings and how parents' perceive family factors to impact the development and management of fussy eating (such as partner support, conflict between partners, family routines, as well as processes and interactions between family members).

**Social and cultural factors.** The social environment beyond the immediate family is important to consider in relation to the development of fussy eating. For instance, peers have been reported to have important influences on children's eating behaviours (Horne et al., 2004; Houldcroft, Haycraft, & Farrow, 2014). A review of strategies to increase vegetable consumption in two to five year olds found that peer models are particularly effective (Holley et al., 2017). In addition, broader social and cultural factors play a role. Children learn to eat foods typical of their cultural environment (Birch et al., 1995). Socio-economic status has widely been associated with fussy eating and food neophobia (Cardona Cano, Tiemeier et al., 2015; Dovey et al., 2008; Dubois et al., 2007). For instance, a survey of 4914 four year olds found parent-reported fussy eating to be more common in lower income households (Tharner et al., 2014). This may be partly explained by lower income families being more concerned about time, money and food waste (Goodell, Johnson, Antono, Power, & Hughes, 2017) which has been associated with parents' willingness to re-offer rejected foods to pre-schoolers (Holley, Farrow, & Haycraft, 2018).

**Summary of the development, maintenance and management of fussy eating.** A wide range of factors have been identified that contribute to the development, maintenance and management of fussy eating. These can broadly be categorised as child, parent, family, and sociocultural factors. Child factors such as genetics, personality and sensory sensitivity contribute to fussy eating behaviour, and also impact children's responsiveness to different parent feeding practices. For instance some children are more responsive to the use of rewards for eating than others. In relation to parental influence,

the majority of research has focused on how parent feeding practices relate to fussy eating. Much less is known about other factors such as beliefs, feeding goals and mealtime emotions. Finally, contextual factors relating to the family structure (e.g. presence of siblings, parent relationship) and the broader social and cultural environment (such as peer influence and socio-economic status) also impact fussy eating behaviours and how they are managed. More qualitative research would be useful for capturing the complex and dynamic nature of these factors, how they interact, and how they change over time. A better understanding of the experiences and perspectives of children would be beneficial when designing interventions for fussy eating, particularly in relation to the factors that influence food refusals, their experiences of feeding practices that parents use to encourage them to eat and their own strategies for dealing with new or disliked foods.

### **Fussy Eating Intervention**

Fussy eating behaviours are often targeted as part of parent feeding interventions aiming to improve children's diet, increase fruit and vegetable intake, or reduce the risk for obesity (e.g. Bhushan et al., 2017; Gibson & Cooke, 2017; Hayes et al., 2016; Huxtable, Millar, Love, Bell, & Whelan, 2018; Sobko, Jia, Kaplan, Lee, & Tseng, 2017; Sandvik et al., 2019). Parent-focused feeding interventions often focus on providing nutritional information and supporting parent feeding practices such as repeated exposure and modelling (Hendrie, Lease, Bowen, Baird, & Cox, 2017; Mitchell et al., 2013; Nekitsing et al., 2018; Peters, Sinn, Campbell, & Lynch, 2012; Holley, Haycraft, & Farrow, 2015). Recent reviews of interventions and strategies to increase fruit and vegetable intake have identified repeated taste exposure as the most effective and well-documented intervention strategy (Holley et al., 2017; Nekitsing, Blundell-Birtill, et al., 2018). This effect can be enhanced by tangible non-food rewards such as stickers and peer modelling (Holley et al., 2017). In addition to nutrition knowledge and feeding practices, a few interventions have also included other components such as meal planning and coping skills, reporting positive impacts on parents' confidence and children's mealtime behaviours (Adamson, Morawska, & Sanders, 2015; Cullen & Thompson, 2008; Inglis, Docherty, & Pryke, 2010). Unlike the majority of child feeding interventions, the SENSE-ational Mealtimes intervention did not focus on parent feeding practices and instead aimed to improve mealtime difficulties by targeting the parents' understanding of sensory preferences as well as their ability to understand their child's behaviour in light of their mental states



(feelings, thoughts, intentions and beliefs). This intervention focused on empathy and compassion, so that parents could respond to their child in a sensitive manner. This intervention reported significant improvements in the frequency of mealtime difficulties, parents' level of concern, understandings, feelings and mealtime goals (Stapleton, Griffiths, & Sherriff, 2013).

In relation to intervention delivery, non-clinical parent focused feeding interventions generally take the form of educational material through newsletters or leaflets, and group education programmes. Providing information by leaflet has had mixed results (Inglis et al., 2010; Mitchell et al., 2013). The SENSE-ational Mealtimes intervention described above was delivered in the form of a book. Although this intervention was successful for parents who were experiencing mealtime difficulties and read the book, one quarter of participants did not participate in the evaluation because they had not read the book. Barriers to parents engaging with this type of intervention were not having time, and thinking that the book would not help with their child's feeding difficulties (Stapleton et al., 2013). Brief group education programmes such as 'fun not fuss with food' (Fraser, Wallis, & St John, 2004) have had a positive impact on reducing problem eating behaviours. Given that many parents report wanting to manage non-clinical feeding problems themselves at home (Mitchell et al., 2013) reliable information and practical tools via apps, websites and social media are likely to be popular. For example, preliminary evaluation of the Child Feeding Guide App showed that parents reported it as interesting, educational and easy to use (Haycraft, Witcomb, & Farrow, 2016). Boswell, Byrne, & Davies (2019) found that online platforms were parents' preferred method of participation in child feeding interventions.

Child-focused interventions also focus on repeated exposure to foods. For example, Food Dudes, a school-based exposure, reward and peer modelling intervention has had positive results on increasing children's acceptance of fruits and vegetables (Horne et al., 2004; Laureati, Bergamaschi, & Pagliarini, 2014). In addition, child focused interventions that increase children's familiarity with vegetables through virtual exposure on evidence based mobile apps and games show promising results (e.g. Vegetable Maths Masters) (Chow et al., 2020; Farrow et al., 2019).

It has been suggested that raising awareness of evidence-based practices such as repeated exposure to foods would be of benefit to parents (Gibson & Cooke, 2017; Peters

et al., 2012). Other research has reported that nutrition knowledge alone does not promote behaviour change and that we need to explore other factors that might promote lasting behaviour change (Horodynski, Hoerr, & Coleman, 2004). Michie et al (2011) developed a taxonomy of behaviour change techniques used to identify specific behaviour change strategies in interventions in order to assess the effectiveness of different components of interventions. To the author's knowledge, behaviour change techniques have not been evaluated specifically in relation to fussy eating interventions. However, Hendrie et al. (2017) reviewed the behaviour change techniques (Michie et al., 2011) used in 22 interventions aiming to increase children's vegetable consumption in home and community settings. Only 12 interventions were effective in the short term, and six in the long term (over six months). Planning for social support, vegetable exposure and provision of staff training were common techniques used in effective interventions. Despite the role of parent goals and mealtime emotions in contributing to children's eating behaviours and how they are managed (highlighted earlier in this chapter), only nine out of 22 interventions included a goal setting component and two out of 22 interventions included a stress management or emotional control training component. Furthermore, the effectiveness of interventions aiming to increase vegetable consumption in pre-schoolers has been shown to vary depending on child factors including level of fussy eating (Holley, Farrow, & Haycraft, 2016b), suggesting that healthy eating interventions may require specific components targeted at addressing fussiness in addition to currently used strategies such as exposure. Nekitsing, Hetherington, & Blundell-Birtill (2018) reviewed interventions for promoting vegetable intake in pre-school children and reported a lack of evidence in relation to promoting vegetable intake in fussy children. Based on the current literature, the types of family beliefs, goals and emotions that need to be targeted in relation to fussy eating behaviours are relatively unknown.

The role of beliefs, emotions and goals are highlighted in health behaviour change models such as the Theory of Planned Behaviour, and the Transtheoretical Model of Health Behaviour Change (Ajzen, 2011; Morrison & Bennett, 2012; Prochaska & Velicer, 1997). Despite the importance of these factors in the development of behaviour change interventions, very little research has investigated parent or child awareness, beliefs, emotions or goals in relation to fussy eating behaviours. The first steps involved in the development of interventions include defining the problem, identifying what needs to change, identifying the evidence base, developing theory and modelling processes and

outcomes (Michie, Atkins, & West, 2014; Craig et al., 2008). Therefore, the research in this thesis aims to investigate parent and child perceptions, experiences and management of fussy eating behaviours and to develop a better understanding of the types of beliefs, goals and emotions that relate to these behaviours, which will provide an evidence base for the future development of fussy eating interventions.

### **Theoretical Perspectives**

**Adopting a dialectical approach to studying fussy eating.** As is evident in the review of literature provided above, a parent-centred unidirectional perspective has guided the majority of research on fussy eating to date, with a focus on parent perspectives and practices and little acknowledgement of the child's agency. This reflects a mechanistic deterministic view of parenting that has dominated the child feeding literature and socialisation research in general (Kuczynski & De Mol, 2015). From this perspective, fussy eating behaviours are conceptualised as defiant or non-compliant behaviours that are 'fixed' or 'controlled' by parent practices (Walton et al., 2017). However, parenting develops in response to the child as much as child behaviours are a response to parents. This is evident in some fussy eating research that has reported the influence of child characteristics on parent feeding practices and that has demonstrated that parents feed siblings and twins differently depending on their level of fussiness (Farrow et al., 2009; Harris et al., 2016; Jansen et al., 2018; Jansen et al., 2017). In 2017, Walton and colleagues published a theoretical paper: "*Time to re-think picky eating?: a relational approach to understanding picky eating*". In this paper, Walton et al. (2017) draw from child socialisation literature and argue that fussy eating should be reconceptualised as children exercising agency in terms of eating preferences, rather than categorised as compliant or non-compliant behaviour. In addition, they propose that we use appropriate research methodology to move away from this unidirectional (parent → child) way of thinking, to a bidirectional (parent ↔ child) perspective in which both parents and children are considered to co-create feeding interactions and the feeding relationship. They argue that reconceptualising fussy eating in this way will reduce stress and concern associated with fussy eating and will help professionals to support families to develop healthy eating behaviours (Walton et al., 2017).

Dialectics is a metatheory which states that all phenomena and processes consist of opposing forces that actively relate to produce continuous change (Kuczynski & De

Mol, 2015). This conceptualisation of causality is more realistic than the decontextualised cause → effect arrow often used in socialisation research (Kuczynski & Mol, 2015). A dialectical model of bidirectional causality assumes that parents and children are equal agents and that their interactions occur in the context of an enduring relationship embedded in a cultural context (Kuczynski & De Mol, 2015). Co-actions can be cooperative (acceptable to both members of the relationship) or uncooperative (resistance between parent and child). Parents and children engage in mutual meaning-making, or social transactions, rather than passively reacting to one another's behaviours (Walton et al., 2017). Recently, literature on children's eating behaviours has started to draw upon dialectical socialisation theory concepts. For instance, Russell & Russell (2018) used dialectical socialisation theory to develop a model of biological and psychosocial processes in the early development of children's eating and weight. However, this model does not account for the wider environment (beyond the family), does not specify specific types of family beliefs or expectations relating to fussy eating behaviours, and focuses on the early development of children's appetitive traits rather than how they are experienced and managed by the family, or how fussy eating challenges are resolved.

Walton and colleagues (2017) suggest that adopting a dialectical perspective to studying fussy eating involves 1) viewing parents and children as equal agents, 2) challenging linear thinking and instead considering continuous change as an expected outcome, 3) conceptualising fussy eating as child agency rather than non-compliance, 4) considering the long-term relationship context and 5) considering conditions associated with change rather than direct causation between behaviours.

This thesis draws on two theories that are in line with this dialectical approach: social relational theory (Kuczynski & De Mol, 2015), and family systems/process theory (Broderick, 1993). While social relational theory offers useful conceptualisations of agency, change and interpersonal influence, family systems/process theory provides useful insight into the nature of family goal-seeking processes. Both of these theories view the parent and child as active agents that are part of a larger family system. Therefore these theories are useful for considering both the parent and child perspectives individually, as well as how they fit together and relate to one another. The key tenets of these theories that are useful for understanding family processes in the context of fussy eating are outlined below.

**Social relational theory.** Social relational theory (Kuczynski & De Mol, 2015) is a dialectical approach to understanding parent-child socialisation processes that considers the parent and child to have equal agency. It has previously been applied to various topics including adolescent problem behaviours, school achievement and internet/media use. Although it has been proposed that a relational approach to studying fussy eating is adopted (Walton et al., 2017), and some theory and research has drawn upon dialectical socialisation concepts (Russell & Russell, 2018; Harris, 2018), social relational theory has not yet been applied to fussy eating research. The key tenets of this theory (agency, holism, contradiction and harmony, synthesis/non-linear outcomes and relational efficacy) are outlined below. Social relational theory offers a useful framework for conceptualising family processes in relation to how fussy eating develops and how it is managed.

**Agency.** Agency is the active contribution of an individual to a complex dynamic system. Individual components (e.g. the parent or the child) of the dialectical system are considered to be inherently active, self-organising, self-regulating and change independently of external forces. In social relational theory parents and children are considered to have equal agency. The construct of agency has three aspects: autonomy (motivational aspect), construction (cognitive aspect) and action (behavioural aspect) (Kuczynski & De Mol, 2015). Autonomy is considered a basic human need in self-determination theory (Vansteenkiste, Niemiec, & Soenens, 2010) and thwarting an individual's autonomy is considered to manifest as resistance. Construction refers to the creation of new meanings from parent and child coactions with their environment. Finally, actions refer to behaviours or strategies that an individual uses to intervene in the world or to influence a particular process. Until recently, research of fussy eating has been primarily parent focused, and little attention has been given to child agency. This tenet of social relational theory provides a useful framework for conceptualising how both parents and children exercise agency in the feeding relationship. It suggests that both parents and children have the need to express autonomy (e.g. autonomous decisions in relation to food intake/food choice), that they both actively construct meanings and beliefs about food and their relationship through mealtime interactions or transactions, and they exercise agency through their mealtime practices (e.g. parent feeding practices used to influence the child's intake, child's own strategies for coping with dislikes).

In relation to the construction of beliefs, relational efficacy refers to an individual's belief that they can influence the other individual in the relationship and that their actions have consequences for the other person. Relational efficacy is an extension of the concept 'self-efficacy' (judgements of personal capability or control in relation to specific tasks) (Bandura, 1997) but it distinguishes influence in an interpersonal interaction from control over the non-social environment (Kuczynski & De Mol, 2015). Self-efficacy is based on a linear conception of influence and the concept of 'control'. In contrast, relational efficacy accounts for the fact that another individual in a social relationship has agency, and therefore is influenced rather than controlled. Relational efficacy beliefs develop as a result of past experiences and interactions within the relationship. This is a useful concept in the feeding context, as the parent can only influence their child's eating behaviour by providing appropriate structure and support, and cannot control their child's food intake or food preferences.

Although parents and children have equal agency they are not considered to be equal in power. Power depends on the individual (e.g. strength), relational (e.g. support from others), and cultural (e.g. rights) resources available to an individual. Individual differences such as personality or temperament can impact the expression of agency (Kuczynski & De Mol, 2015).

***Holism.*** Holism refers to the context or system in which individuals exist. In social relational theory, the minimum level of analysis is the parent-child relationship, however it is important to acknowledge that this dyad is part of a larger system. The importance of the long-term parent-child relationship context is also highlighted. As both parent and child have a stake in the future of their relationship, it is in their interest to accommodate each other's perspectives. Parents and children mutually interpret each other's actions within a social and historical context. For example they make interpretations based on previous interactions and begin to predict future actions based on what has happened before (Kuczynski & De Mol, 2015). In addition, there are multiple domains in which parent-child interactions may occur: The authority domain (the parents exercise power and the child may or may not accommodate the parent's expectations), the attachment domain (the child expresses needs and the parent provides) and the intimacy domain (the mutual sharing of thoughts, ideas, emotions and rituals). These different domains are all relevant in the feeding context, for instance the parent may enforce rules at mealtimes and the child may or may not accommodate the parent's expectations, the child expresses

hunger or the need for certain types of food and the parent provides developmentally appropriate foods. In addition, the parent and child mutually share emotions and rituals at mealtimes. These domains interact and what happens within one domain may affect interactions within the other domains (Kuczynski & De Mol, 2015). In relation to fussy eating, this aspect of social relational theory highlights the importance of considering the broader parent-child relationship, the family, and the social cultural environment and how these relate to the feeding context. It may be important to consider both how these factors impact the experience and management of fussy eating, but also how fussy eating related challenges may impact other areas of the relationship, family functioning, or child development. Figure 1.1 below illustrates these concepts of agency and holism. It shows that both the parent and the child actively interact across different parenting domains, and across time, producing continuous change, and that these processes occur within a cultural context. This figure also shows how interactions, or transactions, within one domain (e.g. authority) at one time-point (e.g. middle childhood) relate to other domains, as well as the past and future of the relationship.

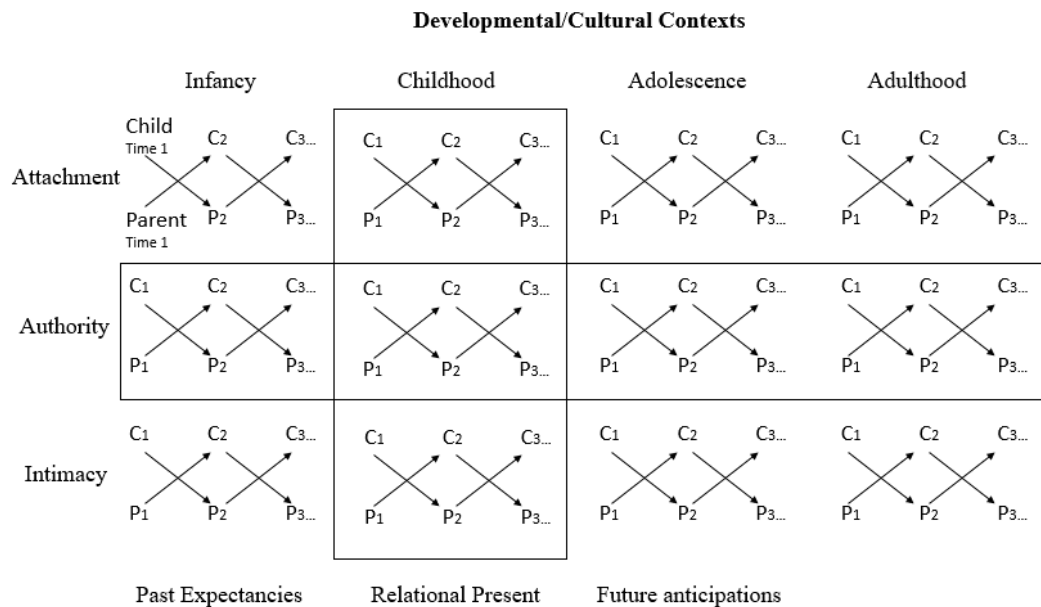


Figure 1.1. Transactional model of parent-child relationships embedded in culture (adapted from Kuczynski & De Mol (2015) pg 25).

**Contradiction and harmony.** Contradiction provides opportunities for change, whereas harmony and consensus maintain stability and continuity. Problem solving in

response to a contradiction will produce new trajectories for the relationship, whereas ignoring a contradiction will result in continued tension. Parents and children have different and potentially conflicting perspectives and goals. Both the child and parent are continuously changing and strategies or practices that worked in the past may not work in the present. Contradictions can occur internally (e.g. within an individual, such as competing goals), or externally (e.g. between individuals). Contradiction occurs in relation to four underlying processes: conflict (parent and child needs or goals are against each other), expectancy violations (new information violates a previously established understanding), ambivalence (simultaneous positive and negative emotions) and ambiguity (experiencing uncertainty) (Kuczynski & De Mol, 2015). Contradiction and its four underlying processes may help to explain challenges that families experience in relation to fussy eating. For instance, conflict may arise due to conflicting parent and child goals if a parent wants the child to eat a disliked food to be healthy but the child is more motivated by food enjoyment than health.

***Synthesis/nonlinear outcomes.*** Resolving contradictions involves a synthesis of opposing ideas and creates new outcomes, sending the parent-child relationship on new trajectories. Contradictions can be resolved through problem solving which involves recognising the problem, generating possible solutions and testing whether solutions are successful. Social relational theory assumes constant change and the outcome or meaning produced by one contradiction becomes the basis for another. While unidirectional deterministic models of parenting may perceive child compliance as an expected outcome, social relational theory considers accommodation and negotiation (cooperative response containing a novel component, or a compromise) and working models (in which beliefs and values are continuously constructed or challenged) to be appropriate synthetic outcomes. Children are considered active agents who determine their own trajectory, but parents support and mediate child trajectories (Kuczynski & De Mol, 2015). The process of synthesis and non-linear outcomes may help to conceptualise how fussy eating related challenges are solved. This idea also highlights how compromise between parent and child food preferences and mealtime goals should be considered an appropriate outcome of change, rather than the child's food intake and preferences completely aligning with that expected or desired by the parent. In addition it is important to consider change as continuous and gradual rather than conceptualising a child to be either a 'fussy eater' or



a ‘non-fussy eater’ at different time points, and to try to understand contexts that facilitate change rather than identifying predictors of static outcomes.

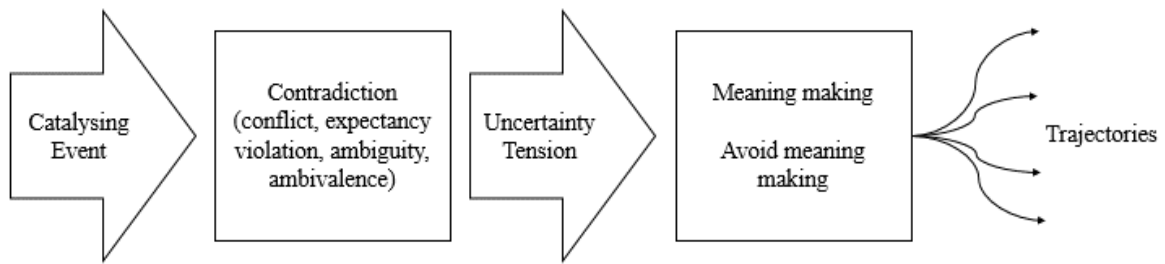


Figure 1.2. Psychological processes underlying causality in dialectical systems (adapted from Kuczynski & De Mol 2015, pg 37)

**Family systems/process theory.** Family systems theory evolved from the family therapy movement (Broderick, 1993) and shares many of the assumptions of social relational theory. Kuczynski & Mol (2015) suggest that aspects of social relational theory may inform clinical practice using a family systems approach. Similarly to social relational theory, family systems theory views the child as an active member of a family system in which all parts of the system are connected. In family systems theory, the family is considered an open, on-going system, meaning that its parts are not static but are dynamically related to each other as well as the environment. Similarly to social relational theory, the focus of family systems theory is on processes rather than static constructs or outcomes (Broderick, 1993).

***The family is a goal-seeking system.*** The family continuously monitors its progress to try to reduce error between its current status and set goals. Goals may differ between family members, for example a child may not share their parent’s goal to increase vegetable intake. A response (action in attempt to reach set goals) feeds back into the system, sometimes resulting in further deviation from the goal (White & Klein, 2015). This process is useful for understanding how some parent feeding practices (e.g. pressure to eat) used to increase vegetable intake may actually reduce their child’s liking of the vegetable, resulting in further deviation from the parent’s goal. Goals are hierarchically structured, with higher level goals defining priorities among lower level goals (Broderick, 1993; White & Klein, 2015). For instance, avoiding conflict may be a higher priority goal than increasing vegetable intake, so efforts to reduce conflict may limit the extent to which vegetables are introduced.

***The family is a self-regulating system.*** Family systems theory states that families try to pursue a state of homeostasis or stability characterised by a resistance to change. If a family has an inadequate repertoire of responses to maintain a state of homeostasis, it either fails to respond at all, falls back to a standard response, or is forced to generate new responses (Broderick 1993). These processes may be helpful for understanding how parents respond to fussy eating in different ways, by falling back to a standard response (e.g. by continuing to serve preferred foods, or continuing to pressure their child to eat, even if these strategies are not working) or by being forced to come up with new solutions (e.g. by trying different strategies, or seeking professional support). This also highlights the importance of parents being educated about alternative feeding practices if their current repertoire of responses are not working.

***The family is a social system.*** The family system is social in that components are independent agents and convey messages to one another. Messages contain both the information component (e.g. specific instruction, request), but also the relationship-defining component (e.g. contributes to meaning about the nature of the relationship as a whole). Family systems theory highlights the importance of communication in addressing emotional and pragmatic challenges faced by the family (Broderick, 1993). This applies to the role of family communication in overcoming challenges associated with fussy eating. Similarly to social relational theory, how these challenges are managed can have implications for the broader family relationships.

***Variations and constraints in family systems.*** Processes that occur within a system are shaped and constrained by a number of factors. Firstly, processes are shaped by the characteristics of the system (e.g. parents may not be able to monitor eating as closely in larger families or the parental relationship may impact consistency in parents' feeding practices), the characteristics of its components (e.g. genetics, sensory sensitivity, age, personality), and how the family system is placed within a larger system (e.g. culture may impact food preferences, financial constraints of lower socio-economic classes may impact parents' willingness to serve disliked foods).

**Conclusion.** To conclude, the assumptions and tenets of social relational theory and family systems/process theory are used to guide the research in this thesis and to develop our theoretical understanding of family processes that relate to fussy eating behaviours. The use of these theories supports the conceptualisation of both the parent

and child as active agents, as well as the consideration of the broader parent-child relationship, family and socio-cultural context. In addition, these theories are useful for understanding processes and interactions in relation to beliefs, goals, emotions and practices that make up the family experience of fussy eating.

### **Existing Qualitative Research on Fussy Eating and Relevant Methods**

As is evident in the review of the literature presented in this chapter, qualitative research on fussy eating is limited. A number of qualitative studies have been carried out in recent years (such as that by Harris, Ria-Searle, et al., 2018; Rubio & Rigal, 2017; Trofholz, Schulte, & Berge, 2018). These studies generally rely on interviews or focus groups with parents. A few studies have also used novel data collection methods such as analysis of calls to a helpline (Harris et al, 2018) and the use of projective technique drawings (scenarios to prompt discussion) (Norton & Raciti, 2016). There are a wide range of other qualitative research designs and methods that have been used in related research areas. For instance, Alm and colleagues used parent-child dyads when investigating family communication about food preferences (Alm, Olsen, & Honkanen, 2015), as well as photo-voice to investigate children's food preferences (Alm & Olsen, 2017). Wills (2012) outlines numerous spoken and written qualitative methods used in sociological research to explore children's food and eating practices, including 'on the move' interviews, written diaries, and vignettes, and states that using multiple methods as well as offering children choice about methods they want to engage with, can deepen our understanding of children's lives. The consideration of some of these alternative research designs and qualitative research methods could significantly enhance our understanding of fussy eating. In addition, published qualitative studies are cross-sectional, only providing an insight into the family's experience at one particular point in time. Although there are challenges in relation to longitudinal qualitative research designs (Thomson & Holland, 2003), there is a need to explore tools, methods, and approaches to analysis that can capture the complexity of families' experiences of fussy eating over time.

The majority of published qualitative studies do not state a philosophical perspective, however some use quantitative vocabulary in line with a realist or positivist perspective ('valid', 'reliable', 'variables') (e.g. Norton, 2016). Overall this body of literature appears to reflect the positivist perspective that there is a 'family truth' which

can be understood through the lens of the reporter (Zartler, 2010), in this case the parent (or mother), with little consideration of potential alternative perspectives. A more relativist and constructivist view, which acknowledges that individuals construct meaning through experiences with their environment and that different family members perspectives may differ (Braun & Clarke, 2013; Zartler, 2010), may allow for additional insights into the phenomenon of fussy eating to be explored. Overall, there is a need for 1) a review of the current state of qualitative research on fussy eating, 2) the adoption of a constructivist epistemological approach, allowing for the exploration of diverse perspectives including those of both parents and children and 3) an exploration of the usefulness of more diverse qualitative research designs, methods, and approaches to analysis that can capture the complexity of family experiences over time.

### **Research Gaps, Rationale and Thesis Aims**

This chapter has reviewed a wealth of literature on fussy eating, specifically relating to how fussy eating develops, how it is experienced and how it is managed. A significant amount of research has been carried out on factors that contribute to fussy eating (child, parent, family, socio-cultural factors) and the impact of fussy eating on child and family health and well-being. The majority of this research is quantitative, focusing on specific relationships between factors (e.g. pressure to eat and fussy eating, or parent diet and child fruit and vegetable intake). While this type of research helps us to understand the relationships between certain factors and outcomes, it is somewhat reductionist and fails to capture the complex, dynamic and contextual nature of the parent-child feeding relationship (Walton et al., 2017). For instance, it is widely reported that coercive practices are associated with fussy eating, yet little is known in relation to the contexts in which they are used, parents' motivations or reasons for using them, parents' knowledge of alternative strategies, the extent to which parents' have tried other approaches, parents' consistency or inconsistency when using these practices, their past experiences with their child, their future expectations, or children's thoughts and feelings in relation to coercive practices. Qualitative research provides participants with the opportunity to share their perspectives and experiences, and allows many of these types of questions to be answered. However, qualitative research on fussy eating is relatively limited.

The majority of research on managing (or coping with) fussy eating behaviours has focused on parent feeding practices. Despite the important role of beliefs, goals, and

emotions evident in health behaviour change literature and intervention development, very little research has investigated parent beliefs about fussy eating, their goals in the context of managing fussy eating, or how parents manage stress and negative emotions relating to fussy eating. A better understanding of these factors would inform the development of interventions regarding the types of beliefs, goals, and emotions that would be useful to target alongside parent feeding practices.

In addition, much research has focused on parents of pre-school children so the trajectories, experiences, and processes relating to fussy eating beyond early childhood are not well understood. Therefore, it is necessary to gain a better understanding of how fussy eating is experienced by families of school-aged children. Despite the relevance of this topic to children, their perspective is not reported in the literature. Although some studies have reported children's views on food choice more generally, it is unclear whether children perceive fussy eating to be a problem, what they think about their parents' feeding practices, or what types of strategies they use to cope with dislikes.

Therefore, the overall aims of this thesis are to:

- 1) Qualitatively explore family perceptions (e.g. descriptions, beliefs), experiences (e.g. impact and emotions) and management (e.g. goals and practices) of fussy eating behaviours across childhood,
- 2) explore these constructs in families of school-aged children,
- 3) account for both parent and child perspectives and
- 4) explore how family perceptions, experiences and management strategies relate to one another, as indicated by qualitative accounts.

This thesis consists of a synthesis of previous qualitative studies (Study 1), a qualitative interview study with parents (Studies 2A and 2B) and a qualitative interview study with children (Study 3).

Specifically Study 1 (Chapter 3) aims to review and synthesise published qualitative research on family perceptions, experiences and practices in relation to non-clinical childhood fussy eating behaviours. In addition, this study aims to investigate how fussy eating perceptions (e.g. awareness, beliefs), experiences (e.g. manifestations of fussy eating, consequences of fussy eating, mealtime emotions), and practices (e.g. repeated exposure, pressure to eat) relate to each other, as described in recent published qualitative studies (research aims 1 & 4).

Study 2A (Chapter 4) aims to investigate how parents experience and manage fussy eating behaviours in school-aged children. This study also aims to investigate how parent responses change over time as children get older, based on parents' retrospective accounts (research aims 2 & 3).

Study 2B (Chapter 5) investigates parent perceptions of fussy eating. Specifically this study aims to investigate: 1) parent beliefs about the development and management of fussy eating and 2) how parent beliefs about fussy eating relate to parent feeding practices (with reference to the response patterns identified in Chapter 4) (research aims 2, 3 & 4).

Finally, Study 3 (Chapter 6) provides children's perspectives on fussy eating behaviours. Specifically this study aims to explore how food dislikes, food refusal and 'fussy eating' behaviours are perceived by school-aged children and how children experience family processes relating to these behaviours (e.g. mealtime emotions, goals and practices) (research aims 2 & 3).

## **Chapter 2. Research Design and Methods**

### **Chapter Overview**

This chapter outlines the research design and methodology used in this thesis. First, the overall research design and methodology is outlined, followed by the epistemological position underpinning the research. Next, the meta-ethnography approach used to synthesis qualitative studies in Chapter 3 is introduced. Following this, the recruitment, participant characteristics, data collection methods, procedure, ethical considerations and analysis approach in relation to Studies 2 and 3 are outlined.

### **Overall Research Design and Methodology**

A cross-sectional qualitative research design was employed. A qualitative research design was adopted due to the limited knowledge available on family processes and fussy eating behaviours and the exploratory nature of this work. A strength of qualitative research is its ability to identify novel interpretations and constructs (Braun & Clarke, 2013). Qualitative research is also useful for informing the design and interpretation of quantitative studies, and for understanding participant perceptions, needs and experiences to inform the design of interventions (Booth et al., 2016; France et al., 2014; Levitt et al., 2018). In addition, a qualitative approach is suitable for capturing the complex and non-linear nature of the parent-child feeding relationship (Walton et al., 2017). In the context of fussy eating, qualitative studies provide useful insights into family mealtime experiences as well as beliefs and motivations that underpin different practices and behaviours that may not be captured using quantitative measures.

Adopting a dialectical approach to researching fussy eating (in which both the parent and child are considered equal agents) requires consideration of both the parent and child perspective (Kuczynski & De Mol, 2015; Walton et al., 2017). Kuczynski and De Mol (2015) state that research would benefit from focusing on what children do and think in relation to their parents' actions or practices. Multiple perspective family research in which two or more family members are included (Harden, Backett-Milburn, Hill, & MacLean, 2010) is useful for understanding different perceptions and experiences relating to a shared phenomenon, and for understanding family dynamics (Harden et al.,

2010; Kendall et al., 2010; Zartler, 2010). The perspectives of parents (including mothers and fathers) and school-aged children were included in this research project.

### **Epistemology**

Carrying out multiple perspective qualitative research requires consideration of how divergent and convergent data will be addressed or interpreted (for instance, if children portray a different account of fussy eating behaviours to parents). This thesis takes a pragmatic constructivist approach. A constructivist approach assumes that individuals within a family or relationship construct their own realities which may be similar or different from the realities perceived by other family members (Zartler, 2010). This is in contrast to a positivist or objectivist understanding which assumes that there is a single truth (or reality), that can be detected by determining agreement among different informers or family members (Zartler, 2010). However, the approach used in this thesis is somewhat pragmatic. Pragmatism endorses pluralism and states that methods should be selected based on the research question rather than rejecting methods based on traditional philosophical dualisms (Johnson & Onwuegbuzie, 2004). Therefore, while the research presented in this thesis is primarily carried out from a constructivist perspective accounting for multiple different subjective perspectives, quantitative tools can be drawn upon when they are considered useful for supporting the overall programme of research. For example, a quantitative screening tool was used to recruit participants for interviews (further details on page 48). Quantitative tools such as this are considered to offer an additional perspective rather than contradicting or overriding participant's subjective perspectives. In addition, it is hoped that this qualitative research compliments, and helps to explain, findings in the quantitative literature and that it can be used to inform the design of future quantitative studies.

### **Selecting a Qualitative Evidence Synthesis Approach for Study 1 (Chapter 3)**

The synthesis of qualitative research can provide in-depth understanding of experiences and perspectives across a range of contexts. Synthesising qualitative studies can be useful for creating new theoretical or conceptual models, highlighting research gaps to inform future studies, and for providing evidence for the development of health interventions (Tong, Flemming, McInnes, Oliver, & Craig, 2012). There are many forms of qualitative evidence synthesis, including meta-ethnography, thematic synthesis,



critical interpretive synthesis, narrative synthesis, and meta-study (Tong et al., 2012). The RETREAT framework (Booth et al., 2016) was used to select an appropriate qualitative evidence synthesis method. Booth and colleagues (2016) detail characteristics of 19 qualitative evidence synthesis approaches and give guidance on selecting an approach suitable for a given review. The RETREAT framework involves consideration of the Review question, Epistemology, Timeframe, Resources, Expertise, Audience and purpose, and Type of data in order to select a suitable synthesis method. A number of qualitative evidence synthesis approaches (such as framework synthesis and thematic synthesis) were not considered appropriate for this review, as they are underpinned by a more realist epistemology rather than a constructivist/relativist epistemology. In addition these approaches are targeted at practitioners and intervention developers rather than reviewing literature for academic audiences, and are generally used to synthesise large numbers of studies, whereas only a limited number of qualitative studies have been carried out on fussy eating.

Following the RETREAT framework (Booth et al., 2016), meta-ethnography was considered the most appropriate method for reviewing qualitative literature on fussy eating. Meta-ethnography is suitable for qualitative review questions that can be emerging (rather than fixed) in nature. The qualitative research on fussy eating had never been reviewed before, so it was useful to start the review process with a broad research question which could be refined after initial readings of relevant papers. Meta-ethnography takes an idealist epistemological position, representing the complexity of multiple viewpoints (rather than a realist position in which multiple viewpoints are considered to provide confirming evidence for a single reality), but typically includes a wide range of studies carried out with different epistemologies (Barnett-Page & Thomas, 2009; Booth et al., 2016). This aligned with the overarching constructivist multiple perspective approach throughout this thesis. In addition, the time, resources, and qualitative expertise required for completing meta-ethnography were available. While it was anticipated that this review would be of interest to practitioners and intervention developers, the primary purpose was to review and synthesise qualitative studies on fussy eating to develop a better theoretical understanding to inform future research. Therefore, using a meta-ethnography approach typically targeted at an academic audience was considered appropriate. Finally, meta-ethnography can be used to synthesise conceptually rich data from a relatively small

number of studies. This was perceived to be a good fit for the purposes of this review, given the small number of relevant studies identified during preliminary searches.

### **Overview of Meta-Ethnography Approach Used in Study 1 (Chapter 3)**

Meta-ethnography is an interpretative qualitative evidence synthesis methodology, originally developed in the field of education by Noblit and Hare (1988). It is now widely used across social science and healthcare disciplines. The aim of meta-ethnography is to produce novel interpretations that go beyond the findings of original studies while maintaining the original meanings and contexts of original accounts. This is in contrast to other approaches that aim to summarise or aggregate data (France, Cunningham, et al., 2019). Meta-ethnography can be used to develop theory and conceptual models (France, Cunningham, et al., 2019), useful for illustrating relationships between constructs such as perceptions, experiences and practices in relation to fussy eating.

Carrying out a meta-ethnography involves seven phases: 1) Getting started, 2) Deciding what is relevant to the initial interest, 3) Reading the studies, 4) Determining how the studies are related, 5) Translating the studies into one another, 6) Synthesising translations and 7) Expressing the synthesis (Atkins et al., 2008; Cahill, Robinson, Pettigrew, Galvin, & Stanley, 2018; France et al., 2014; Noblit & Hare, 1988). In meta-ethnography, key concepts or findings within original studies are referred to as metaphors. In phase 5, metaphors are translated from one study to another. For example, findings in Study 1 are compared to findings in Study 2. Study 3 is then compared to Study 1 and 2 and so on (Atkins et al., 2008; Cahill et al., 2018). Synthesis of findings in Step 6 involves three processes. Reciprocal synthesis refers to identifying similarities across studies. Refutational synthesis focuses on identifying differences, or contradictory findings, across studies. Finally, line-of-argument synthesis involves creating a whole picture from the individual parts (Noblit & Hare, 1988).

The meta-ethnography approach is relatively abstract, and detailed clear steps for carrying out each of the seven phases is not provided in the original guidance by Noblit and Hare (1988). This has led to various interpretations of meta-ethnography steps, inconsistencies across studies, and a lack of transparency in reporting (France et al., 2014). However, given its increasing popularity, more specific guidance on meta-ethnography methods and reporting standards have been developed including eMERGe (meta-ethnography reporting guidance) (France, Cunningham, et al., 2019). Tools and

guidelines relevant to qualitative evidence syntheses in general also provide useful guidance on conducting and reporting qualitative reviews, including ENTREQ (Enhancing Transparency in Reporting the Synthesis of Qualitative Research) (Tong et al., 2012) and QMARS (Qualitative Meta-analysis Article Reporting Standards) (Levitt et al., 2018).

The aim of the above section is to provide an introduction and overview of meta-ethnography as a qualitative evidence synthesis method. However, given the extent to which the meta-ethnography process relates to the synthesis outcome, more detailed information regarding the synthesis steps are provided together with the review findings in Chapter 3.

### **Recruitment and Data Collection for Studies 2 & 3 (Chapters 4 - 6)**

Studies 2A, 2B and 3 aimed to investigate perceptions, experiences and practices regarding fussy eating in families of school-aged children. As outlined at the beginning of this chapter, this is a multiple perspective study aiming to gain the perspectives of both parents and children. This section outlines how families were recruited through primary schools and selected for the qualitative studies using a screening questionnaire. The characteristics of participants included in Studies 2 and 3 are provided. Data collection methods, materials and procedures are discussed. Finally, some methodological, ethical and pragmatic considerations are outlined in relation to interviewing children, and in relation to interviewing multiple members from the same families.

#### **Recruiting families.**

Although the parent data and child data are analysed and presented separately (parent data in Study 2A and 2B, child data in Study 3), family units were recruited together through primary schools. There are a number of benefits to recruiting parents and children from the same families. Firstly, challenges associated with accessing children to participate in research have been reported, due to the requirement to obtain consent from multiple gate-keepers including schools and parents (Fargas-Malet et al., 2010). Parents may be more inclined to consent to their children' participating in research when they are also participating themselves and have an opportunity to meet with the researcher through their own participation. In addition, recruiting parents and children together, ensures that the context remains consistent across studies, which facilitates

comparison of findings (e.g. parent vs child perspectives). Finally recruiting family units together increases the opportunities for analysis. For instance, parent and child data can be analysed separately, as parent-child dyads or at a case-study level (Zartler, 2010) (discussed further on page 61).

***Accessing a typically developing community sample.*** Due to the widely varying definitions of fussy eating reported in the literature (Boquin et al., 2014; Trofholz et al., 2017), this study aimed to capture diverse perceptions of fussy eating on a continuum from typical refusal of a few foods to refusal of entire food groups or textures. Therefore, it was decided to recruit a typically developing community sample (rather than recruit parents of ‘fussy eaters’ only). This is in line with the current literature, as many studies use a typically developing community sample (e.g. Boquin et al., 2014; Russell & Worsley, 2013; Trofholz et al., 2017). To access as diverse a sample as possible, families were recruited through primary schools. Due to the varying prevalence estimates of fussy eating, and the lack of research on fussy eating in Ireland, a screening questionnaire was used for recruitment. The screening questionnaire was used to estimate the extent of fussy eating challenges in a typically developing community sample and to ensure that perspectives of families experiencing a range of different severities of fussy eating were represented in the qualitative interviews.

***Recruiting primary schools.*** A list of primary schools located in Galway City was drawn up. Schools were prioritised based on size (to maximise sample size), gender (to ensure balanced representation of both genders), location (to ensure diverse socio-economic areas were represented and to ensure accessibility by the researcher). An invitation letter and study information brochure (Appendix A) was delivered to twelve schools. Four schools accepted the invitation (33% response rate). The most commonly reported reasons for not participating were lack of time or that the school was already participating in another research project. All schools that participated had between 200 and 500 pupils in the entire school, however only families of pupils in first and third class were invited to participate. School characteristics are summarised below in Table 2.1.

Table 2.1.

*Characteristics of Participating Schools for Studies 2 & 3*

		<b>Number of Schools</b>
Gender	Co-education	4 <sup>b</sup>
	Single sex	0
Location	City Centre	1
	Suburbs	3
Religious Ethos	Catholic	3
	Multi-denominational	1
DEIS School <sup>a</sup>	Yes	1
	No	3

<sup>a</sup>Delivering Equality of Opportunity in Schools: School with a high concentration of students from socioeconomically disadvantaged backgrounds.

<sup>b</sup>One school was co-ed as far as 1st class and taught girls only from 2<sup>nd</sup> to 6<sup>th</sup> class.

**Screening questionnaire.** In order to recruit families with children aged 6-10 years, an invitation letter, study information brochure (Appendix B) and screening questionnaire (Appendix C) were delivered to all families with a child in first and third class of participating schools. The screening questionnaire was completed by the parents in relation to one target child in 1<sup>st</sup> or 3<sup>rd</sup> class. A total of 115 questionnaires were returned (38% response rate), from 108 families representing 42 boys and 72 girls (1 unspecified). This response rate was relatively low but was expected as some schools serve communities with diverse ethnicities and languages and their needs may not have been adequately supported, reducing response rates. Demographic questions included child age, sex, presence of siblings, any diagnosed disabilities or medical conditions that impact the child's eating, family income, nationality, both parents' level of education and occupation. In addition, the screening questionnaire included the Children's Eating Behaviour Questionnaire (CEBQ) (Wardle, Guthrie, Sanderson, & Rapoport, 2001) which includes a six item food fussiness scale (my child enjoys tasting new foods, is interested in tasting food s/he hasn't tasted before, refuses new foods at first, decides that s/he doesn't like food, even without tasting it, is difficult to please with meals). Items are scored on a 5-point Likert scale. The average food fussiness score (CEBQ) in the full

sample was 2.61 (range 1.17-5.00, SD = .91). A total of 37% of the sample had a food fussiness score above the cut-off point of 3.00 indicating moderate-severe fussy eating according to (Steinsbekk, Sveen, Fildes, Llewellyn, & Wichstrøm, 2017).

***Purposeful sampling of interview participants.*** A total of 108 parents (of 115 children) completed the screening questionnaire. Half of these parents (54) expressed interest in participating in an interview. Purposeful sampling was used to select families for interview to ensure a balanced sample in terms of child sex (male and female), age (ranging from 6-10) and income or education level (low, medium and high). Parents who reported that their target school-aged child had a diagnosis that affected their eating behaviour (e.g. allergies, asthma, ADHD, autism) were not invited for interview as their mealtime experiences may not solely reflect fussy eating behaviours. Families were purposefully selected to represent target school-aged children with food fussiness scores ranging from low to high according to the CEBQ in an attempt to capture different experiences and perceptions. However, interviews tended to focus on experiences of fussy eating in general (rather than in relation to the originally intended target child). It was originally planned to make comparisons between families of ‘fussy eaters’ and ‘non-fussy eaters’. However, over time the merits of a continuum based approach, and the limitations of a dichotomous approach, became increasingly clear. Due to the diverse levels of food fussiness between siblings within families, and the discordance between parent perceptions, child perceptions, researcher perceptions and food fussiness scores it was not possible to dichotomise the sample. However, viewing fussy eating as a spectrum of behaviours, accounting for varying degrees of fussy eating behaviours, and allowing parents to talk about general experiences (rather than focusing on one target child) generated rich contextual data and provided more information in relation to how fussy eating behaviours fit within a broader family context (in line with a social relational or family systems approach). Seventeen families accepted the invitation to participate in the qualitative study (52% of those invited). Although the majority of research on child feeding has focused on maternal reports, fathers perceive themselves to be responsible for feeding half of the time (Vollmer, Adamsons, Foster, & Mobley, 2015). Acknowledging the role of both parents in child feeding, both parents were encouraged to be involved where possible. However, in the majority of cases only one parent participated. The primary reason for not participating was lack of time and scheduling difficulties. Recruitment was terminated after interviewing 17 families due to the depth

of data received at this point as well as the end of the school term. The recruitment and participant selection process is summarised in Figure 2.1 below.

### **Sample characteristics**

**Total interview sample.** Seventeen families participated in the qualitative interviews. Nine (53%) families were Irish, and eight (47%) were from another country or reported mixed nationalities. Seven families had an income over 40,000 euro per year, six families had a lower income (less than 40,000 euro per year) and four families did not specify their income. Overall, the sample was diverse in terms of nationality and income (See Table 2.2).

Three families were single-parent households, and fourteen families were two-parent households. Families had between one and five children ( $M = 2.7$ ). Collectively, families comprised of 45 children living in the family home, 27 of which were school-aged at the time of the interviews (between the age of six and ten). In line with the assumptions of social relational theory and family systems theory, it is not possible to understand a part of the family system without considering the whole family system. Seven families had school-aged children only (age six to ten) and did not have any siblings outside this age range. However, five families had older siblings living in the family home (ranging in age from 11 to 23) and five families had younger siblings in the family home (ranging in age from zero to five). Eight families had more than one child in the target age range (six to ten), and sometimes parents discussed fussy eating behaviours of multiple children (not just the same child who participated in the study). Similarly, child participants in Study 3 sometimes referred to their siblings eating behaviours or made comparisons between themselves and siblings. Although the study focused on school-aged children sometimes participants referred to younger or older siblings outside of the target age-range. These experiences contribute to our understanding of the contextual factors that relate to perceptions, experiences and management of fussy eating in school-aged children. For instance, the fussy eating behaviours of a school-aged child may be experienced and managed differently in a family with several adolescent children, a family with only one child, or a family with several infants or toddlers.

**Parent participants.** The majority of parent participants were educated to third level (See Table 2.2). In three cases, both parents took part in individual interviews. All

other families were represented by one parent only (either the mother or father). In total, 16 mothers and 4 fathers took part. Twelve parents (from ten families) described relatively significant fussy eating behaviours in at least one of their school-aged children such as prolonged rejection of unfamiliar foods, very strong reactions to dislikes, or the rejection of entire food groups. Eight parents (from seven families) described less significant behaviours such as rejection of a few specific foods or fussy eating phases.

***Child participants.*** Sixteen school-aged children from these 17 families participated, representing 15 of the 17 families. In one case parental consent for child participation was not provided, and in another the child was absent from school on the day of the interviews and it was not possible to reschedule. Two participants were siblings. Participants were aged 7-10 years at the time of the interviews. Nine children were in first class in participating primary schools, and seven children were in third class. Nine children were female and seven children were male. Their food fussiness scores on the Children's Eating Behaviour Questionnaire (Wardle et al., 2001) ranged from 1.17 – 5.00 (out of a possible range of 1.00 - 5.00) with a mean score of 3.06 (slightly higher than the average in the full sample who completed the screening questionnaire). Nine children had a score above the cut-off score indicating moderate-severe fussy eating (3.00) identified by Steinsbekk, Sveen and colleagues (2017). Participating children were typically developing, with no reported developmental disorders, allergies or medical conditions that may impact their eating behaviours.



Table 2.2.

*Sample Characteristics for Study 2 & 3*

<b>Family Characteristics</b>	<b>Number of families (N=17)</b>
<b>Family Size (Number of children living at home)</b>	
1-2 children	7
3 children	6
4-5 children	4
<b>Nationalities</b>	
Irish	9
North/East African	2
British	1
Irish/French	1
Irish/Australian	1
Irish/Asian	1
Asian	1
American	1
<b>Family Income per Annum (Gross)</b>	
<€20,000	3
€20,000 - €40,000	3
>€40,000	7
Unspecified	4
<b>Highest Level of Parent Education</b>	
Secondary School	2
Higher Certificate/Diploma	1
Bachelor Degree	8
Master Degree or PhD	5
Unspecified	1

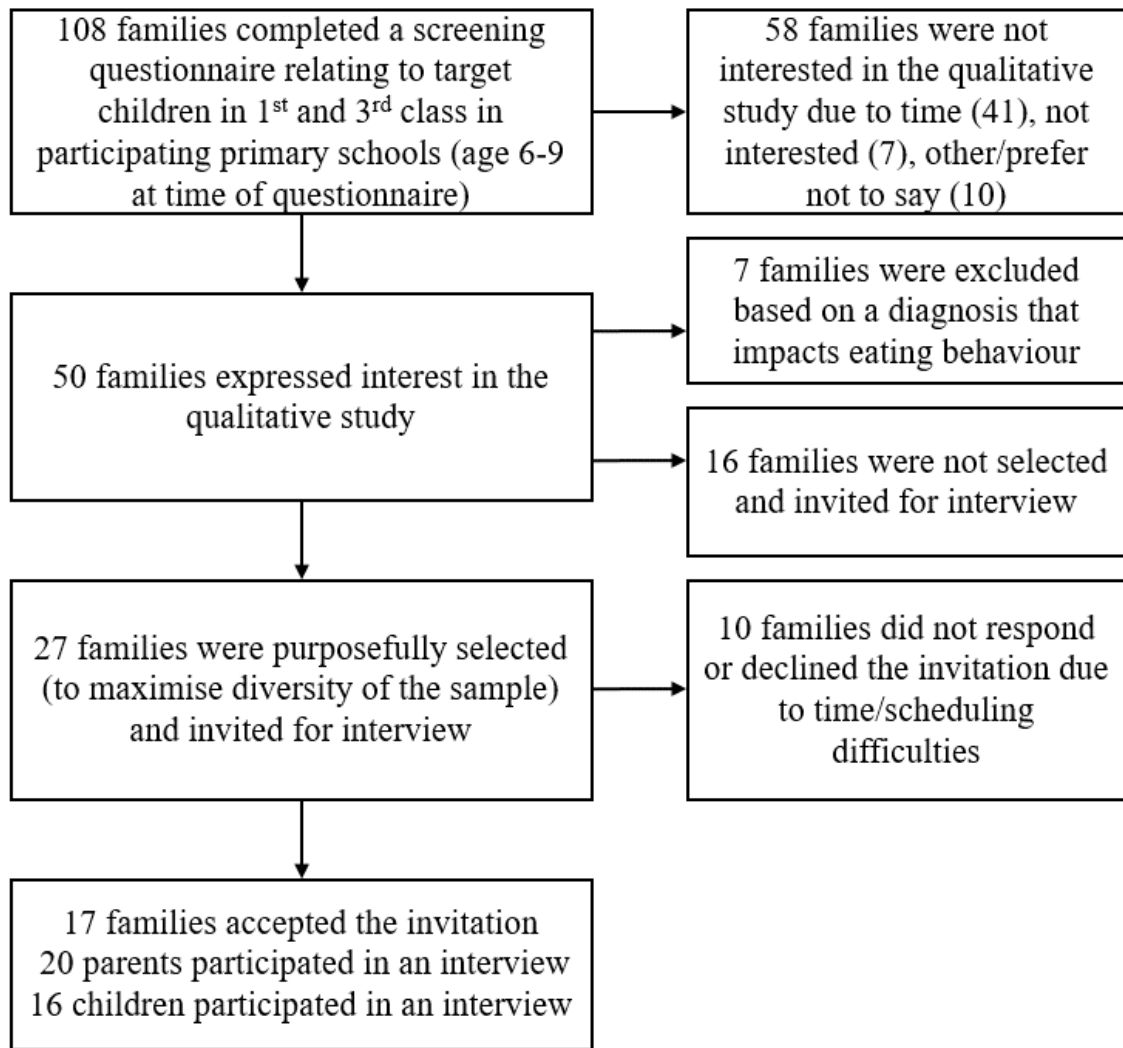


Figure 2.1. Recruitment and participant selection process for Study 2 & 3.

**Interviews vs focus groups and multiple perspective research.** Interviews are suitable for generating rich data in relation to experience-type research questions as well as exploring how people's understandings and perceptions are constructed. They are also useful for covering sensitive topics that participants may not feel comfortable discussing in a group setting. On the other hand, focus groups are more suited to topics that participants do not have a personal stake in, and are useful for exploring interactions and communication between participants. However, focus groups do not allow in-depth follow up on individuals' experiences or perceptions and can be logistically difficult (Braun & Clarke, 2013). Participants (particularly children) can be easily influenced by the responses of other participants in focus groups, so interviews may provide more accurate and honest responses. This research aimed to capture the in-depth experiences, perceptions and practices of individuals. In addition, eating behaviours and child feeding

challenges are sensitive topics for some participants. Therefore, interviews were considered to be a more appropriate data collection method for this research, for both parent and child participants.

Additionally, in multiple perspective family research it is important to consider whether participants from the same family will be interviewed separately or together, and whether interviews will occur on the same occasion. According to Kendall et al. (2010), interviewing family members together can constrain the discussions, but can also provide additional insights regarding the relationship. Similarly, Zartler (2010) states that individual interviews create a more confidential atmosphere whereas joint interviews can allow more direct investigation of interactions and communication within the family. In this study it made sense to interview parents and children separately so that they could talk more freely about their own (and each other's) practices. For instance, parents may not openly discuss their children's eating behaviours or parenting practices in front of their children, and likewise children may not discuss mealtime practices openly in the presence of their parents. When carrying out separate individual interviews, it is recommended that they are carried out on the same occasion as they are more practical for the participants and family members do not have an opportunity to share their responses in between the interviews (Zartler, 2010). When both parents wished to participate in this research, they were interviewed separately to allow both of their (potentially different) experiences and perceptions to be heard, and to maintain consistency across all parent interviews. However they were carried out one directly after the other, so participants did not have an opportunity to discuss their responses between interviews. Child interviews took place in their school several weeks after the parent interviews. Due to the different nature of the parent and child interviews, carrying out the child interviews on a separate occasion was not considered problematic. However, it is possible that parents may have discussed the research project with their children prior to the child interviews.

**Developing interview guides and materials.** One interview guide was developed for the parent interviews, and a second interview guide was developed for use with children. Both of these interview guides were developed to tap into the key research questions: to investigate parent and child perceptions (descriptions and beliefs), experiences (impact and emotions), and management (goals, parent feeding practices, coping strategies) of fussy eating behaviours. The interviews were designed to open with

a broad and relatively simple question to build rapport with the participants and allow spontaneous narrative, which could then be followed up with later questions and prompts (Braun, & Clarke, 2013; Docherty & Sandelowski, 1999). The sequencing of questions was considered so that the interviews could flow logically, but also so that the order could be flexible if participants naturally addressed topics in a different order. Questions were designed not to be loaded or leading, however prompts and probes were also used to encourage participants to respond in more detail if desired (Braun & Clarke, 2013).

The parent interview schedule was piloted with three mothers who were PhD students or researchers in the School of Psychology or Health Promotion Research Centre at NUI Galway. The child interview guide was piloted with two school-aged children who were personal contacts of the researchers. These pilot interviews provided an opportunity to test the interview guides and methods prior to commencing data collection (Kim, 2010) and to ensure that the child information sheets and interview guides were appropriate for the targeted age range and cognitive level of participants. Only minor adjustments were made to the interview guides (e.g. incorporating questions on infant feeding in parent interviews; simplifying sections of the information sheet for child interviews) after pilot interviews. The parent interview guide is provided in Appendix D.

***Child interview guide.*** The child interview consisted of a number of visual methods used to elicit discussion with school-aged children. Visual methods are widely used for a variety of reasons including enabling communication, enhancing data quality, and facilitating the relationship between the participant and the interviewer (Glegg, 2019). In addition, a range of tools were used to accommodate different ages, cognitive abilities and interests (Fargas-Malet, McSherry, Larkin, & Robinson, 2010; Kirk, 2007), and to prevent question fatigue as some children are likely to become bored by lengthy verbal communication (Huang, O'Connor, Ke, & Lee, 2016). The interview commenced with children writing or drawing about them having dinner at home. This activity was used to engage children, allow time for reflection on the topic, to create a comfortable atmosphere by using a familiar activity, and to serve as a conversation starter to lead to the more formal section of the interview (Literat, 2013; Søndergaard & Reventlow, 2019). Following this, an activity sheet was used for children to report what they liked to eat for breakfast, lunch and dinner. A second activity sheet with emotion faces allowed children to report their feelings when eating liked, disliked, and new foods (Fane, MacDougall, Jovanovic, Redmond, & Gibbs, 2018; Fargas-Malet et al., 2010; Schouteten, Verwaeren,

Lagast, Gellynck, & De Steur, 2018). The remainder of the interview focused on two vignettes (or hypothetical scenarios) to facilitate discussion and elicit responses to more structured questions. Vignette 1 depicted Rosie disliking and rejecting vegetables in a family context, and Vignette 2 depicted Mark disliking cheese in a social (peer) context. Vignettes are useful tools for collecting data in a less personal and threatening way and allow participants to discuss situations in their own terms (Palaiologou, 2017). It has also been suggested that children provide more detailed answers when asked ‘what usually happens’ questions rather than questions relating to a specific event (Docherty & Sandelowski, 1999). The vignettes in this study allowed children to discuss general thoughts and perspectives about the characters, to volunteer personal experiences if they wished to, and facilitated conversation about dislikes and food refusals without using labels like ‘fussy’ and ‘picky’. The materials used in the children’s interviews and the interview guide are included in Appendix E.

**Data collection procedure and ethical considerations.** Ethical approval for this study (parent and child interviews) was granted by NUI Galway Research Ethics Committee in August 2016 (Appendix F).

**Parent interviews.** All participants took part in an individual interview carried out by the thesis author, who had completed training in qualitative research methods. Parents were given the option to complete the interview in one of three locations (their child’s school library, the family home, or the university). When parents opted to complete the interview in their home, the interviewer was accompanied by a Garda vetted research assistant to ensure researcher safety. Interviews took place in May and June 2017 and lasted between 21 and 67 minutes (average 48 minutes). Participants were provided with study information (Appendix G) and an opportunity to ask questions before giving their informed consent (Appendix H). It was highlighted that participation was voluntary, that they could withdraw from the study at any time, and that responses would be anonymised during transcription. At the end of the parent interviews, parents were provided with a list of relevant services and resources (Appendix I). Parents were informed about the child interviews that would be taking place in their child’s school, were given an opportunity to ask questions about these interviews and were asked to provide their consent (Appendices G & H).

***Child interviews.*** After obtaining parent consent (at the end of parent interviews), child interviews took place in the child's school. A children's information sheet was emailed to the families in advance of child interviews (Appendix G). The researcher also read and discussed the information sheet with children prior to commencing the interviews and children provided informed assent (Appendix H). Conducting interviews during the school day facilitated child participation as it minimised the requirements and time commitment for parents. The interviewer was accompanied by one of three research assistants at all times during child interviews. All research assistants were Garda vetted, had knowledge of research methods, and extensive experience working with children. The role of the research assistant was to supervise the children completing drawings and activity sheets on one side of the room, while children were interviewed individually by the researcher about their drawings, activity sheets and vignette characters on the other side of the room.

The interviews took place in a class room, resource room or library in each of the participating schools. First the study was introduced to children in pairs or small groups (six pairs, one group of three children, one individual). This involved reading the information sheet, discussing the purpose of the research, discussing limits of confidentiality, obtaining assent and playing a short ice-breaker game. Following this introduction, children completed their drawings and activity sheets (Appendix E) with the research assistant on one side of the room, and took part in a short individual interview with the researcher (about their drawings and vignette characters) on the other side of the room. The process took between 50 and 72 minutes per pair/group (average 61 minutes). Children were given a certificate to thank them for their participation. Although risks were not considered high due to the nature of the topic, it was acknowledged that some children may experience negative feelings after participating in the interview (Mishna, Antle, & Regehr, 2004). A follow-up/debriefing letter including appropriate supports was delivered to each child through their school following participation (Appendix I).

***Ethical and methodological considerations.*** Throughout data collection, certain ethical and methodological issues relating to interviewing children were considered. Firstly, the Children First: National Guidance for the Protection and Welfare of Children (Tusla, 2017) guidelines and university child protection policy were adhered to at all times and appropriate precautions were taken. These included working with children in small groups, having a research assistant present, leaving the door open if a participant

was alone with the researcher, discussing limits of confidentiality, and not pushing children to provide personal information. Secondly, conveying the meaning of research to children, and ensuring that their assent is informed can be challenging (Kirk, 2007). Each participant was provided with a handout about ‘being a researcher’ (Appendix E). In addition, information sheets were read with participants and re-worded or explained by researchers when required. Thirdly, the adult-centredness of our society poses challenges in relation to power imbalances when interviewing children (Kirk, 2007; Wills, 2012). This was particularly evident in the primary school setting where children are used to following instructions given by adults and are used to being tested on their knowledge. It was re-iterated that there were no right or wrong answers and that it was their opinion that was of interest. Their choice not to answer certain questions was respected and the researchers were responsive to children’s own agendas (for example if they wanted to participate in other activities with their class) (Kirk, 2007).

It is also important to consider confidentiality in multiple perspective research, particularly when interviewing multiple family members from the same family, or participants who may care about and want to know the responses of another participant (e.g. parent and child) (Kendall et al., 2010). All participant data was kept in a locked storage facility or on a password protected computer and was only accessible to the research team. If participants asked to be informed of their child’s responses they were told that the overall study findings would be shared, but it would not be possible to share individual’s responses due to confidentiality and anonymity guaranteed to all research participants.

Finally, a protocol was put in place for dealing with distressed participants in both parent and child interviews (See Appendix J). If parents asked for advice in relation to child feeding, they were advised to see a health professional. However, a list of relevant services and resources was provided to all participants and parents were offered a tips and strategies sheet at the end of their interview.

### **Selecting a Qualitative Analysis Method for Studies 2 & 3 (Chapters 4 - 6)**

There are many different approaches to analysing qualitative data. The most widely used include thematic analysis, interpretative phenomenological analysis, grounded theory, discourse analysis and content analysis. Thematic analysis is a method for identifying themes and patterns of meaning across data. It is a widely used, accessible and flexible

method that can be used to answer many types of research questions (Braun & Clarke, 2013). Interpretative phenomenological analysis (IPA) focuses on how people make sense of their lived experiences and is usually carried out using small groups of participants (Braun & Clarke, 2013; Smith & Osborn, 2015). Grounded theory (Glaser & Strauss, Anselm, 1967) has sociological origins and focuses on generating theory from data. It comes in many forms, some of which produce outcomes similar to thematic analysis. Grounded theory is an approach to qualitative research as well as analysis, and follows relatively prescriptive procedures, not as flexible as thematic analysis (Braun & Clarke, 2013). Discourse analysis (Willig, 2015) is used to analyse patterns in language use and understanding how phenomena are constructed. Finally, content analysis is a flexible approach, with several forms but is often more descriptive, focused on describing phenomena, sometimes involving counting and comparing key words or content (Hsieh & Shannon, 2005).

On consideration of various methods of analysis, thematic analysis was considered the most appropriate for this study. The flexible nature of thematic analysis made it suitable for answering different types of research questions using different types of data (parent/child interviews, drawings, children's worksheets etc.) as well as combining inductive and deductive approaches. It was possible to remain true to participants' views by using inductive data-driven coding, while also being informed by concepts from social relational theory and family systems theory at later stages of analysis in order to make sense of the data. In addition it was considered suitable for the sample size of this study, in contrast to IPA which usually requires smaller groups of participants. Finally, it is an accessible method, suitable for novice qualitative researchers, and accessible to wider audiences (Braun & Clarke, 2013).

**Analysing multiple perspectives: parent and child data.** There are different ways of analysing multiple perspective family data. For example, at the level of the parent-child dyad, the family, investigating case-studies, or analysing parent and child data separately (Kendall et al., 2010). In this study, it was decided to analysis parent and child data separately, but to make comparisons between findings in the discussion chapter to build a more holistic view of the family experience. This form of analysis was chosen as it allows children's voices to be heard in their own right, as children's perspectives of fussy eating behaviours has never been reported. Zartler (2010) recommends analysing interviews at the individual level first, before investigating the dyad/family level,



otherwise details about individual interviewees and perspectives may be lost. Also, by using this approach, it is easier to maintain participant confidentiality, which may not be protected by presenting parent and child data from the same family together. However, the limitation of this approach is that analysing parent and child data separately does not allow for an in-depth investigation of family dynamics, or an exploration of converging and diverging perspectives within families (Harden, 2010; Zartler, 2010).

### **Thematic Analysis Approach Used for Studies 2 & 3 (Chapters 4-6)**

Thematic analysis was used to analyse parent and child data for Studies 2 and 3 (Chapters 4-6). Thematic analysis is a method for identifying, analysing and reporting patterns (or themes) in data (Braun & Clarke, 2006). Braun & Clarke (2019) outline three distinct types of thematic analysis: Coding reliability thematic analysis, codebook thematic analysis and reflexive thematic analysis. In coding reliability thematic analysis, coding is guided by a pre-determined code book or coding frame, and reliability is assessed across multiple coders. Similarly, codebook thematic analysis utilises structured coding and includes framework analysis and template analysis. In contrast, in reflexive thematic analysis, the researcher plays a key role in actively developing and constructing themes, continuously reflecting on the process. In reflexive thematic analysis a second researcher can collaborate in generating codes and themes but achieving consensus (or determining reliability between coding) is not considered necessary or appropriate. In this research, a reflexive thematic analysis approach was used to analyse data. Thematic analysis varies across three dimensions (inductive-deductive, experiential-critical, and essentialist-constructivist).

**Inductive/deductive.** In this thesis a hybrid inductive-deductive approach was used. Initially all coding was inductive and data-driven due to the exploratory nature of this research. At later stages of the analysis, interpretation of findings and theme development was influenced by social relational theory (Kuczynski & De Mol, 2015) and family systems theory (Broderick, 1993). Using concepts from these theories helped to make sense of the data and did not undermine reporting of participants' own perspectives, as these theories are broad in nature and acknowledge that perspectives may differ between family members.

**Experiential/critical.** Experiential qualitative research focuses on understanding people's own perspectives, meanings, experiences and practices. Participant's

interpretations are accepted and prioritised, and language is seen as a window into a person's interior. On the other hand, critical qualitative research tries to understand factors influencing, and effects of, particular meanings. It takes an interrogative stance towards participant's experiences and uses them to explore some other phenomenon. In critical qualitative research, language is seen to represent what is out there in the world and reality is seen to be constructed through language (Braun & Clarke, 2013). The approach in this thesis was primarily experiential as the primary aim was to explore family perceptions, experiences and practices in relation to fussy eating behaviours and to prioritise participants' own perspectives. However, an additional aim was to investigate how perceptions, experiences and practices relate to each other, how families' perceptions, experiences and beliefs about fussy eating were constructed and developed over time, and the impact of different meanings of fussy eating (e.g. whether fussy eating is conceptualised as defiant behaviour or an expression of autonomy). Therefore, the analysis was primarily experiential but also somewhat critical.

**Essentialist/constructionist.** In line with the epistemological approach to the entire thesis (outlined in section 2.2), thematic analysis in all studies was carried out from a constructionist perspective which posits that there are multiple knowledges, rather than a single truth or reality (Braun & Clarke, 2013). It was acknowledged that different participants, particularly parents and children, may have different perceptions, understandings, goals and experiences.

**Analysis steps.** The six steps of thematic analysis (Braun & Clarke, 2006, 2013) were followed. Although the process is outlined as distinct steps below, in reality thematic analysis is an iterative process involving continuous theme development, writing, re-reading of theme and code content, and re-reading of interviews/data-set (Nowell, Norris, White, & Moules, 2017). All parent interviews were analysed first, and child interviews were analysed after. However, the overall process for analysing parent and child interviews was the same. Prior to analysis, the analysis approach and steps to be taken were discussed and agreed with the research team to ensure dependability and transparency throughout the analysis process. The researchers engaged in regular team discussions throughout all stages of analysis and writing.

***Step 1. Familiarisation with the data and identifying items of potential interest:*** Interviews were transcribed using orthographic (verbatim) transcription outlined by

Braun & Clarke (2013). Interviews were transcribed in MS Word and were later imported to QSR NVivo 11 Software. Recordings were listened to a second time to confirm accuracy of the transcripts and items of potential interest were noted. Following this the transcripts were re-read and further observations were noted by highlighting sections of interest in MS Word documents and by creating memos in NVivo. At this stage the author reflected on how her experiences, knowledge, interests and the wording of questions may have influenced participant responses during interviews.

**Step 2. Generating initial codes:** Complete coding was carried out, in which the data was worked through systematically looking for chunks of data that addressed the relevant research questions. Data that was not relevant to any research question was not coded (Braun & Clarke, 2013). Initially, inductive open coding was carried out manually by the researcher, using NVivo to organise codes. Each code was named and a brief description of the code was provided. Codes from this first round of coding were reviewed and refined to ensure all codes were coherent and distinct.

Transcripts were coded a second time to identify any data relevant to a specific research question that may have been overlooked in the first round of coding. This was an iterative process and codes were continuously revised and refined (by merging similar codes, breaking down larger codes into sub-codes, and adding new codes) and transcripts were continuously re-read.

Codes were reviewed by the supervisory team. The purpose of this was to provide a second opinion/interpretation and to assess whether codes were coherent and distinct, rather than to assess coding reliability (Braun & Clarke, 2019). The author reflected on the coding process and noted any key decisions made. In addition, each new round of coding was completed in a new folder in NVivo, providing an audit trail which allows earlier stages of coding to be compared with later stages, ensuring that the analysis process is dependable, transparent and clearly documented (Hannes, 2011).

**Step 3. Generating initial themes:** Once all of the data was coded and all codes were reviewed and revised, the relationships between codes were considered. Related codes were sorted into initial themes. Relationships between themes were also considered by drawing thematic maps.

**Step 4. Reviewing (and developing) potential themes:** The themes generated in Step 3 were reviewed and revised. Data extracts under each theme were read to ensure

the theme was coherent and that all data related to a central concept. Themes were reworked (by merging similar themes and dividing larger themes into sub-themes). Individual themes (and relationships between themes) were considered in relation to the overall data set. Interview transcripts were re-read to ensure that the themes were representative of the participants' accounts and to identify any further data that was missed in earlier rounds of coding. At this stage, theme development was somewhat deductive. Theme development (and the relationships between themes) was influenced by concepts from social relational theory or family systems theory. Often this involved going back to the transcripts and completing an additional round of coding to identify data relating to a particular concept that may not have been included in earlier stages of coding.

At these later stages of analysis (in Studies 2 and 3), participants were categorised into mutually exclusive groups based on the narrative they portrayed throughout their interview (e.g. consistent, resistance-acceptance, and fluctuating response patterns; low relational-efficacy and high relational-efficacy). Matrices in NVivo were used to gather and explore data items that were coded under more than one node or theme, or to explore codes/themes in relation to different groups of participants (e.g. references to coercive practices in parents who expressed low relational efficacy vs high relational efficacy). This enabled the identification of patterns across the data and an understanding of how different codes or themes relate to one another. Again, theme development was carried out in a separate folder in NVivo, providing an audit trail which shows how analysis moved from early code generation to theme development. The author reflected on theme development, and how the focus of studies may have been influenced by her experiences, interests, and knowledge.

***Step 5. Defining and naming themes:*** At this stage, themes were defined and further refined. A detailed analysis was written for each theme by outlining the key messages and findings and supporting them with participant quotes. Themes and theme names were reviewed by supervisors who provided feedback in relation to the coherence of themes and offered alternative interpretations. This feedback as well as regular team discussions ensured dependability (consistency and transparency of analysis) and confirmability (analysis is grounded in the data) (Hannes, 2011).

**Step 6. Producing the report:** Feedback from supervisors was incorporated and themes were reviewed, refined and re-written. Findings were presented as written reports (Chapters 4, 5 and 6), sometimes using graphical representations or thematic maps to illustrate relationships between findings. All findings were supported by verbatim quotes, demonstrating credibility (representation corresponds with participant views) and confirmability (analysis is grounded in the data) (Hannes, 2011).

**Consideration of the limitations of thematic analysis.** Thematic analysis is a flexible approach, and can be used to answer most research questions. However, thematic analysis focuses on patterns across datasets, so it does not account for contradictions or conflicting statements within data items (Braun & Clarke, 2013). Thematic analysis has been criticised for not being a method in its own right, but a tool used by many qualitative methods. However, others argue that it should be considered a method in its own right (Braun & Clarke, 2013; Nowell et al., 2017). The flexible nature of thematic analysis can lead to inconsistencies in how it is used by different researchers and it has been criticised for lacking literature and guidance on how to conduct trustworthy rigorous thematic analysis. However, several authors have outlined steps and criteria for carrying out successful and rigorous thematic analysis (Braun & Clarke, 2013; Nowell et al., 2017).

**Considering criteria for good qualitative research.** Taking these limitations into account, the researcher followed the guidance provided by Braun and Clarke and others (Braun & Clarke, 2006, 2013; Hannes, 2011; Nowell et al., 2017). Hannes (2011) outlines four criteria for good quality qualitative research: 1) Credibility refers to whether the representation of the data corresponds with participants views, 2) Transferability refers to providing sufficient information about participants and the context of the research so that it is clear whether findings can be transferred to other settings, 3) Dependability relates to the consistency of the research and whether the process is logical, transparent and clearly documented and 4) Confirmability relates to the extent that the analysis is grounded in the data as well as acknowledgement of the effects of the researcher. As detailed above, a number of steps were taken to ensure that the analysis was rigorous and met these criteria. Firstly, the researcher clearly identified the approach to thematic analysis adopted in this research (reflexive thematic analysis) and described the process as transparently as possible. In addition, the author was reflexive throughout the process, kept a record/audit trail of the different analysis stages in NVivo,

incorporated interpretations and feedback from multiple reviewers, engaged in regular team meetings, checked findings/themes against the full data set and provided verbatim quotes throughout the report. These steps enhance the credibility, dependability and confirmability of the findings. In addition, detailed participant demographic information was provided so that the limits of transferability to other contexts are clear.

### **Researcher's Reflexive Statement**

Relativist approaches (including constructivism) position the researcher as central to the research process, having a significant role in creating the research findings. Therefore it is important to reflect on the author's identity, experiences and values and how these factors might influence the research findings.

I completed a psychology degree at the National University of Ireland, Galway in 2015. As part of this degree I studied for a year at the University of Padua, Italy. During this degree I took an interest in developmental psychology, health psychology and cultural psychology modules. In the final year of my degree I carried out a quantitative research project on the relationships between acculturation, family functioning, health self-efficacy and health-related quality of life in a multi-cultural adolescent sample. Following this, I was accepted onto the Child and Youth Research structured PhD Programme at the National University of Ireland, Galway. At this time, I was working in a health-food store and I was thinking about the relationship between food and health, and how our attitudes and food preferences develop. This, along with my interests in family functioning and health psychology, prompted me to focus my PhD research on family dynamics and children's eating behaviours. During the first two years of this programme I completed a variety of modules on qualitative and quantitative research methods as well as modules on theory and policy relating to children, youth and society. During the first year of this PhD programme, I received funding for a three-week research placement with Dr Emma Haycraft and Dr Gemma Witcomb at Loughborough University where I was involved in a research project observing feeding practices in a pre-school/nursery setting. This placement was a great opportunity to see how research and theory on child feeding can be applied to practice in childcare settings.

My interests were primarily research focused at the start of my PhD and I saw myself continuing in a research or academic role after the PhD. However, over the course of the PhD I became more interested in clinical applications of child feeding research.

This interest was strengthened at the International Conference on Children's Eating Behaviour in Birmingham in 2019 which was a really engaging and inspiring meeting of researchers and practitioners that were primarily working within a responsive feeding framework. Around this time I also did a training course in applied behavioural analysis for helping children with feeding problems (with Dr Keith Williams, Director of Penn State Children's Hospital Feeding Programme) and was struck by the contradictory approaches to feeding therapy for picky/selective eaters and became motivated to learn more about these diverse approaches and their effectiveness. In the past year I completed additional training in sensory oral-motor therapy for problem feeders (with Dr Kay Toomey and Dr Erin Ross, developers of the SOS Approach to Feeding), and responsive feeding for supporting parents of avoidant eaters (with Jo Cormack, therapist and developer of the Emotionally Aware Feeding (EAF) approach). Although approaches vary in their methods for treating feeding challenges, what was common to all approaches was a thorough and detailed assessment to understand the root cause of the feeding challenge. It occurred to me that although there has been extensive research on factors associated with fussy eating and other feeding difficulties, there had been extremely limited research on parent beliefs about the influences of fussy eating. In the same way that clinicians need to understand the root cause to determine an appropriate treatment strategy, it occurred to me that in sub-clinical cases or typical fussy eating, parents must understand the causes of fussy eating in order to use appropriate feeding practices. In this way, my interest and training in clinical approaches for managing feeding challenges somewhat influenced my research focus in Study 2B on parent beliefs about the development and management of fussy eating.

I have always worked closely with children and have been interested in children's perspectives of the world. The modules I took in my undergraduate degree and the Child and Youth Research Programme developed my understanding in relation to the value of respecting children's opinions and giving children a voice in research and policy. When I started reading literature on fussy eating it struck me that there was little (or no) research on family mealtime dynamics and fussy eating that provided children's perspectives. Although carrying out research with children has its challenges, from the beginning of the PhD I was determined to include the child's point of view. Over the course of the PhD, it became increasingly important for me to ensure that I used theoretical approaches and methods that respect children's autonomy and view children as active agents. In line

with recent advances in the fussy eating literature, such as publications that draw on child socialisation theory and highlight the role of child agency in fussy eating research (e.g. Walton et al., 2017; Russell & Russell, 2018, detailed in Chapter 1), my work throughout the PhD programme became increasingly influenced by social relational theory (Kuczynski & De Mol, 2015).

To conclude, my training in developmental psychology and health psychology sparked my interest in carrying out research in this area. In addition, I have always been drawn to children's perspectives of the world and this has been an important aspect of my research from undergraduate level. However, over the course of the PhD I have become increasingly aware of different clinical approaches to managing feeding difficulties, the importance of child agency, and child socialisation theory which to an extent, has influenced the focus of the research presented in this thesis.

### **Conclusion**

A qualitative research design was used in this research due to the limited knowledge of family processes in relation to fussy eating, and because qualitative methods are useful for capturing the complex and dynamic nature of the feeding relationship. In line with a dialectical approach, a multiple perspective approach was adopted, including the views of both parents and children. Research was conducted and analysed from a constructivist position, recognising that individuals construct their own realities which may be similar or different to other family members. For Study 1, a meta-ethnography approach was selected to synthesise the current qualitative literature on fussy eating (see Chapter 3). For Studies 2A, 2B and 3, families were recruited through primary schools. Parents and children took part in individual interviews to capture in-depth experiences and individual perspectives. This chapter discussed ethical and methodological challenges and how these were managed, including child protection considerations, obtaining consent and assent, conveying the meaning of research to children, power imbalances between researchers and participants, and maintaining confidentiality in multiple perspective family research. Interviews were analysed using thematic analysis due to the flexible and accessible nature of this approach. The strengths and limitations of this approach were outlined as well as steps taken to ensure quality of qualitative research.



### **Chapter 3. Childhood Fussy/Picky Eating Behaviours: A Systematic Review and Synthesis of Qualitative Studies (Study 1)**

**Note:** An edited version of this chapter has been published as:

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#### **Chapter Overview**

The aim of this chapter is to review and synthesise published qualitative studies on family perceptions, experiences and practices in relation to non-clinical fussy eating, food neophobia and food refusal in children aged one year to young adult. First, a brief introduction to the study is provided. Following this, the meta-ethnography approach introduced in the previous chapter is elaborated on, detailing the specific steps that were involved in searching for, and synthesising, qualitative literature on fussy eating. Next, the findings are presented, including a comprehensive description and definition of fussy eating behaviours, a conceptual model illustrating relationships between five constructs identified in primary qualitative studies, and five themes which explain these constructs and how they relate. Finally, the findings are discussed in relation to the current literature and recommendations for future qualitative research and practice are made.

#### **Introduction**

As detailed in Chapter 1, extensive research has been carried out on the correlates and influences on fussy eating behaviours. Child factors include age, personality, tactile defensiveness, emotionality, and cognitive factors (Cardona Cano, Hoek et al., 2015; Dovey et al., 2008; Lafraire et al., 2016). Other important influences on fussy eating, food preferences and intake include genetics and environmental factors such as culture and peer influence (Birch et al., 1995; Horne et al., 2004; Johnson, 2016; Smith et al., 2017). Parental influence has received the most attention in the literature, particularly in relation to parent feeding practices (Mallan et al., 2018; Mitchell et al., 2013; Scaglioni et al.,

2018), possibly due to these factors being the most amenable to intervention. Research on parent feeding practices and fussy eating has found that positive or responsive feeding practices (involving an awareness of hunger and satiety cues and a division of responsibility in which parents provide the meal and the child decides how much to eat) are associated with lower levels of fussy eating, while negative or non-responsive feeding practices (such as pressure to eat and using food as a reward for behaviour) are associated with higher levels of fussy eating (Cardona Cano, Hoek et al., 2015; Cole et al., 2017; Satter, 1986).

Therefore, it has been suggested that raising awareness of evidence-based practices such as repeated exposure to foods would be of benefit to parents (Gibson & Cooke, 2017; Peters et al., 2012). However, other research suggests that knowledge alone does not always promote behaviour change (Horodynski et al., 2004) and the effectiveness of interventions that aim to increase fruit and vegetable consumption are limited (Hendrie et al., 2017). Therefore, it is important to explore other factors involved in order to support parents to implement feeding practices effectively. Theory and research on health behaviour change highlight the role of factors such as beliefs, goals, emotions and stress management (Ajzen, 2011; Michie et al., 2011), yet family beliefs, goals and stress management strategies in the context of fussy eating remain relatively unexplored. Some research suggests that maladaptive feeding practices result from parents' expectations and anxiety about their child eating too little, the belief that children cannot self-regulate their hunger levels, and low parental self-efficacy (Cardona Cano, Hoek et al., 2015; Cole et al., 2017; Koh et al., 2014; Mitchell et al., 2013; Tan & Holub, 2011). However, there is limited research on the role of all of these factors in contributing towards parents' feeding practices, and the relationships between these factors and childhood fussy eating are poorly understood. A better understanding of these factors may contribute to the development of more effective interventions that target parental feeding practices and aim to improve fussy eating related challenges.

There is increasing recognition of the importance of qualitative work in both intervention development and informing quantitative work (Booth et al., 2016; France et al., 2014; Levitt et al., 2018). Specifically, the World Health Organisation (Flemming, Booth, Garside, Tunçalp, & Noyes, 2019; Langlois, Tunçalp, Norris, & Ghaffar, 2018) has highlighted qualitative evidence synthesis as a key approach to understanding the needs, values, perceptions and experiences of stakeholders and to inform the development

of health guidelines. In the context of fussy eating, qualitative studies provide useful insights into family mealtime experiences and parent feeding practices used to manage these behaviours. Qualitative research also highlights novel findings in relation to parents' beliefs and motivations, which could improve our understanding of the context in which certain feeding practices are used, as well as the effectiveness of interventions aiming to resolve fussy eating related challenges.

Despite numerous reviews of the definitions, prevalence, correlates, consequences and management of fussy eating since 2008 (Brown, Vander Schaaf, Cohen, Irby, & Skelton, 2016; Cardona Cano, Hoek et al., 2015; Cole et al., 2017; Dovey et al., 2008; Gibson & Cooke, 2017; Lafraire et al., 2016; Taylor, Wernimont et al., 2015), these reviews focus primarily on quantitative findings and a review of the qualitative research on family perceptions, experiences and practices has not yet been carried out. Therefore, this study aims to review and synthesise the body of qualitative work carried out in this period, specifically examining family perceptions, experiences, and practices in relation to non-clinical childhood fussy eating behaviours. Specifically, the objective of this review is to investigate the relationships between fussy eating perceptions (e.g. awareness, beliefs), experiences (e.g. manifestations of fussy eating, consequences of fussy eating, mealtime emotions), and practices (e.g. repeated exposure, pressure to eat), that have been described in recent published qualitative studies, and to develop a conceptual model representing these relationships.

### **Using Meta-Ethnography to Synthesise Qualitative Studies on Fussy Eating**

As detailed in Chapter 2, meta-ethnography was selected as an appropriate qualitative synthesis method for this study, using the RETREAT (Review question; Epistemology; Time; Resources; Expertise; Audience and purpose; Type of data) framework (Booth et al., 2016). Meta-ethnography is a qualitative synthesis method widely used across psychology and health care disciplines (Atkins et al., 2008), and is a form of secondary analysis involving re-interpretation of published findings. Meta-ethnography aims to synthesise qualitative research while maintaining the context of each individual study, unlike a meta-analysis of quantitative literature which aims to aggregate data. A qualitative synthesis aims to establish meaning by relating knowledge from different original studies and highlighting the relevance of this knowledge to a specific topic (Noblit & Hare, 1988). Following Noblit and Hare (Noblit & Hare, 1988) and ENTREQ

guidelines (Tong et al., 2012), meta-ethnography was used to synthesise the qualitative literature on family experiences, perceptions and practices regarding non-clinical childhood fussy eating. This method involves seven phases, detailed below (Atkins et al., 2008; Noblit & Hare, 1988). The steps taken, and tools used for each of the seven phases are outlined in Table 3.1.

Table 3.1.

*Meta-Ethnography Phases, Steps, and Tools/Software Used to Review and Synthesise Studies*

<b>Phase of Review and Synthesis</b>	<b>Steps</b>	<b>Tools/Software Used</b>
<b>Choosing a synthesis approach</b>	1. Select a qualitative synthesis approach appropriate for review question	RETREAT framework (Booth et al., 2016): consider Review question, Epistemology, Timeframe, Resources, Expertise, Audience & purpose, and Type of data
<b>Phase 1: Getting started</b>	1. Preliminary literature searches	Databases (Embase, Scopus, PsycINFO)
	2. Register review protocol	PROSPERO ( <a href="https://doi.org/10.1111/1745-6214.12443">CRD42017055943</a> )
<b>Phase 2: Deciding what is relevant to the initial interest</b>	1. Develop search strategy and run exhaustive search of databases	Databases searched: Cinahl Plus, Embase, Scopus, PsycINFO, Proquest (ASSIA and Sociological Abstracts)
	2. Title and abstract screening	COVIDENCE
	3. Full text screening	Microsoft Word
	4. Team discussions about discrepancies	
	5. Supplementary searches	Reference lists, author searches on Google Scholar, 'Cited by' tools on Scopus and Google Scholar
<b>Phase 3: Reading the studies</b>	1. Data extraction (full texts)	NVivo
	2. Noting initial observations	Memos in NVivo
	3. Extract key contextual information and key findings	NVivo (to organise data) Microsoft Word (to visualise data in table format)
	4. Quality appraisal	JBI Critical Appraisal Checklist (Lockwood, Munn, & Porritt, 2015)

<b>Phase 4: Determining how the studies are related</b>	1. Consider similarities and differences across studies	Matrix in NVivo Table in Microsoft Word
<b>Phase 5: Translating the studies into one another</b>	1. Enter key contextual information for each study to preserve context and meaning of original studies throughout the analysis process.	Microsoft Excel spreadsheet
	2. Enter metaphors (findings from each study) into table (row for each study, column for each new metaphor not already reported by a previous study) If studies reported similar findings under different names or themes, these findings were entered into the same column and a metaphor name was selected which best represented all of the data	Microsoft Excel spreadsheet
	3. Compare each study against all previous studies, observing initial similarities (reciprocal translations) and differences (refutational translations) between studies	Microsoft Excel spreadsheet
	4. Colour coding 1 <sup>st</sup> order (participant quotes), 2 <sup>nd</sup> order (primary study author) and 3 <sup>rd</sup> order (reviewer) interpretations to preserve context and meaning	Microsoft Excel spreadsheet
<b>Phase 6: Synthesising translations</b>	1. Read excel file row by row summarising similarities and differences of each study (reciprocal and refutational translations)	Microsoft Excel spreadsheet
	2. Read excel file column by column to define, refine and summarise each metaphor while observing similarities and differences across studies	Microsoft Excel spreadsheet
	3. Group similar metaphors together into 3 <sup>rd</sup> order constructs (categories developed by reviewer)	Microsoft Word
	4. Develop themes that describe constructs and relationships between them	Microsoft Word

	5. Map relationships between key themes within each individual study	Conceptual maps using paper and pen
	6. Integrate individual conceptual models to form an overarching conceptual model of relationships between constructs across studies	Conceptual model (Microsoft PowerPoint) (See Figure 3.2)
<b>Phase 7: Expressing the synthesis</b>	1. Write a summary of each theme supported by quotes	Microsoft Word
	2. Illustrate findings visually	Conceptual model Microsoft PowerPoint
	3. Consider purpose and audience of review	
	4. Assess confidence in review findings (relationships in the model), and consider any alternative interpretations of findings	GRADE CERQual (Lewin et al., 2018)
	5. Consider quality of reporting	ENTREQ (Tong et al., 2012) QMARS (Levitt et al., 2018) eMERGe (France, Cunningham, et al., 2019)
	6. Rewrite theme summaries considering confidence and alternative interpretations	Microsoft Word

**Analysis steps.**

**Phase 1: Getting started.** Preliminary literature searches were carried out in 2016-17 to assess the feasibility of the review and the review protocol was registered on PROSPERO (<https://www.crd.york.ac.uk/PROSPERO/> registration number: [CRD42017055943](https://www.crd.york.ac.uk/PROSPERO/CRD42017055943)).

**Phase 2: Deciding what is relevant to the initial interest.** Due to the small number of qualitative studies on fussy eating, it was likely that each study would contribute new knowledge to the synthesis. Therefore, an exhaustive search of the literature (rather than a purposive search) was considered appropriate. Following preliminary database searches and two consultations with a subject librarian, a final search strategy was developed to achieve a balance between sensitivity (maximising retrieval of relevant items) and specificity (minimising retrieval of irrelevant items) (Booth, 2016). Search strategy details can be seen in Table 3.2. The search was limited to research published since 2008 because preliminary searches indicated a significant increase in research on fussy eating since 2008. In addition, the majority of qualitative studies on fussy eating had been published since 2015 and several reviews on fussy eating had been carried out in 2008 and 2015 (Cardona Cano, Hoek et al., 2015; Dovey et al., 2008; Taylor, Wernimont et al., 2015) with limited reference to qualitative research. Extending the search beyond this time would significantly increase the number of irrelevant items to be screened with a low chance of identifying relevant articles. Given the limited number of qualitative studies on fussy eating in childhood, a broad age-range was selected to maximise retrieval of relevant items that would add to our understanding of fussy eating across childhood.

Title and abstract screening (HW & CH), as well as full text screening (HW & MH) were carried out based on the inclusion and exclusion criteria listed in Table 3.3. Supplementary searches did not identify any additional sources that had not already been identified by the database search. Additional details in relation to study selection are included in Figure 3.1.



Table 3.2.

*Search Strategy Used to Identify Qualitative Studies on Fussy Eating in Childhood Published Since 2008*

<b>Databases</b> (selected to span psychology, social science and medical disciplines)	Cinahl Plus, Embase, Scopus, PsycINFO, Proquest (ASSIA and Sociological Abstracts)
<b>Date of final database search</b> (conducted by HW)	11-Jul-2018
<b>Search terms</b> (based on key words of relevant articles and test searches in Scopus and Embase. Terms and search operators varied slightly according to database guidelines)	
<b>Concept 1 (focus)</b>	Fussy eat(ing/er(s)); Food W/15 (within 15 words of) fuss(iness); Picky eat(ing/er(s)); Food W/15 pickiness; Faddy eat(ing/er(s)); Finicky eat*; Choosy eat(ing/er(s)); Selective eating; Food selectivity; Neophobia; Food refusal; Food rejection; Food aversion
<b>Concept 2 (target age)</b>	Child(ren); Pre(-)school(er(s)); Toddler(s); School(-)age(d); Adolescen(ce/t(s)); Teen(s/age/aged/ager(s)); Preteen(s/age/aged/ager); Youth(s)
<b>Concept 3 (research method)</b>	Qualitative; Qualitative research; Qualitative study; Qualitative method; Interview(s/ing/ed); Focus group(s); Phone(s/call); Diary/diaries; Photo(s); Memo(s); Qualitative analysis; Thematic analysis; Content analysis; Grounded theory; Phenomenological analysis; Discourse analysis; Narrative analysis Observ(e/ed/ing/ation(s))
<b>Concept 4 (participant)</b>	Parent(s/ing); Guardian(s); Caregiver(s); Mother(s); Father(s); Couple(s); Child(ren); Adolescent(s); Son(s); Daughter(s); Sibling(s); Famil(y/ies)
<b>Search limits</b>	2008-2018
<b>Supplementary Search Strategies</b>	Backchaining (searching reference lists of relevant studies), forward chaining (searching research citing relevant studies), searching other work by authors of relevant studies

Table 3.3.

*Inclusion and Exclusion Criteria for Title and Abstract and Full Text Screening*

	<b>Inclusion Criteria</b>	<b>Exclusion Criteria</b>	<b>Rationale</b>
<b>Methodology</b>	Qualitative studies (using both qualitative methods and analysis) Mixed methods studies in which the qualitative component can be extracted	Quantitative studies Review articles Intervention studies (evaluations of interventions)	Mixed methods are included due to the small number of relevant studies available  Qualitative evaluations of interventions are excluded in order to represent family experiences of non-clinical fussy eating prior to any intervention
<b>Dates</b>	Published between 2008 and July 2018	Published before 2008	Focus on recent research. Searching prior to 2008 would significantly increase the number of irrelevant items to screen with a low chance of identifying relevant articles.
<b>Language</b>	English	Any language other than English	Author resources
<b>Target Age</b>	Children from one year to young adult	Eating behaviours of infants less than year and independent adults	Broad range due to limited number of studies on childhood fussy eating. Wide age range would maximise retrieval of items that would contribute to our understanding of fussy across childhood. Focus on children over one year as younger children are still being introduced to solid foods
<b>Focus</b>	Experiences, perceptions and practices regarding fussy eating/food neophobia/food rejection/refusal (min. one relevant sentence in abstract during title and abstract	Studies on: food preference without reference to fussy eating/neophobia/food refusal, breastfeeding and weaning, food insecurity, malnutrition related to poverty,	Diverse terminology used to report 'fussy/picky' eating behaviours

	screening; author stated relevant aim or objective in full text screening)	intervention implementation	
<b>Context</b>	Typically developing population	Studies on specific populations with a diagnosis of a condition impacting eating behaviour (including diabetes, cancer, autism, other disabilities, premature infants)	Studies carried out in the context of a diagnosis may not be transferable to typically developing populations
<b>Participants</b>	Children and parents or primary caregivers	Other family members, teachers, healthcare professionals	Focus on family experience of fussy eating behaviours

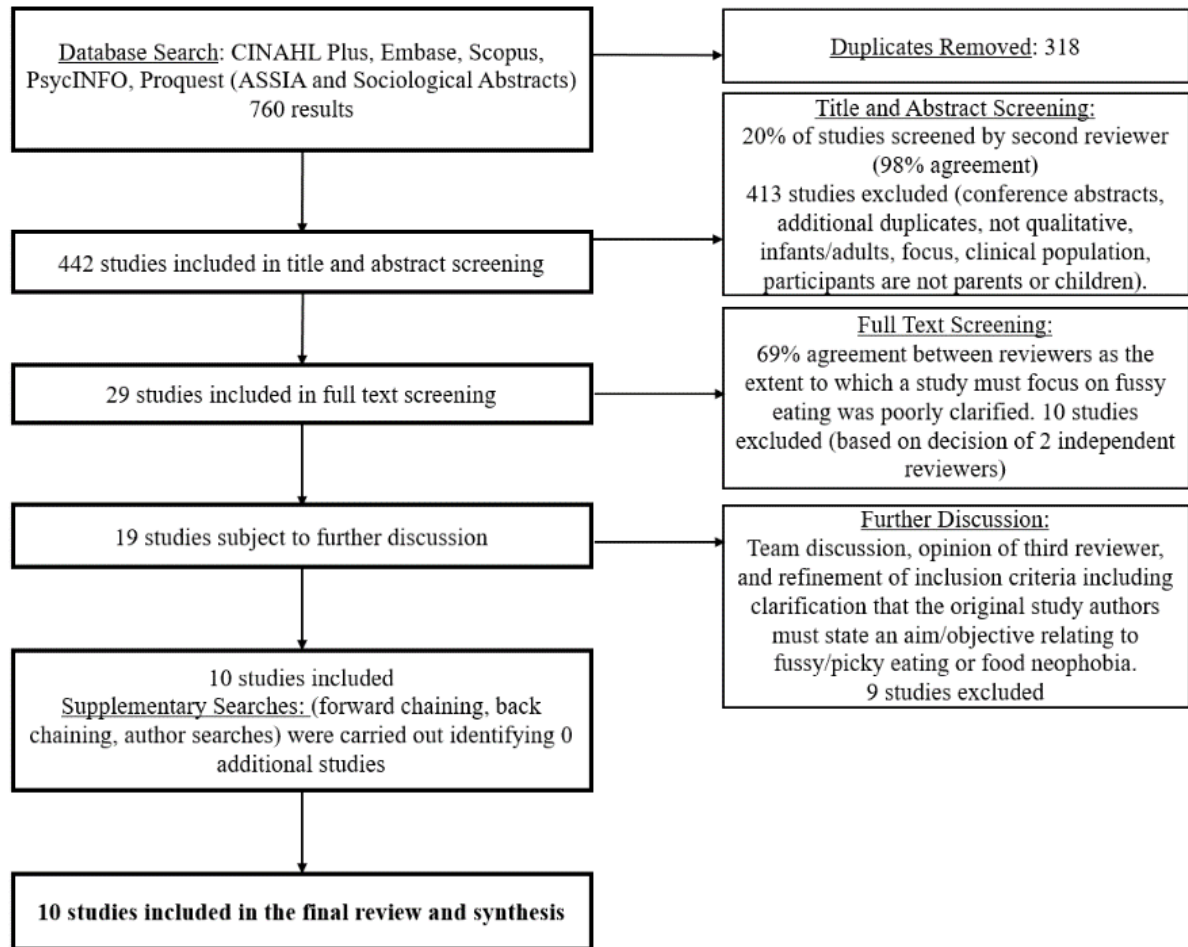


Figure 3.1. Flow chart illustrating selection of studies through database searches, screening, team discussions and supplementary searches

**Phase 3: Reading the studies.** At this stage, full texts were imported to NVivo qualitative data analysis software, QSR International Pty Ltd. Version 11.4. The first reviewer (HW) actively read all included studies, noting any initial observations (e.g. how study findings relate to the review question, quality and quantity of data, how authors define or describe fussy eating, important contextual factors, findings of potential interest). Key contextual information was extracted from the introduction and methods sections of each paper (Table 3.4). First order (participant quotes) and second order (author) interpretations were extracted from results and discussion sections.

The first author (HW) used the Joanna Briggs Institute Critical Appraisal Checklist for Qualitative Research (Lockwood et al., 2015) to assess the quality of each individual study (reported in Table 3.4). This was to aid interpretation of findings at later stages of the review and studies were not excluded on the basis of poor quality. Studies were of moderate-high quality (average 7.15/10). Most studies failed to provide

information regarding the philosophical perspective of the study and the impact of the researcher on the research. However, this is likely due to space limitations in publications and may be representative of the published report rather than the quality of the research (Atkins et al., 2008).

***Phase 4: Determining how the studies are related.*** At this stage, key findings and study characteristics were presented in table format in MS Word (similar to Table 3.4). The first reviewer (HW) considered similarities and differences across studies in relation to contextual factors such as country, sample, and socio-economic status of participants. These observations increased the reviewer's familiarity with the contexts of each study prior to analysis, and determined the order in which studies would be analysed in Phase 5 (detailed below in Phase 5).

***Phase 5: Translating the studies into one another.*** The process of translation aims to maintain the central findings of each study (referred to as metaphors), while also comparing the findings in one study with those in the other studies (Noblit & Hare, 1988). The key steps involved in this phase are detailed in Table 3.1. The process started with findings from Rubio and colleagues (Rubio & Rigal, 2017) as this study was considered to have the highest quality and quantity of relevant data based on initial observations in Phases 3 and 4. Studies were then entered one by one into the Microsoft Excel file (by HW) according to study characteristics, to maximise proximity of studies with similar contexts (e.g. studies using the same sample, low-income samples, school-aged children, see Table 3.4). Translating studies into one another was an iterative process in which previous studies were continuously re-read to look for any data to support newly identified metaphors which may have been overlooked during previous readings. The process of extracting metaphors from studies, and the final excel file were reviewed by a second reviewer (CH) and discussed by the review team.

***Phase 6: Synthesising translations (developing a line-of-argument synthesis).*** Similar to primary qualitative research moving from descriptive to explanatory, this phase involves moving from translations (produced in Phase 5) to a higher order interpretation, or a 'line-of-argument' (Atkins et al., 2008) and creating a whole picture which represents more than the individual parts alone imply (Noblit & Hare, 1988). Steps involved in this phase are detailed in Table 3.1. Third-order constructs (categories of findings/metaphors generated by the reviewer), themes (text explaining constructs and how they relate) and

the conceptual model (Figure 3.2) were derived inductively. The process was reviewed by members of the review team (CH, CK), who offered alternative views and interpretations. Themes and conceptual maps were refined following team discussions (HW, CH, CK).

**Phase 7: Expressing the synthesis.** The line-of-argument synthesis was expressed by writing a summary of each theme (outlining the five constructs and relationships between them), supported by both first order (participant) and second order (author) quotes from primary studies, and by developing a conceptual model which illustrates the relationships between constructs. The purpose of this review is to contribute to our theoretical understanding of fussy eating behaviours, therefore it is targeted at an academic audience. It is expected that findings will also be applicable to policy makers, practitioners and intervention developers.

GRADE-CERQual (Confidence in the Evidence from Reviews of Qualitative Research) (Lewin et al., 2018) was used to assess the extent to which the findings from the synthesis (i.e. relationships between constructs illustrated in the conceptual model) are a reasonable representation of the phenomenon of interest based on methodological limitations, coherence, adequacy and relevance of the data supporting each finding. Confidence in each finding is indicated in Figure 3.2 and additional information is provided in Table 3.5. Qualitative Meta-Analysis Reporting Standards (QMARS) (Levitt et al., 2018) guidelines were consulted to ensure American Psychological Association (APA) guidelines for reporting qualitative meta-analytic research were met. Specific guidelines for reporting meta-ethnography (eMERGe (France, Cunningham, et al., 2019)) and for enhancing transparency in reporting the process of synthesising qualitative research (ENTREQ (Tong et al., 2012)) were also followed. It was also ensured that the report was representative of the original research articles by grounding findings in the texts by providing supporting quotes and referring to the contexts of original studies throughout (Campbell et al., 2011).

## Results

**Study characteristics.** As can be seen in Figure 3.1, ten studies were included in the final review. The characteristics of these studies are presented in Table 3.4. Studies represented a total of 372 parents or primary caregivers from 8 datasets (studies E and F used the same dataset, and studies I and J used the same dataset). One study (C)

represented mothers only. All other studies included both female and male caregivers, however only 29 fathers took part (approx. 8% of the total number of participants). Seven studies (from 6 datasets; A, B, C, D, E/F, G) focused on pre-school children aged between 1 and 5 years. Three studies (from 2 datasets; H, I/J) focused on a broader age-range including parents of children aged 1.5-21 years. Half of the studies focused on low-income families or geographical areas of deprivation (A, B, C, I/J), and half represented diverse socio-economic backgrounds (D, E/F, G, H). Two of the included studies (C & H) were mixed-method studies, and in these cases only qualitative findings were included. Study D included both infants (<1 year) and toddlers (>1 year), however, only sections of the paper relating to the toddler group were included in this review.

Table 3.4.

*Characteristics of Original Qualitative Studies Synthesised in this Review*

<b>Study</b>	<b>Country and Author Disciplines</b>	<b>Age Group Targeted</b>	<b>Sample/ Population</b>	<b>Aims/Objectives</b>	<b>Data Collection, Analysis, &amp; Summary of Interview Guide</b>	<b>Quality Appraisal<sup>a</sup></b>	<b>Key Findings Reported by Primary Study Authors</b>
<b>Study A</b> Rubio et al. 2017 (Rubio & Rigal, 2017)	France Psychology	Pre-schoolers 18-38 months	38 parents (35 mothers, 3 fathers) General community sample Low-moderate income Recruited through day care centres	To explore parental concerns about their toddler's pickiness and its consequences for parent-child relationship and family meals. To understand parental attributions of food pickiness and to investigate how parents manage their children's food refusals.	Focus groups Thematic analysis Interview guide: Onset of child's eating difficulties, parental perceptions and beliefs, parental strategies and food practices	Moderate	The majority of parents report changes in food behaviours. Parents feel responsible. Picky eating causes parental anxiety and guilt. Attributions include opposition. Variety of different practices including repeated exposure and modelling, rewards for eating.
<b>Study B</b> Goodell et al., 2017 (Goodell et al., 2017)	US Nutrition Sciences; Pediatrics; Human Development	Pre-schoolers 3-5 years	111 primary caregivers (104 female, 6 male, 1 chose not to answer) Low-income African American and Hispanic parents Recruited from Head Start Centres	To determine parent feeding strategies used to influence child acceptance of previously rejected foods.	Focus groups Thematic analysis Interview guide: Several topics relating to child feeding and mealtimes including: what strategies do parents use to influence their children to like previously rejected foods?	High	Parents often do not serve previously rejected foods. Parents value their child eating over liking a food. Parents rarely use the same feeding strategy more than once for a previously rejected food. Parents wish to reduce waste, save time, and ensure children eat enough for adequate growth.
<b>Study C</b>	UK	Pre-schoolers	29 mothers	To explore mothers' use of overt and covert control	Mixed method Focus groups	High	Feeding young children is stressful. Parent control is



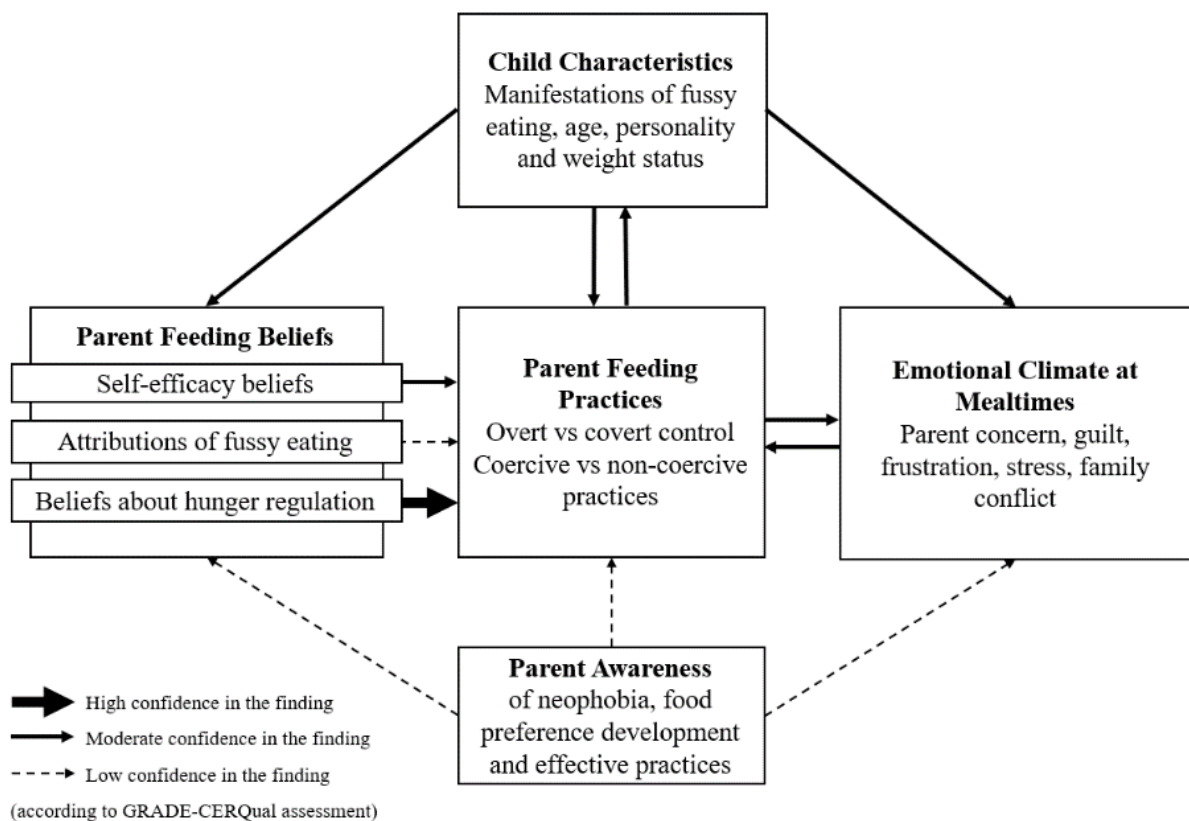
Jarman et al., 2015 (Jarman et al., 2015)	Lifecourse Epidemiology; Nutrition Biomedical Research; Psychology; Musculoskeletal Biomedical Research	18 months – 5 years	Socially deprived area Purposive sampling	practices (and relationship with neophobia). Specifically, what do mothers say about controlling their children’s eating habits?	Thematic analysis Interview guide: Not provided		often relinquished to reduce conflict at mealtimes.
<b>Study D</b> Harris et al, 2018 (Harris, Ria-Searle, et al., 2018)	Australia Children’s Health; Exercise & Nutrition Science; Social Science	Pre-schoolers 1-4 years	6 parents of children >1 year (5 female, 1 male) General sample, mix of low and high socio-economic status	To characterise parents’ presentation of fussy eating and mealtime interactions at a point of crisis.	Calls to a help-line Inductive thematic analysis Interview guide: n/a	Moderate	Parents of toddlers presented emotional accounts of feeding, portrayed their child’s eating behaviours as a battle and child agency over intake/variety as ‘bad’ or ‘wrong’. Escalating concern evoked non-responsive feeding practices.
<b>Study E</b> Russell et al., 2013 (Russell & Worsley, 2013)	Australia Exercise & Nutrition Sciences	Pre-schoolers 2-5 years	57 parents (49 female, 8 male) General community sample recruited from a range of SES background Purposefully selected from survey participants	To describe parents’ beliefs (attributions and self-efficacy) about the origins of children’s food preferences that may influence parental feeding behaviours. To examine differences between parents of children with healthy preferences, unhealthy preferences and neophobia.	Interview Content analysis Interview guide: describe child’s likes and dislikes, influences of preferences, how much preferences change over time, how much influence parents have over child preferences	Moderate	Attributions of food preferences include child characteristics, sensory attributions, and socialisation experiences. Beliefs (and self-efficacy) differ between parents of children with healthy preferences, unhealthy preferences, and neophobia supporting the idea of causal links between parent beliefs, behaviours, and child characteristics.

<b>Study F</b> Russell et al., 2015 (Catherine G. Russell et al., 2015)	Australia Health; Exercise & Nutrition Sciences	Pre-schoolers 2-5 years	57 parents (49 female, 8 male) General community sample recruited from a range of SES background Purposefully selected from survey participants	To describe behaviours used by parents to influence children's food preferences. To examine differences between parents of children with healthy preferences, unhealthy preferences and neophobia.	Interview Content analysis Interview guide: behaviours used to influence children's preferences (likes and dislikes), whether methods were effective and why	Moderate	Parents used diverse behaviours to influence their child's food preferences. Parents of children with healthy preferences appeared to use more effective feeding behaviours. Parents of children with unhealthy and neophobic preferences appeared to use more ineffective behaviours.
<b>Study G</b> Norton et al., 2016 (Norton & Raciti, 2016)	Australia Business	Pre-schoolers 1-2.5 years	24 parents (23 female, 1 male) General community sample recruited from range of socio-economic areas Snowball sampling and purposeful selection	To explore primary caregivers' awareness of food neophobia and how food preferences develop in young children.	Interview and projective technique drawings Cross case analysis Interview guide: history of child's eating, foods that should be provided to a child on an everyday basis, other foods. Drawings of crying child in a trolley and child making a mess in a highchair.	Moderate	Primary caregivers are unaware of food neophobia and food preference development in young children.
<b>Study H</b> Boquin et al., 2014 (Boquin et al., 2014)	US Food Science & Human Nutrition; Market Research	Children 18 months – 21 years	19 parents (14 female, 5 male) General sample	To investigate perceptions of picky eating. To determine the most predictive elements that people use to describe a picky eater.	Mixed method Focus groups Analysis method described but not specified Interview guide: describe mealtimes, picky eating perceptions, definitions and characterisations.	Moderate	Fussy eaters display before mealtime behaviours (being uninterested or avoidant), during mealtime behaviours (being disengaged, uninvolved, distracted, carefully inspecting food, having strong physical reactions to foods), general mealtime preferences, and food sensory-dependent preferences. Top two

							perceptions of picky eating: 1) unwilling to try new things, 2) consuming limited type and amount of food.
<b>Study I</b> Trofholz et al., 2017 (Trofholz et al., 2017)	US Family Medicine & Community Health	Children 2-18 years	88 parents (83 female, 5 male) Racially and ethnically diverse Low-income sample Recruited from previous study	How do parents describe child picky eating? How do parents perceive picky eating to impact the family meal? How do parents report responding to picky eating in the family meal?	Interview Content analysis Interview guide: what kind of eater child is, how eating impacts meal, how picky eating affects the family, what happens if child doesn't want to eat what is prepared, how parents influence what child eats.	High	Children are frequently described as picky eaters, parents define picky eating in a variety of ways, picky eating impacts the family meal (stress, meal preparation), parents respond in a variety of ways.
<b>Study J</b> Berge et al., 2016 (Berge, Trofholz, Schulte, Conger, & Neumark-Sztainer, 2016)	US Family Medicine & Community Health; Human Development & Family Studies; Epidemiology & Community Health	Target children 6-12 years Siblings 2-18 years	88 parents (83 female, 5 male) Racially and ethnically diverse Low-income sample Recruited from previous study	How do parents describe their approach to feeding siblings? Do parents engage in different feeding practices based on child-specific characteristics (weight, picky eating, age, sex, temperament)?	Interview Content analysis Interview guide: what it is like to be a parent of 2 (or more), how you decide what to feed your children, how do you feed them (similarly and differently), role as a parent during mealtimes, how you influence what siblings eat (child characteristics)	High	Food preferences, in-the-moment decisions and planned meals influence decisions about what to feed siblings. Picky eating is managed by making 1 meal or by giving leeway to siblings about having other food options. Parents used different feeding practices.

<sup>a</sup>JBI Critical Appraisal Checklist. Assessment is based on 10 items regarding congruity between authors' philosophical perspective, methodology, methods, research question and data analysis, the interpretation of results, the influence of the researcher on the research, adequate representation of participant's voices, ethics, and conclusions drawn from the analysis. Moderate indicates a score of 5-7. High indicates a score of 8-10.

**Line-of-argument synthesis (building a whole picture from the individual parts).** Translating the ten studies into one another (Phase 5 of the analysis) produced 54 metaphors (individual findings identified by the primary study authors). In Phase 6 of the analysis, the first reviewer (HW) grouped similar metaphors together to produce 21 third-order constructs (sub-categories identified by the reviewer). These third-order constructs were categorised further (by HW), to produce five main constructs (child characteristics, parent feeding beliefs, parent feeding practices, emotional climate at mealtimes and parent awareness of neophobia, food preference development and effective practices). Five themes were developed that explain these constructs and how they relate to one another. Together, the final five constructs and five themes form an overall line-of-argument synthesis represented by the conceptual model in Figure 3.2.



*Figure 3.2.* Conceptual model illustrating 5 constructs (and how they relate to one another) generated by a secondary analysis of findings in recent qualitative studies

Overall, this model describes and explains the family experience of fussy eating behaviours (as indicated by the current qualitative literature), and proposes relationships between childhood fussy eating behaviours, parent feeding beliefs, parent feeding

practices, mealtime emotions and parent awareness of food preference development. As highlighted in the model, there is higher confidence in some relationships over others, indicating better quality (and quantity of) data supporting these findings, as assessed using the GRADE-CERQual assessment tool (Lewin et al., 2018). The GRADE-CERQual assessment for each finding is detailed in Table 3.5.

The five themes below provide an in-depth explanation of each of the constructs and relationships identified in Figure 3.2. Studies are referred to as Studies A-J in the order that they were translated into one another (Phase 5 of the analysis), and in the order presented in Table 3.4. Quotes in regular font represent second order (author) interpretations, and quotes in italics represent first order (participant) interpretations.

**Theme 1. Manifestations of fussy eating behaviours.** Studies indicated that a significant group of parents experience changes in their toddlers' eating behaviours such as food refusal and pickiness (Studies A, G, H, I). Study C, which focused on eating habits and control practices of mothers in an area of social deprivation, reported that "fussy eating or neophobic tendencies seemed to be the main [feeding] issues" (C). Fussy eating behaviours often began in toddler years (Studies A, E, G, H) and appeared suddenly with no explanation (A, E) "*He used to eat everything and overnight he started to be difficult*" (A). Although some parents of younger children expected fussy eating to improve with age (E), this synthesis found that across studies with parents of older children (H, I, J) fussy eating behaviours were still common, and parents of older picky eaters said that "*their children's food preferences/avoidances lasted as the children got older*" (H).

Although some studies highlighted the impact of fussy eating behaviours on certain food groups such as vegetables and meats (A, H, I), data across studies demonstrated that all food groups could be affected, including foods such as vegetables, fruit, dairy, meat, eggs, sauces, pizza and burgers (Studies A B, E, H, I). In particular, issues were reported in relation to new foods (A, E, H, I), "*she's kind of picky when it comes to trying things new*" (I). Parents referred to both a limited intake of foods (D, H, I, J) "*I don't think she eats enough*" (J) and a limited variety (A, D, H, I), "*he won't eat fruit, he won't eat vegetables, he won't eat potatoes, he won't eat meat*" (D). Fussiness also manifested as frequent changes in preferences (E, I), requiring particular preparation or presentation ("*he'll have the noodles in a separate bowl*" (E)) (E, H, I), general disinterest and avoidance of food (H), and variability in behaviours depending on context

(e.g. “*the meal goes better with his grandparents*” (A)) (A, E). Study A reported specific fussy eating behaviours or reactions to foods displayed by pre-schoolers, which were supported by participant quotes in other studies of both younger and older children. These behaviours included inspecting and picking out foods on the plate (A, H, I), expressing dislikes through verbal reactions (A, B, E, F, G, I, J), gestural reactions such as pushing the plate away (A, C) and mouth-based reactions such as spitting or gagging (A, H).

**Theme 2. Child characteristics and parent feeding practices.** As can be seen in Figure 3.2, there was moderate confidence in a relationship between child characteristics (including fussy eating behaviour) and parent feeding practices, and both parents and children changed their behaviours in response to each other.

In response to the child’s fussy eating behaviours described in Theme 1 above, parents used a wide range of parent feeding practices in an attempt to influence their child’s eating behaviour. These included practices such as covertly influencing food availability and role modelling as well as more coercive practices such as pressure to eat and using rewards or punishments (Studies A, B, C, D, E, F, G, H, I, J). Parents tried different strategies across and during meals (B) with differing levels of success (B, C, F, H, I, J). Parent feeding practices were widely discussed across studies, with the assumption that they influence children’s eating behaviours. For example authors referred to parent feeding practices as strategies “to overcome their children’s food refusal” (B) or “to influence their children’s food preferences” (F). However, the secondary analysis of the data presented in these studies revealed a limited number of specific examples (or quotes) illustrating changes in child eating behaviours as a result of parent feeding practices.

Instances of parent feeding practices being successful in overcoming food refusal were observed in six studies (A, B, C, F, I, J) for example “*I make her taste everything...I had her taste some chicken today, ‘It looks nasty!’ But she loved it*” (I) and “*she was like ‘oh, what’s this green stuff’ but now she eats it quite happily. So that’s taken about four weeks to wean her into that*” (F) and “*I cook with her, it works incredibly well*” (A). On the other hand, three studies provided specific examples of parent feeding practices reinforcing and maintaining the child’s fussy eating behaviours (D, E, F). For example, Study E reported that children disliked some foods “because they had been offered an

alternative to eating them when they had originally expressed a dislike” and that parents believed that indulging children’s desires increased their dislike of rejected foods.

There were more specific examples and quotes illustrating changes in parent feeding practices due to their child’s fussy eating behaviours and other characteristics including individual tastes, weight, personality and age (A, B, C, E, F, G, H, I, J). This was particularly evident in Study J which focused on how parents feed siblings similarly or differently. Approximately half of the parents in this study reported feeding siblings differently (e.g. by using pressure) depending on their individual characteristics (such as weight), for example ““*you need to eat it, eat it all.*” *Because I don’t think she eats enough...she is too skinny compared to her sister*” and “*I feed them [siblings] different because they have different personalities and food preferences*” (J). This was also evident in Study E when a parent’s response was influenced by the child’s personality (“*There’s no point fighting with him ‘cos he’s as stubborn as they come*”). Other studies emphasised that a parent’s use of feeding practices (e.g. repeated exposure or offering alternatives) was affected by whether their child had accepted or rejected the food in the past, and the “parent’s ability to cope with their child’s reactions to foods” (F). For example “*I’ve got children that attack each other, are disrespectful and trash the home. So really one more fight about food, I’m not up for it*” (C). Parents’ ability to cope with children’s food refusals was also impacted by time constraints and concern about food waste (B, F, I, J), which was particularly evident in low-income samples. For instance mothers in Study B reported not offering previously rejected foods because “*Ma don’t have time for this...I can’t afford for you [child] to go to bed hungry*” and “*I won’t give [previously rejected foods] to her. I don’t want to waste it*” (B).

***Theme 3. Fussy eating behaviours, parent feeding practices and emotional climate at mealtimes.*** This synthesis identified two ways in which fussy eating contributes to negative mealtime emotions. It was found that fussy eating can directly relate to parents’ negative emotions and can also contribute to negative mealtime emotions via parent feeding practices.

There was moderate confidence based on a GRADE-CERqual assessment (See Table 3.5), that these fussy eating behaviours can have a direct impact on parent emotions such as concern, frustration and guilt (A, C, D, H, I). For example, one study reported that “parents were afraid that the lack of food diversity might prevent their child growing”

(A). High levels of concern were evident across many studies (A, B, D, H plus additional quotes in E, F, I, J). Specific fussy eating behaviours (described in Theme 1) were also associated with negative emotions. For example, one parent said *“I find it very hard...she will push her plate away and she will have a real tantrum and she won’t eat. And that, really, well, it does get to me”* (C).

In addition to a direct relationship between fussy eating behaviours and parents’ emotions, the GRADE-CERQual assessment indicated moderate confidence that parent feeding practices (described in Theme 2) relate to the mealtime emotional climate, and that parents adjust their practices to reduce stress and conflict.

For example, pressuring or forcing a child to eat was associated with a negative mealtime environment and tricky parent-child relationships (Studies A, F) *“we have screaming matches sitting at the table for three or four hours”* (F). Catering to children’s requests and cooking alternative meals was also considered stressful (F, I, J) *“It can be stressful, especially if I had a busy day...it can be kind of stressful when I have to cook something totally different...because she’s very picky”* (I). In contrast to this, some parents reported accommodating children’s preferences to be rewarding and to result in less conflict (H) and positive emotions *“It’s work, but it’s a lot of fun work, you know, and I just like to see them happy eating. It does my heart good, yeah”* (J). Although 56 out of 88 participants in Study I reported having a fussy eater, only 36 parents found it was disruptive to family meals, indicating a significant group exists who do not find fussy eating disruptive. There was insufficient data to explain why it was not disruptive in many cases, but authors suggested this may be due to parent feeding practices and the way parents have adapted to fussy eating behaviours, or this may reflect less severe fussy eating behaviours (e.g. refusal of a few foods) that are not perceived to be frustrating by parents (J).

This idea that parents adapt their practices to avoid conflict and stress at mealtimes was supported by many studies (B, C, D, F, H, I, J). Parents changed their practices to reduce stress levels. For example one parent said *“I used to make different meals for the kids but it took too much time and was really stressful for me. No, we don’t do that, not anymore”* (J). High levels of conflict often resulted in parents relinquishing control and catering to child requests (B, C, I) for example *“if the kid straight up won’t eat and she’s been screaming and yelling at you for an hour, we give in”* (I). In addition, practices were



also associated with other emotions such as concern and anxiety, for example authors of Study D stated that “escalating parent anxiety (parent concern) had evoked parent non-responsive feeding practices or provision of foods the child preferred”.

***Theme 4. Fussy eating behaviours, parent feeding beliefs and parent feeding practices.*** By synthesising findings across studies, three key beliefs were identified that relate to parent feeding practices in the context of fussy eating: self-efficacy beliefs, attributions of fussy eating, and beliefs about hunger regulation. These parent beliefs likely develop in response to a child’s eating behaviours (Studies A, D, E, H, I), for example if a parent is faced with a highly fussy eater, they may experience low self-efficacy, may attribute fussy eating to child characteristics like sensory sensitivity and may start to believe that their child cannot regulate their own hunger.

*Self-efficacy beliefs.* Parents’ beliefs about their ability to influence their children’s eating behaviours varied. In several studies, authors indicated that some parents experienced low self-efficacy or feelings that they were doing something wrong (Study A, D, E). Low self-efficacy was also evident in some participant quotes in studies B, I, and J, for example one parent said “*I just didn’t bother to give [it] to him...I knew he wasn’t going to eat [it]*” (B). In contrast, some parents expressed higher self-efficacy, reporting higher feelings of control over their child’s behaviours (E, F). In one study, authors indicated that parents felt more able to control food intake than preferences (E), and more able to get children to like foods, than to dislike foods “*you can overcome dislikes. But with likes, there are some things they’re going to like regardless*” (E/F). Parents “internalised the child’s food intake as a reflection of their own parenting” (A, D), indicating that the way fussy eating manifests (e.g. limited variety or quantity described in Theme 1) may impact parents’ self-efficacy beliefs.

*Attributions of fussy eating.* Parents frequently attributed fussy eating to sensory sensitivity or sensory characteristics of food such as taste, texture, appearance and smell (A, D, E, H, I); “*she doesn’t like strong flavours* (A); “*he really don’t like mushy food*” (I). Fussy eating behaviours were also attributed to non-modifiable factors such as child temperament, personality (A, E), and innate or universal preferences (E, F) (“*It’s her nature*” (A) “*Generally speaking children start off liking a lot of plain foods and probably sweet foods*”(E)). In addition, fussy eating was attributed to modifiable environmental factors such as parent socialisation, peer and TV influence (E, H), depicting the belief

that “*you can educate your taste buds*” (E) (E, H). Again, these attributions likely relate to how a child’s fussiness manifests (A, D, E, H, I) (Theme 1). For example in Study H, the rejection of foods mixed together on the plate was attributed to sensory sensitivity “parents described a picky eater as one who would not eat foods that are mixed...parents thought...the food combination may generate a sensory overload” (H), and in Study E this characteristic of fussy eating was attributed to personality traits (“*obsessive, compulsive sort of personality are the ones like, it has to be arranged on the plate like this and it can’t touch*”) (E).

*Beliefs about hunger regulation.* Finally, regarding hunger regulation, the belief that “*you can’t let them starve*” (B) and “*eating something is better than nothing*” (G) was highlighted by some study authors (B, D, G) and evident in participant quotes (A, I, J). In contrast to this, other parents were not concerned about letting their children get hungry and believed “*the child would eat, if and when they became hungry enough*” (I) (“*And if they don’t eat it, that’s fine...he’ll be hungry, not me*”) (I).

*Feeding beliefs and feeding practices.* These beliefs regarding self-efficacy, attributions and hunger regulation were associated with the use of different feeding practices. For example, authors highlighted the role of self-efficacy in implementing certain practices (such as not purchasing undesirable foods) (C, E, F and this relationship was evident in participant quotes in studies B, I and J). Parent attributions may relate to their feeding practices (A, E, F) although there was a lack of rich data to support this relationship and a reliance on second and third order interpretations, resulting in lower confidence in this finding. For example, parents may modify or disguise foods if they believe their fussy eater is sensitive to certain sensory properties of foods such as the taste, texture or colour of foods (A, B, F) “*I sneak green beans in the meatballs, and he’ll ask for a second helping*” (B) Practices such as repeated exposure to disliked foods and role-modelling may be more likely if parents attribute fussy eating to modifiable environmental influences such as parent socialisation (e.g. “*if there is something she doesn’t like, I have to offer it again over the following weeks until she eats it*”) (A). Finally, GRADE-CERQual indicated high confidence that parents’ beliefs about hunger regulation relate to their feeding practices, as this finding was reported across multiple studies (A, B, D, G, I, J). For example, offering alternative meals was associated with the belief that it is better to eat something rather than nothing (“*We’ll get some KFC but we’ll have to go to McDonalds and get them nuggets! (laughs)...so I’d rather them eat*

*something than nothing*” (G)), whereas if parents were not concerned about children getting hungry they may be more likely only cook one meal (“*my role is, if I cook dinner and you don’t like it, then you don’t eat. So if she doesn’t like it then she doesn’t eat anything*” (I)).

The associations between child preferences, parent beliefs, and parent feeding practices were particularly evident in Studies E and F (using the same data set), which compared the beliefs and practices of parents with children in healthy preference, unhealthy preference and neophobic groups. Parents of children with healthy preferences had higher self-efficacy, were more likely to report the role of parent socialisation in influencing children’s preferences (“*it’s got a lot more to do with the environment around them and what they see other people doing*” (E)), and were more likely to use effective practices (“*we eat together, we eat the same food*” (F)). On the other hand, parents of children with unhealthy and neophobic preferences were more likely to have low self-efficacy (“*I can’t control what he likes*”(E)), report child factors like sensory sensitivity and stubbornness as influences of children’s preferences (“*I think it’s the texture of the skin. She doesn’t like the feel of it.*” (E)), and were more likely to report using less effective practices (“*you bribe her in every way possible*” (F)).

***Theme 5. Parent awareness of food preference development and effective feeding practices: Possible associations with beliefs, practices and emotions.*** Parent awareness of food neophobia, food preference development and effective feeding practices was identified as a key metaphor (or finding) in Study G. Authors of this study reported that “primary caregivers of young children are unaware of food neophobia and food preference development” (G). Authors implied that a lack of awareness of how food preferences develop may be related to parents’ belief that eating ‘something is better than nothing’, as well as their use of ineffective practices such as repeated exposure to non-core foods (G). However, as indicated in Figure 3.2, there was low confidence in these findings as there was inadequate data to identify a clear relationship between these constructs. These beliefs and practices may also be explained by other factors (e.g. health concerns, desire to avoid conflict). In addition, this lack of awareness of food preference development may only be applicable to certain participant groups, such as parents of very young children (G).

Although there was limited data to support the finding, Study A also reported a change in children's eating behaviours as sudden and unexpected "*He used to eat everything and overnight he started to be difficult*" (A) which may indicate that parents are unaware that these changes are likely to occur. Lack of awareness that these behaviours are, in fact, typical may lead parents to experience high levels of concern and guilt, "*He'll get vitamin deficiency*"; "*Each time I wonder what I did wrong*" (A). In contrast, other parents did refer to food preference development "*their food preferences are actually emerging*" (A) and the use of effective practices such as role modelling and repeated exposure (A, F, G). Studies, particularly including parents of older children, provided examples of parents learning effective practices through trial and error (F, H, I, J) ("*I've done it before, and found out that that wasn't the best way so I don't, don't make separate meals anymore*" (J)). Comparing these findings across studies indicates that awareness of neophobia, food preference development and effective practices varies significantly between parents and may develop over time as parents become more experienced. However, this theme relies on 3<sup>rd</sup> order (reviewer) interpretations, and further exploration regarding the role of parent awareness of food preference development and effective practices in contributing to the family experience of fussy eating behaviours is warranted.

Table 3.5.

*GRADE-CERQual Assessment: Confidence that Relationships in the Model are a Reasonable Representation of the Phenomenon of Interest*

Summary of Review Finding (Relationship in Figure 3.2)	Studies Contributing to Review Finding	Methodological Limitations <sup>a</sup>	Coherence <sup>b</sup>	Adequacy <sup>c</sup>	Relevance <sup>d</sup>	CERQual Assessment <sup>e</sup>	Explanation of CERQual Assessment
<b>Theme 1 &amp; 2: Child characteristics (including fussy eating behaviours) and parent feeding practices</b>							
Parent feeding practices have an impact on child fussy eating behaviours (either by overcoming, or reinforcing behaviours).	A, B, C, D, E, F, G, I, J	No or very minor concerns that all coded parent feeding practices were adequately reported in Study B. However finding is reported across studies with diverse methods.	Minor concerns due to some cases where parents do not effectively influence the child and the possible influence of other factors such as knowledge and self-efficacy (D, E, G).	Minor concerns that although impact of parents on child behaviours are often assumed by authors, there was a lack of quotes illustrating direct effectiveness of parent feeding practices on child fussy eating behaviours (A, C, D, G, I).	Minor concerns that this finding is specific to mothers. Some studies have a broader focus (e.g. on food preferences rather than fussy eating specifically). This finding was represented across diverse countries, contexts, income levels, ethnicities, and age-groups.	<b>Moderate confidence:</b> It is likely that the review finding is a reasonable representation of the phenomenon.	There are some minor concerns regarding some disconfirming cases, potential influence of other factors, the lack of examples illustrating the effectiveness of practices, and that this finding is specific to mothers. However this finding was reported across diverse contexts.

Child characteristics (including pickiness, weight and temperament) impact parents' use of parent feeding practices.	A, B, C, E, F, G, H, I, J	No or very minor concerns. This finding was reported across many studies with different data collection and analysis methods.	Minor concerns that in some cases the relationship may be explained by other factors (such as concern and conflict) (A, B) and some disconfirming cases where parents do not feed siblings differently (J).	Minor concerns regarding lack of specific examples/quotes in some studies (A, C, E, G, H).	No or very minor concerns that this finding is specific to mothers. This finding was identified across diverse countries, contexts, income levels, ethnicities, and age-groups.	<b>Moderate confidence:</b> It is likely that the review finding is a reasonable representation of the phenomenon.	Despite minor concerns regarding some disconfirming cases, the potential influence of other factors, and lack of examples/quotes in some studies this finding was identified across many studies with diverse methods and contexts.
<b>Theme 3: Fussy eating behaviours, parent feeding practices and emotional climate at mealtimes</b>							
Manifestations of fussy eating (such as limited variety or quantity of food, and gestures such as pushing the plate away) are directly related to negative parent emotions such as frustration and concern.	A, C, D, H, I	Minor concerns that focus groups in studies A, C, H may impact parents' discussions regarding emotions and parents may provide more emotional accounts when calling a helpline (D).	Minor concerns that fussy eating may not always contribute to negative emotions and may depend on other factors such as parent feeding practices and severity of fussy eating (H).	Minor concerns regarding lack of quotes supporting this finding (C, H) and lack of explanation of disconfirming cases in which mealtime emotions were not impacted by fussy eating behaviours (I).	No or very minor concerns. Finding may be specific to mothers. Studies focus on impact of fussy/picky eating and represent diverse countries, contexts, income levels, ethnicities, and age-groups.	<b>Moderate confidence:</b> It is likely that the review finding is a reasonable representation of the phenomenon.	Although there are some minor concerns regarding the impact of data collection methods on discussions of emotions, the potential influence of other factors, and a lack of supporting quotes in some studies, this finding was reported across diverse contexts.

Parent feeding practices relate to the emotional climate at mealtimes (for example pressure to eat may be associated with conflict).	A, F, H, I, J	No or very minor concerns regarding use of focus groups (A, H) which may impact discussions about emotions.	Minor concerns that this is an over simplified finding and the direction of influence is not clear in some examples (H), and there are some disconfirming cases (I).	Minor concerns regarding richness of data contributing to this finding in some studies (A, H).	Minor concerns that this finding is specific to mothers. This finding was identified across diverse countries, contexts, income levels, ethnicities and age-groups.	<b>Moderate confidence:</b> It is likely that the review finding is a reasonable representation of the phenomenon.	Despite minor concerns that this is an over-simplified finding, and thin data in two contributing studies this finding was identified across diverse contexts.
Emotional climate at mealtimes (such as concern, anxiety, conflict and stress) impacts parents' choice of parent feeding practices (e.g. cooking alternative meals).	B, C, D, F, H, I, J	No or very minor concerns (regarding influence of focus groups and calls to helpline on reporting emotions). However the finding was reported across studies with diverse methods.	Minor concerns due to some disconfirming cases where parents are persistent in their practices and not influenced by conflict/emotions) (I, J).	Minor concerns regarding lack of specific examples/quotes and reliance on author interpretations in some studies (D, H).	Minor concerns that this finding may be specific to mothers however this finding was identified across diverse countries, contexts, income levels, ethnicities and age-groups.	<b>Moderate confidence:</b> It is likely that the review finding is a reasonable representation of the phenomenon.	Although there were some concerns regarding some disconfirming cases and lack of specific examples/quotes this finding was identified across diverse contexts.
<b>Theme 4: Fussy eating behaviours, parent feeding beliefs and parent feeding practices</b>							
Manifestations of fussy eating relate to parent feeding beliefs (for example, if a child refuses mushy food, fussy eating may be attributed to sensory sensitivity, or if a parent is faced with a highly neophobic child, they	A, D, E, H, I	No or very minor concerns.	Minor concerns that the direction of the relationship is not always clear and is not explicitly stated in some studies.	Minor concerns regarding reliance on second and third order interpretations in some studies.	No or very minor concerns that this finding is specific to mothers. These studies are relevant to this finding focusing on descriptions and attributions of fussy eating.	<b>Moderate confidence:</b> It is likely that the review finding is a reasonable representation of the phenomenon of interest.	There are minor concerns as this relationship is not explicitly stated in some studies and there is a reliance on second and third order interpretations.

may experience lower self-efficacy).							
Parent self-efficacy relates to parent feeding practices.	B, C, E, F, I, J	No or very minor concerns that focus groups in studies B & C may impact discussions on self-efficacy.	Minor concerns that the relationship could be explained by other factors (e.g. child's response to foods).	Minor concerns regarding adequacy of specific quotes illustrating this finding, and reliance on second order (author) and third order (reviewer) interpretations from studies E and F.	Minor concerns that this finding is specific to mothers, and that only one study specifically focuses on self-efficacy.	<b>Moderate confidence:</b> It is likely that the review finding is a reasonable representation of the phenomenon of interest.	There are minor concerns that this finding is over simplified and also influenced by other factors. Only one study specifically focused on self-efficacy (E) so there is a reliance on second and third order interpretations.
Attributions (perceived influences) of fussy eating relates to parent feeding practices.	A, E, F	No or very minor concerns.	Minor concerns that this is an oversimplified finding as there as some disconfirming cases (E).	Moderate concerns regarding reliance on second and third order interpretations with limited quotes clearly illustrating a link. There are a small number of studies contributing to this finding.	Minor concerns that this finding is specific to mothers of pre-schoolers.	<b>Low confidence:</b> It is possible that this review finding is a reasonable representation of the phenomenon of interest.	There were some disconfirming cases, and a reliance on second and third order interpretations as well as a limited number of studies contributing to this finding.
Beliefs about hunger regulation relate to parent feeding practices. For example, parents who believe it is the	A, B, D, G, I, J	No or very minor concerns.	No or very minor concerns that different definitions of fussy eating in study I may impact	Minor concerns regarding reliance on author interpretations (D) and the lack of	No or very minor concerns that this finding is specific to mothers.	<b>High confidence:</b> It is highly likely that the review finding is a reasonable	Although there were minor concerns regarding the data adequacy in some



parents' responsibility to ensure their child eats ("you can't let them starve") may cook alternative meals. However, parents who believe it is the child's responsibility to regulate their hunger levels ("they will eat when they are hungry") are more likely to just cook a meal.		the extent to which parents have to adapt a meal in order for their child to eat.	specific examples/quotes in some studies (A, G).	representation of the phenomenon.	studies, and that this finding may be specific to mothers, this finding was reported across studies representing different countries, age groups, ethnicities, and income levels.
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**Theme 5: Parent awareness: Possible associations with beliefs, practices and emotions**

Parents' lack of awareness of neophobia, food preference development and effective practices relates to their feeding beliefs, practices, and emotions.	A, G	Minor concerns that purposeful sampling (G) and narrow age range (1-2.5 years) may result in the selection of parents who are less aware of neophobia, food preference development and effective practices.	Moderate concerns regarding potential for other factors to explain the relationship and insufficient data to fully explain this finding.	Moderate concerns regarding richness and quantity of data to support this finding, as well as a limited number of studies contributing to this finding.	Minor concerns that this finding may be specific to parents of young children, and only one study (G) specifically focused on parent awareness.	<b>Low confidence:</b> It is possible that this review finding is a reasonable representation of the phenomenon of interest.	There were moderate concerns regarding coherence and data adequacy. In addition this finding was only identified in studies with parents of young children so may not be generalizable to all parents.
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<sup>a</sup>**Methodological limitations:** Concerns about the design or conduct of primary studies that contribute evidence to an individual review finding; <sup>b</sup>**Coherence:** how clear and cogent the fit is between the data and a review finding; <sup>c</sup>**Adequacy:** The degree of richness and quantity of data supporting a review finding; <sup>d</sup>**Relevance:** Extent to which the body of evidence is applicable to the context specified in the review question; <sup>e</sup>**CERQual assessment** categories: high confidence, moderate confidence, low confidence, very low confidence (Lewin et al., 2018).

## Discussion

In this study, ten recent qualitative studies on childhood fussy eating were reviewed and the findings of these studies were synthesised. Meta-ethnography was used (Noblit & Hare, 1988), involving a secondary analysis of the data presented in these studies. A conceptual model (Figure 3.2) was produced illustrating the relationships between child characteristics (including fussy eating), parent feeding beliefs, feeding practices, mealtime emotions and parent awareness of food preference development that have been proposed in the current qualitative literature.

In Theme 1, perceptions of fussy eating behaviours across ten qualitative studies were synthesised. A strength of the meta-ethnography approach is to identify and highlight findings hidden amongst individual studies (Noblit & Hare, 1988). In addition to the limited intake and variety of food, less commonly reported characteristics of fussy eating were identified such as frequent changes in preferences (Russell & Worsley, 2013; Trofholz et al., 2017). It is often reported that fussy eating peaks in early childhood (Cardona Cano, Hoek et al., 2015; Cardona Cano, Tiemeier et al., 2015). However, this synthesis demonstrated that fussy eating behaviours were still perceived to be common across three studies of parents with older children (Berge et al., 2016; Boquin et al., 2014; Trofholz et al., 2017), even in general samples not specifically targeting ‘fussy eaters’. This supports findings of some quantitative studies in which fussy eating persisted in later childhood (Mascola et al., 2010).

As illustrated in Figure 3.2, the qualitative literature depicts parent feeding practices as a central component of the family experience of fussy eating behaviour. Authors of studies in this review often used language implying an effect of parent feeding practices on children’s eating behaviours (e.g. ‘strategies used by parents to influence their children’s preferences’). However, the secondary analysis actually found stronger qualitative data (using specific examples and quotes) illustrating changes in parent feeding behaviour due to their child, rather than changes in children’s behaviours as a result of parent feeding practices (both in the short term and in the long term). The findings highlight that parent feeding practices do not exist independently and do not have a unidirectional influence on fussy eating. Instead they are embedded in a complex system, developing over time in response to a child’s

behaviours, mealtime emotions and parent beliefs. This supports the adoption of a relational approach to studying fussy eating, in which both the parent and child are considered to have agency in contributing to the feeding relationship (Walton et al., 2017). The findings also support findings from other studies that show that genetics and other child factors (Cole et al., 2017; Smith et al., 2017) play a role and fussy eating is not simply a product of parenting practices.

Numerous qualitative and quantitative studies have reported that fussy eating is associated with a negative emotional climate at mealtimes and that it contributes to parent stress and frustration (Emmett et al., 2018; Goh & Jacob, 2012; Mitchell et al., 2013). The synthesis of qualitative studies identified two distinct ways in which fussy eating may relate to a poor emotional climate (Theme 3). Firstly, parents reported negative emotions that directly related to their child's behaviour (e.g. child pushing plate away might make the parent feel concerned or frustrated). Secondly, fussy eating contributes to a negative emotional climate at mealtimes via parent feeding practices (e.g. pressure to eat increases conflict, cooking more than one meal increases stress). This distinction may be useful to consider in interventions that focus on emotional support for feeding (Mitchell et al., 2013). Offering strategies that address both parents' internal emotional responses to food refusal (e.g. parent anxiety, frustration) as well as the general mealtime emotional climate (e.g. stress, chaos, family conflict) may be beneficial in information based interventions (Mitchell et al., 2013). The conceptual model (Figure 3.2) also suggests that negative emotions may impact fussy eating, mainly via the effect of negative emotions on feeding practices that reinforce fussy eating behaviours. This supports findings from quantitative work that affective factors (such as maternal psychological distress) are associated with certain parent feeding practices (such as not offering new foods) (Koh et al., 2014). It is possible that these emotions are also driven by parent beliefs, however findings presented in the reviewed qualitative studies did not illustrate a clear relationship between beliefs and emotions.

The synthesis identified three types of parent beliefs evident in the qualitative literature on fussy eating: feeding self-efficacy, attributions of fussy eating, and beliefs about hunger regulation (Theme 4). Self-efficacy has been considered an important factor in feeding, specifically in obesity prevention and breastfeeding research (Campbell et al., 2010;

Chen, Guo, Esquivel, & Chesla, 2018; Nichols, Schutte, Brown, Dennis, & Price, 2009), but less is known about self-efficacy in relation to managing fussy eating behaviour. Although metaphors relating to self-efficacy were identified across multiple studies in this review, only one study specifically aimed to investigate self-efficacy beliefs (Russell & Worsley, 2013). However, the relationships between fussy eating, self-efficacy beliefs and parent feeding practices identified in this synthesis support findings from cross-sectional quantitative studies that have reported higher levels of parent self-efficacy to be associated with increased variety of fruit and vegetables, more effective feeding practices, and lower likelihood of perceiving their child to be a picky eater (Ernawati et al., 2016; Horodyski et al., 2010; Koh et al., 2014). Although self-efficacy was the term used by the original study authors, self-efficacy usually refers to control over one's own behaviour, rather than the ability to influence another's behaviour and implies that a child's food intake and preferences can be controlled. The term 'relational efficacy' that has been proposed in recent parent-child socialisation literature (Kuczynski & De Mol, 2015) may be a more appropriate term in the feeding context.

The GRADE-CERQual assessment (Lewin et al., 2018) also indicated relatively low confidence in the relationship between parent attributions (or beliefs about causes of fussy eating) and feeding practices, due to inadequate data to identify a clear relationship. Research on attributions of fussy eating is relatively new. Although a Parent Attribution for Child Eating Scale has been developed in a hospital feeding clinic setting (Hendy, Williams, Harclerode, & Riegel, 2014), there has not been any quantitative research investigating how parent attributions of typical fussy eating behaviours relate to feeding practices. Therefore, it would be beneficial for future research to investigate both self-efficacy beliefs and parent attributions further, specifically how these beliefs develop and how they relate to parent feeding practices. The GRADE-CERQual assessment indicated higher confidence in the relationship between parent beliefs about hunger regulation and parent feeding practices. This supports findings by Tan & Holub (2011), and Satter's Division of Responsibility model in which supporting the child to regulate their own hunger and food intake is associated with eating competence and wider food acceptance (Satter, 1986, 1995, 2007).

Theme 5 presents a relatively novel and under-researched finding that parent awareness of food preference development relates to their beliefs, practices and emotions. Although there was a lack of rich data resulting in low confidence in this finding in the GRADE-CERQual assessment (Lewin et al., 2018), the synthesis suggests that parents' awareness of neophobia, food preference development and effective practices varies considerably, and that parents' awareness may develop over time as they learn from experience. Knowledge has been associated with feeding practices in previous quantitative research (Damiano, Hart, & Paxton, 2016). However, interventions that have focused on increasing parent knowledge in relation to feeding, for example through information leaflets, have had mixed results (Mitchell et al., 2013). It would be useful for further qualitative research to explore parents' awareness and knowledge of food neophobia, fussy eating and effective feeding practices, sources of parent knowledge (e.g. their own upbringing, experience of parenting, observations of other children/families, health professionals), and the contexts in which information-based interventions may be beneficial.

Together, these five themes form a line-of-argument synthesis, represented by the conceptual model in Figure 3.2. This model illustrates the complex nature of the family experience of fussy eating behaviours. The conceptual model supports some of the findings identified in Lafraire's (2016) model of factors that modulate food neophobia and picky/fussy eating as well as Koh's (2014) conceptual model of variety in fruit and vegetable intake. However, the model includes some additional factors specific to fussy eating (e.g. parent attributions of fussy eating). While previous models have focused on identifying predictors of food intake and eating behaviour (Koh et al., 2014; Lafraire et al., 2016), the model presented in this review captures the components that determine how fussy eating behaviours are experienced by a family, specifically how fussy eating manifests (child characteristics), how it is perceived (parent beliefs and awareness), how it is experienced (mealtime emotions), and how it is managed (parent feeding practices). Fussy eating is not always disruptive to family meals (Trofholz et al., 2017) and even relatively severe fussy eating behaviours may not be problematic for a family depending on how they are perceived and managed.

The lack of a consistent and operational definition of fussy eating is one of the major limitations of research in this area, including the studies in this review (Boquin et al., 2014; Harris, Ria-Searle, et al., 2018; Taylor, Wernimont, et al., 2015; Trofholz et al., 2017). By synthesising parent perceptions and experiences of fussy eating across ten studies, it is proposed that fussy eating is an umbrella term describing the rejection of one or more food items, the limited intake or variety of foods, and/or frequent changes in food preferences due to novelty, sensory sensitivity, context/presentation of food, temperament/personality, age/developmental stage, and/or genetic and learned food preferences. Fussy eating can be expressed verbally or non-verbally (e.g. gestures, gagging, avoidance) and can (but does not always) have a perceived impact on the physical or psychological wellbeing of the child, parent or family. This definition may be useful for researchers, as current definitions often do not encompass the wide range of behaviours that ‘fussy eating’ can refer to, and do not clearly differentiate typical fussy eating behaviours from other forms of food refusal (e.g. due to allergy, medical conditions, religious or philosophical choices).

**Limitations of the qualitative literature on fussy eating.** This review of the qualitative literature found that most studies were conducted in the US and Australia and focused on toddlers and pre-schoolers, reflecting the belief that fussy eating peaks in early childhood (Cardona Cano, Tiemeier et al., 2015). Fathers’ perspectives were significantly underrepresented. It was planned to include studies reporting the child perspective of fussy eating. Although some studies have qualitatively explored food choice with children (Alm, Olsen, & Honkanen, 2015), the researchers did not identify any studies with children that focused on fussy eating or neophobia sufficiently to meet the inclusion criteria. The quality of studies (assessed using JBI Critical Appraisal Checklist (Lockwood et al., 2015)) included in this review was moderate to high. However, most studies failed to report philosophical perspectives or provide a statement locating the researcher culturally or theoretically which makes it difficult to determine the impact that authors’ assumptions, knowledge and experiences may have on the research findings. Some factors that relate to fussy eating remain under-researched (e.g. parent awareness of food preference development and effective feeding practices, and attributions of fussy eating) and other factors that are known to be relevant to family mealtimes (such as parent feeding goals (Moore et al., 2010; Snuggs,

Houston-Price, & Harvey, 2019)), were not evident in the qualitative studies eligible for inclusion in this review.

**Strengths and limitations of the qualitative synthesis.** The meta-ethnography method was useful for identifying general patterns across studies and for highlighting findings hidden amongst individual studies that may have more meaning when related to the findings of other studies (Noblit & Hare, 1988), specifically relationships between constructs. Rather than simply summarising existing knowledge, the meta-ethnography approach allowed us to build a new understanding of fussy eating (Figure 3.2), based on the findings of individual studies whilst maintaining a focus on contextual factors such as study location, samples, and target-age range.

However, there are some limitations of this synthesis. The literature search was restricted to English language publications. Some terms were not included in the database search (e.g. carer, caregiving, mum, dad) which may have resulted in identifying additional studies, although it is likely that any additional studies would have been identified during supplementary searches. Due to the diverse use of terminology and reporting in qualitative research (Atkins et al., 2008; Booth, 2016), there were some challenges in selecting studies for inclusion. It was decided to only include studies with a primary aim or objective relating to fussy/picky eating or food neophobia. This may have resulted in relevant findings from other studies (e.g. on portion size, out of home eating etc.) being omitted from this review. In addition, the meta-ethnography approach is still evolving, resulting in differing interpretations of the steps involved and varied uses of meta-ethnography terminology (France et al., 2014). The steps carried out at each stage of the meta-ethnography process have been reported as transparently as possible (Table 3.1) using terminology as originally used by Noblit & Hare (1988). In addition, both methodological and reporting guidelines provided by France and colleagues (France, Cunningham, et al., 2019; France, Uny, et al., 2019) have been followed as closely as possible. The synthesis findings represent the current literature in this area and are influenced by the methods, interview guides, interpretations and interests of the original study authors. Therefore, the transferability of these findings to contexts beyond those of the original studies is limited. Finally, it is not possible to infer

cause and effect in cross-sectional qualitative research, but the relationships identified in this review are useful for developing hypotheses for future research.

**Recommendations for future research and practice.** It is recommended that future qualitative research on fussy eating focuses on the perspectives of both children and fathers, targets fussy eating behaviours in later childhood and adolescence, captures experiences of fussy eating across more diverse contexts, and improves the reporting standards of qualitative research methods (Levitt et al., 2018). As well as continuing research into parent feeding practices, it would be beneficial for attention to be focused on the more tentative components in the model (e.g. how parent awareness and attributions of fussy eating relate to parent feeding practices). The model can also be used to build hypotheses for longitudinal quantitative research to investigate, for instance, how feeding self-efficacy beliefs develop in the context of fussy eating and how parent feeding beliefs relate to parent feeding practices.

Targeting factors such as parent beliefs and mealtime emotions alongside parent feeding practices, may improve the effectiveness of interventions aiming to prevent or resolve fussy eating related challenges (Gibson & Cooke, 2017; Mitchell et al., 2013). The conceptual model (presented in Figure 3.2) may be of use to health professionals working in the area of fussy eating, in order to conceptualise how fussy eating is experienced by families, and the different types of beliefs and emotions that may need to be addressed with families to overcome fussy eating challenges.

## **Conclusions**

This review has used a meta-ethnography approach (Noblit & Hare, 1988) to synthesise ten recently published qualitative studies on family perceptions, experiences and practices regarding fussy eating behaviours in typically developing children (aged one to young adult). Based on parent perceptions across ten studies, it is proposed that fussy eating is an umbrella term describing the rejection of one or more food items, the limited intake or variety of foods, and/or frequent changes in food preferences due to novelty, sensory sensitivity, context/presentation of food, temperament/personality, age/developmental stage, and/or genetic and learned food preferences. A conceptual model was produced, illustrating relationships between child characteristics (including fussy eating behaviours), parent



feeding beliefs, parent feeding practices, mealtime emotions and parent awareness of food preference development, neophobia and effective feeding practices (Figure 3.2). It was found that child characteristics and parent feeding practices related to each other, supporting a relational approach to studying fussy eating in which both parents and children are considered to have agency in contributing to the feeding relationship (Walton et al., 2017). Two distinct ways in which fussy eating relates to mealtime emotions were identified (directly and via feeding practices). Three distinct categories of parent beliefs were found to relate to parent feeding practices in the context of fussy eating (self-efficacy, attributions, and beliefs about hunger regulation). This review highlights areas for future qualitative research. The conceptual model can be used to develop hypotheses for longitudinal quantitative studies and may be useful for health practitioners working with families experiencing fussy eating challenges.

**Chapter 4. Parents' Experiences and Management of Fussy Eating Behaviours:  
Response Patterns in Parents of School-Aged Children (Study 2A)**

**Note:** An edited version of this chapter has been published as:

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**Chapter Overview**

Research has primarily focused on parent feeding practices in response to fussy eating in pre-schoolers. The qualitative synthesis (Study 1, Chapter 3) highlighted that few qualitative studies have been carried out with families of school-aged children and less is known about other processes (such as feeding goals) that relate to the family experience and management of fussy eating behaviour. Therefore, the aim of this chapter (Study 2A) is to investigate how parents' of school-aged children experience and manage fussy eating, and based on parents' retrospective accounts, to investigate how their responses change over time. First, a brief introduction and overview of relevant literature is provided. Following this, the findings based on thematic analysis of 20 interviews with parents from 17 families of school-aged children (six to ten years) is presented. Finally, the results are discussed in relation to the current literature, and recommendations for future research and practice are provided.

**Introduction**

As outlined in Chapter 1, it is widely reported that fussy eating peaks in early childhood (Cardona Cano, Hoek, et al., 2015; Cardona Cano, Tiemeier et al., 2015; Carruth et al., 2004; Hafstad et al., 2013), hence the majority of research and intervention programmes target families of pre-schoolers. This was reflected in the synthesis of qualitative studies (reported in Chapter 3), in which only three out of ten studies included families of school-aged children and adolescents. Given the focus of research on pre-school years, the trajectory of fussy eating beyond early childhood is unclear. Although fussy eating is often transitory, a group of children display persistent fussy eating across time points, or develop late-onset fussy eating at six years (Cardona Cano, Tiemeier et al., 2015). It has also been reported that

children with more persistent fussy eating show stronger likes and dislikes than children with shorter-duration fussy eating (Mascola et al., 2010) suggesting that older and more persistent fussy eaters may be at increased risk of experiencing negative consequences. Therefore, it is important to have a better understanding of families' experiences and the nature of their responses to fussy eating in later childhood.

While some quantitative studies have found parent feeding practices to be relatively stable over time (Farrow & Blissett, 2012; Powell et al., 2018), others have reported them to only be moderately stable (Garcia et al., 2018). Some qualitative research has suggested that parents' practices change depending on context (Norman, Nyberg, Elinder, & Berlin, 2018) and that parents of older fussy eaters tend to give up trying to influence their child's diet (Boquin et al., 2014). Further findings from a mixed-methods study report that as children get older, mothers either use overt control or relinquish their control altogether, instead catering to their children's preferences (Jarman et al., 2015). However, data on parent feeding practices is often static and decontextualised, only capturing one or two specific points in time and failing to fully account for families past experiences, the context and motivations impacting their current approach, and the dynamic use of multiple practices and approaches that likely change according to context and moment-to-moment or day-to-day decisions. Qualitatively exploring changes in responses to fussy eating over time may shed light on the nature of the relationship between fussy eating and parent feeding practices in later childhood.

Some research has explored how parent feeding goals relate to their feeding practices in the context of obesity prevention and healthy eating research (Beltran et al., 2011; Moore, Tapper, & Murphy, 2007; Moore et al., 2010; Schuster et al., 2019). Although some of these findings are relevant to fussy eating, parent feeding goals specifically in relation to managing fussy eating have not been investigated. Despite the role of goal setting in behaviour change intervention (Ajzen, 2011; Michie et al., 2011, 2014; Morrison & Bennett, 2012), feeding goals were not identified as a construct in the published qualitative literature on fussy eating synthesised in Chapter 3. Therefore, it is unclear what goals parents have in relation to managing fussy eating and how these goals relate to feeding practices. Some research has focused on the impact of fussy eating on mealtime emotions (e.g. Harris, Ria-Searle, et al.,

2018; Rubio & Rigal, 2017; Trofholz et al., 2017), but little is known as to how parents manage the negative emotional impact. In addition, little is known as to how all of these factors (fussy eating, parent feeding practices, emotions and feeding goals) are related, especially in later childhood.

Although the analysis in this study was primarily inductive (data driven), this study draws upon assumptions of social relational theory (Kuczynski & De Mol, 2015) and family systems/process theory (Broderick, 1993) outlined in Chapter 1. These theories are useful for understanding parents' experiences and management of fussy eating, while accounting for the broader family system, the context in which processes take place, and changes in processes over time. Both of these theories view the child and parent as active agents and highlight how parent-child interactions are embedded in a broader family system and socio-cultural environment. In addition, family systems theory states that the family is a goal seeking system continuously monitoring its progress and trying to reduce error between its current status and set goals. Family systems theory highlights the importance of communication in addressing emotional and pragmatic challenges. These theories offer a dynamic and contextual representation of family responses, which supports our understanding of how a parents' response to fussy eating behaviours in school-aged children may change (or have changed) over time.

Two key research questions are addressed in this study: 1) how do parents experience and manage fussy eating behaviours in school-aged children? 2) Based on parents' retrospective accounts, how do their responses to fussy eating behaviours change over time as children get older?

### **Results**

Three family process themes were identified that describe and explain how families respond to fussy eating behaviours in school-aged children. These themes are: 1) *Dynamic and Evolving Feeding Goals*, 2) *Managing Negative Emotions* and 3) *Parenting Practices: Figuring out what Works*. These processes interact with each other, for example parents' feeding practices (such as pressuring a child to eat) may relate to their goals (to provide a balanced meal or to have a healthy child) and may contribute to negative emotions (family

conflict or parent guilt). Importantly, these themes highlight that feeding goals, emotions and practices in relation to fussy eating are not static, and demonstrate the dynamic, contextual, and evolving nature of family responses to fussy eating in school-aged children. These themes also illustrate the perceived personal and individual nature of families' experiences of managing fussy eating behaviours. These family process themes are introduced below, and additional quotes to support these themes can be seen in Table 4.1.

Parents' perception of how their response has changed over time is explored in the following section, which outlines three different response patterns: 1) *Resistance-to-Acceptance Response*, 2) *Fluctuating Response*, and 3) *Consistent Response*. The family process themes are elaborated on as specific examples are provided of how goals, emotions, and practices differ across groups of parents and how these interact to create distinct response patterns to fussy eating behaviours and food refusal over time. A summary of these response patterns in relation to the family process themes can be seen in Figure 4.1, and additional quotes to support these response patterns can be seen in Table 4.2. The ages of school-aged children (6-10 years) referred to by parents are provided in brackets after quotes. In a few cases parents refer to the family as a whole including siblings outside of this age range. In these cases it is noted whether these are younger or older to provide some context about the family system, in line with social relational theory (Kuczynski & De Mol, 2015) and family systems theory (Broderick, 1993).

#### **Family processes.**

***Dynamic and evolving feeding goals.*** All parents expressed multiple goals and aspirations in the context of their school-aged children's fussy eating behaviours. The most prominent goals were to have a healthy child (which was often challenged by fussy eating), to provide a varied balanced diet, to encourage children to try new or disliked foods, to eat together as a family (to facilitate role-modelling) and to educate children about food. Some parents expressed other goals: to avoid conflict or stress at mealtimes, to avoid hunger, to involve children in food preparation (to increase familiarity with new/disliked foods), and to restrict sweets, junk food and/or snacks. Most importantly these goals were portrayed as dynamic and evolving over time. Many parents had competing goals and the priority they placed on different goals was dependent on context and past experiences.

An important goal for all parents was to have a healthy child, however as children get older, this goal evolves to include aspirations for their child to develop into a healthy adolescent and adult, both physically and psychologically. Some parents expressed “*I don't want to see him sick when he's in his twenties or his thirties and I want to see him strong*” (mother, son aged 9) and

*“I really am a big big believer in not labelling food as good or bad, em, because it's not, I don't think it sets up healthy attitudes for later life, for kids anyway, and especially when they're heading into their teenage years”* (mother, daughter aged 7).

As children get older, ensuring that they are equipped with appropriate knowledge and skills to develop into healthy adolescents and adults, and promoting their increasing independence and autonomy, become important goals. For example a parent's goal may have been to restrict their child from eating sweet foods in the past, but as the child grows up and goes to school, educating the child to be able to make their own choices becomes a higher priority.

*“Stopping him eating any sort of rubbish when he's very small, as soon as they start to go into school you don't have that kind of control anymore...I never say no to him but I'll, you know, try and give him information about food and being healthy and stuff like that”* (mother, son aged 7).

As well as goals evolving over time, many parents expressed competing goals, such as avoiding conflict and providing a balanced meal, or wanting a child to eat more and promoting child autonomy/self-regulation (see Table 4.1). Whether or not a particular goal was prioritised often depended on contextual factors such as time, energy levels and day of the week. For example, one mother explained “*when...I'm not too tired to deal with her fits...we try and do...like 60 [%] fruit and vegetables then 40 [%] something else on the plate and I try to just stick to that*” (mother, daughter aged 8) and another mother said “*we try and all eat together as a family you know what I mean but it's sometimes if [my husband's] working late he won't*” (mother, daughters aged 10 and 8).

***Managing negative emotions.*** Competing goals and struggles to find a balance between parent control and child autonomy sometimes resulted in family conflict and a poor

emotional climate at mealtimes. Not all families experienced negative emotions in relation to fussy eating behaviours, however many parents talked about high levels of stress, concern, conflict, frustration and guilt in relation to fussy eating behaviours both in the past and the present. Many parents said that their school-aged children still experienced distress, fear and disgust in relation to disliked foods. Most parents talked about how they manage negative emotions in relation to fussy eating behaviours, for example by promoting a positive atmosphere at meals and helping children to control their aversions, talking about, and normalising, fussy eating.

Many parents felt it was important to create a positive mealtime environment and expressed efforts to avoid conflict. For example, parents said "*If you're uptight, go away until you're in a right frame of mind*" (mother, daughters aged 6 & 9) and "*the number one thing would be not to stress too much about it...and not to stress with the child*" (mother, son aged 10). Several parents referred to '*picking your battles*' and one father said he would try to encourage his daughter to try new things but would "*give in before the tears start*" (father, daughter aged 7). Some parents tried to help their children overcome feelings of disgust and aversive reactions to foods, for example by encouraging them to eat very small pieces of disliked foods ("*we're working on it at the moment so hopefully...we can overcome the reflex, the gag reflex*" (mother, son aged 9)). How parents manage the emotional climate at mealtimes also depends on contextual factors such as family structure, for example one mother said "*A third child came along...you kind of learned to pick your battles with food*" (mother, children aged 7, 8 & 10).

Many parents also coped with negative emotions and conflict in relation to fussy eating by talking about fussy eating as a family. For example one mother explained "*we try to meet ourselves in the middle...instead of fighting over it*" and said "*the conversation for me has helped*" (mother, children aged 9 & 10). Others discussed fussy eating with their support networks. By talking to others, parents often learned that fussy eating was normal and this helped to reduce many parents' feelings of concern and guilt about their child's fussy eating. For example one mother was told "*Oh, that's ok, that's normal, don't worry about it*" (mother, son aged 9) and another said "*I was scared initially thinking I was doing something*

*wrong, but I feel like I've heard other mothers say you know, "they all go through the same stage" (mother, children aged 9 & 10).*

***Parent feeding practices: finding out what works.*** In addition to promoting a positive mealtime environment and talking about fussy eating, all parents referred to a diverse range of feeding practices and strategies used to overcome fussy eating challenges in school-aged children. These included using rewards and punishments, adapting the meal, and using nutrient supplements. Similarly to parents feeding goals, most parents expressed that practices were dynamic, changed over time and depended on context. The effectiveness of practices varied significantly across families, and many parents experienced challenges trying to figure out what practices work best for them.

Most parent feeding practices had changed over time in response to evolving goals as children get older (such as promoting autonomy or avoiding conflict). For example *"maybe if they're smaller making it into a game...maybe when they're older letting them choose what's for dinner one evening a week"* (mother, daughters aged 6 & 9). Many parents also changed their practices when they found that their current approach was ineffective, for instance *"it was penalties that we started...and that just didn't work so we gave that one a miss, and then we started, em, reward pots but that didn't seem to work...that's when we resorted to kind of blending [food]"* (father, daughters aged 9 & 7).

Importantly the effectiveness of practices varied across families. For example some families found that rewards and punishments were ineffective, whereas others found these to be the most successful strategies (*"sometimes it's the only thing a child will listen to you know like 'I'll get a reward'"* (mother, children aged 9, 7 & 6)). Similarly, disguising foods through blending or juicing worked for some parents (*"that's my only tool in the tool box"* (mother, daughter aged 8)) and was difficult for others (*"it's quite hard to hide vegetables really"* (mother, son aged 7)). For most parents, the implementation of different practices depended on context, such as family structure, work schedules and other family priorities. For instance one father explained *"we didn't stick at it [reward charts] enough...my wife was travelling a lot for work so she wasn't there a lot of the time"* (father, daughter aged 7) and another parent said *"sometimes the kids might help as well, yeah, depending on their humour and that and what time of day it is"* (mother, children aged 6, 7 and 9).



Some parents emphasised that *'every child is going to be different and not every strategy is going to work for every child'* (mother, daughter aged 8). These parents described going through a *'learning process'* or a *'journey'*, and said that parents *"have to figure things out for themselves...and kind of know what works for them"* (mother, son aged 7). This process of figuring out what practices and strategies work was challenging for some families. Some parents of school-aged children still felt that they had not found a solution *"I haven't succeeded in sorting it out yet...if the rewards thing was done right it would work...we'll have to try it again"* (father, daughter aged 7).

Table 4.1.

*Additional Quotes to Support Family Process Themes*

<b>Parent Feeding Goals and Aspirations for School-Aged Children</b>	
To have a healthy child	<i>"You want your child to be full and happy and well"</i> (mother, daughter aged 7)
To provide a varied balanced diet	<i>"you know you'd like a bit more variety sometimes"</i> (mother, son aged 7)
To encourage child to try new foods	<i>"we're going to introduce him to new foods"</i> (mother, son aged 9)
To eat together as a family	<i>"We should sit round more often and we make a conscious effort to do it but it doesn't happen all the time"</i> (mother, sons aged 10, 8 & 7)
To educate and promote independence	<i>"I try to get my kids to know how to do stuff for themselves"</i> (mother, children aged 9 & 10)
<b>Examples of Competing Goals Relating to School-Aged Children</b>	
To provide a balanced diet and to please or satisfy children	<i>"My challenge is to look what's the food that they like that I have to give them that's healthy"</i> (mother, son aged 9, older sibling)
To provide a balanced diet and to avoid conflict	<i>"we wouldn't let him leave until he had like two bits of carrots...eventually that just had to stop because world war three ended up in the house"</i> (mother, son aged 10)
To encourage child to eat more and to promote autonomy/self-regulation	<i>"it's more a personal challenge of not going straight into that 'oh but you have to eat' thing you know 'oh have a little bit more', when they've had two bites of this dinner"</i> (mother, daughter aged 7)
<b>Managing Negative Emotions about Fussy Eating in School-Aged Children</b>	
Parents negative emotions	<i>"it's a big worry because... [it] may go away, maybe not, you know"</i> (mother, children aged 6 & 10)
	<i>"You feel like you're being a horrendous father"</i> (father, daughters aged 9 & 7)
	<i>"It is frustrating, you can go to a load of effort to make this dinner, and they're like two bits, 'I'm done'"</i> (mother, daughter aged 7)
Child's negative emotions	<i>"He goes into a mood and he might have a little cry"</i> (mother, son aged 9) <i>"I see her distress, I see that it's real to her"</i> (mother, daughter aged 9)

Mealtime conflict	<p><i>"It can be a bit of a battle to get him to eat the little bit"</i> (mother, son aged 9)</p> <p><i>"There's always trouble at mealtimes"</i> (father, daughter aged 7)</p>
Managing emotions (by promoting positive mealtimes and talking about fussy eating)	<p><i>"he will say 'eugh I'm not eating that, that's horrible' I say 'look, that's not nice'...not to kind of get very aversive to it"</i> (mother, son aged 10)</p> <p><i>"we would have a conversation about it and then we would decide and when we do we would all sit at the table happily"</i> (mother, children aged 9 &amp; 10, younger sibling)</p>
<b>Parenting Practices: Finding out What Works</b>	
Practices change over time	<p><i>"At the beginning he would have got what we got, but he wouldn't eat it, so we had to give him something he would eat for example pizza"</i> <i>"we've started putting on small portions of our dinner and he has to eat that"</i> (mother, son aged 10)</p> <p><i>"when they're older...you know you can get a bit more stricter with them"</i> (mother, son aged 9)</p>
Practices depend on context (time, family routine, parents' energy etc.)	<p><i>"[the children] are too busy now, to kind of help"</i> (mother, children aged 9 &amp; 7)</p> <p><i>"sometimes we'll just give up...you'll try a few different things before you get her to eat, especially in the morning time"</i> (father, daughter aged 7)</p>
Effectiveness of practices varies	<p><i>"I don't think there's any one solution for any one child"</i> (father, daughters aged 9 &amp; 7)</p>
Challenges finding out what works	<p><i>"It's hard because I don't think we've found a solution yet"</i> (father, daughter aged 9)</p> <p><i>"a few different things, charts we tried the charts but that didn't last you know"</i> (father, daughter aged 7)</p>

**Parent response patterns.** Despite the diversity and uniqueness of families' responses to fussy eating behaviours portrayed by the themes in Section 1, three distinct response patterns were identified in relation to how parent responses change over time: 1) *Resistance-to-acceptance response* (parents resisted fussy eating in the past, experiencing high levels of stress and conflict, but actively decided to change their approach and accept fussy eating), 2) *fluctuating response* (parents frequently change their approach and fluctuate between resisting and accepting fussy eating behaviours) and 3) *consistent response* (parents maintain their approach over time). These three response patterns are characterised in Figure 4.1 in relation to the three family process themes described above. Additional quotes supporting each response pattern can be seen in Table 4.2.

		Parent Response Patterns		
		Resistance-to-Acceptance Response	Fluctuating Response	Consistent Response
Family Processes Interact	Dynamic and Evolving Feeding Goals	Adapts feeding goals over time Current goal is to avoid conflict and give child more autonomy over food choices	Has competing goals Goals include providing a balanced diet, introducing new/disliked foods, avoiding hunger, and pleasing children	Maintains goals over time Goals include restricting sweet foods and eating together
	Managing Negative Emotions	High levels of stress in the past Learning to have positive conversation and negotiate about food improves emotional climate	Parent concern, uncertainty, guilt, and child distress Higher levels of mealtime conflict Talking to others and normalising fussy eating reduces negative emotions	Some child distress in response to disliked foods, but lower levels of family conflict and parent feelings of concern and guilt Promotes positive emotional environment at mealtimes
	Parenting Practices: Figuring out What Works	Pressured the child to eat in the past, now accommodates child preferences and cooks alternative/alterd meals	Exposes children to new/disliked foods. Less likely to restrict sweet foods, more likely to pressure child to eat and use food as a reward	Restricts sweet foods, involves children in food preparation, less likely to pressure children to eat, less likely to offer alternatives Emphasises importance of breastfeeding and weaning

Figure 4.1. Parent response patterns to fussy eating behaviours characterised by differences in family process themes

***Resistance-to-acceptance response.*** Six parents, from four families, described resisting their child's fussy eating behaviours for a period of time before actively deciding to change their approach and accept their child's behaviour. Most of these parents said they 'let

go' when their children were between three and six years old, for example "*I'd say I gave up four or five years ago*" (mother, children aged 9 & 10). These parents experienced fussy eating that persisted throughout childhood, but were likely to say that fussy eating was improving as their children approached teenage years, independent of parent intervention.

For parents in this group, having a healthy child and providing a balanced diet were important goals in the past. For example, one mother said "*I was very much like he needs to eat his vegetables he needs to have meat*" (mother, son aged 8). However, parents in this group were more likely to adapt their goals than parents in other groups, and currently their most prevalent goal was to avoid conflict, for instance "*so on a Friday we have pizza, Friday pizza night is just no argument for everybody*" (mother, daughters aged 9 & 7). One mother explained how she used to believe "*you should have protein, you should have carbohydrate...broccoli is good for you and I'm going to force it down your throat kind of even if you don't like it*". However, when achieving this goal resulted in high levels of stress, avoiding conflict became a higher priority ("*eating now would be on the bottom of the list just because I decide, you know, I'm going to give myself a bit of peace of mind and I'm not fighting them*"), and the initial goal was adapted to make sure that her children at least eat something ("*now like, I don't care, as long as you eat something*" (mother, children aged 9 & 10)). Parents in this group were more likely to back away and give their child more control over their food choices, for example "*she's getting [a balanced diet], but she's kind of getting it on her terms and not ours anymore*" and "*we've backed away from it and hope it will sort itself out*" (mother, daughter aged 9).

Parents in this group had experienced high levels of conflict and stress in relation to fussy eating in the past, in comparison to parents with other response patterns. This likely led to their change in approach from resisting to accepting fussy eating. Parents in this group often came to accept fussy eating by talking about it with both their family and other support networks and explained that this acceptance had resulted in an improved emotional climate at mealtimes.

*"we were all stressed out at the end of the day and I don't think it's worth it"* and  
*"talking about it, and you know, consulting their opinion kind of makes it easier"*

*because nine and ten year olds really they're beginning to have a mind of their own"* (mother, children aged 9 & 10).

*"I've learned to let it go and that's been a good lesson...made for happier mealtimes anyway"* (mother, daughters aged 9 & 7).

Regarding feeding practices, this group had tried what they believed was the '*right thing*' in the past, but changed their practices if they were ineffective, and to avoid conflict and distress. Parents in this group had used pressure and coercive practices in the past but were now more likely to accommodate child preferences. These parents cooked alternative meals, disguised disliked foods, and relied on nutrient supplements as they felt it was important not to let their children get hungry. For example, parents said "*we started to introduce vitamins...just to make sure she's getting things that I think she's missing from her diet*" (father, daughter aged 9); "*just give them the nutrients...from the stuff that they like, and they won't be going hungry*" (mother, children aged 10, 8 & 7) and "*I would make a curry sometimes...but he might have some tofu instead*" (mother, son aged 10).

***Fluctuating response.*** Six parents from six different families described regularly changing their response to fussy eating, accepting it on some occasions, and not tolerating it on others. The severity of fussy eating behaviours experienced by families in this group varied, but unlike families described above who had learned to accept fussy eating, the parents in this group described more prolonged challenges and family conflict in response to these fussy eating behaviours.

Parents in this group were more likely to express competing goals than parents with other response patterns, as they simultaneously wished to provide a balanced diet, introduce new foods, avoid hunger, and please or satisfy their children. For example one mother described wanting her son to eat a more balanced diet, while also trying to avoid stress, "*I know he needs to eat more nutritious stuff, so it's hard to be feeding him what I'm feeding him, but he won't eat anything else and he gets very stressed out*" (mother, son aged 9). Although promoting autonomy was an important goal for many parents in this group, they were more likely to express challenges in balancing parent control and child autonomy. For some parents in this group promoting autonomy competed with other goals such as providing a balanced diet, for instance "*I need her to eat her vegetables...it's a really hard balance for*

*me...I want her to be able to be independent and make her own choices*" (mother, daughter aged 8). This resulted in parents alternating between giving their child control over food choice and later pressurising them to eat (*"I tend to let her go two days and then I'm like, ok now we need to eat real food"* (mother, daughter aged 8)).

Sometimes these parents had positive conversations about trying new foods but on other occasions experienced high levels of conflict and distress that sometimes disrupted the entire meal or evening (*"she throws a giant fit and...that derails our whole night"* (mother, daughter aged 8)). These parents experienced higher levels of concern, guilt and uncertainty in relation to their school-aged children than parents in other groups. Talking to other parents, and normalising fussy eating was particularly important for parents in this group and helped to reduce these negative emotions, for example *"people say to me 'no, no, it's good that they're growing, [there's] nothing wrong with it, it's ok"* (Mother, children aged 6 & 10).

Unlike parents who had decided to accept fussy eating, parents with a fluctuating response sometimes accommodated children's preferences, but were also more likely to continue exposing children to new foods and trying to cooking new things. However, parents desire for their child to eat well often led to parents in this group pressuring their school-aged children to eat by using threats, and using sweet foods as rewards, for example *"I have to force them to take a vegetable at least once a week"* and *"they know...that there is an ice-cream...waiting for them to finish their dinner"* (Mother, children aged 8 & 9). Some parents were aware that their practices may not be effective due to inconsistencies, but this was often due to limited time and energy resources, *"it comes back to like picking my battles and like trying to be better with eh yeah time management"* (mother, daughter aged 8).

**Consistent response.** In contrast to the two response patterns above, a final group of eight parents from seven different families, described a relatively consistent response to fussy eating behaviours over time. Fussy eating behaviours in this group ranged from occasional rejections of a few specific foods, to persistent rejections of entire food groups. However, all parents in this group were less likely to perceive these behaviours as a problem or be distressed by these behaviours, for example *"as you get older too your taste buds change, like the way I look at it, it's not really a problem when they're that age"* (mother, daughters aged 10 & 8).

The most prominent feeding goals for parents in this group were to restrict sweet foods and to eat together. These parents were less likely to have competing goals, or to adapt their goals over time. These parents also felt it was important to encourage child independence and autonomy, but were more likely to set clear boundaries than parents in the fluctuating group, for example by letting children decide what to eat within a limited range of options (“*you’ve got a choice of this or this and then we’ll kind of come up with something*” (mother, son aged 7)).

These parents were less likely to talk about feelings of concern, guilt and stress than parents with other response patterns. These parents had always been conscious of enjoying mealtimes and promoting a positive emotional environment around food, for example one mother said she ‘*never got stressed out*’ about food and to ‘*avoid food turning into a battle ground is the main thing*’ (mother, son aged 7) and another explained “*we eat at the table, we sit together, we talk you know*” (mother, daughter aged 7).

In line with their goals and efforts to promote a positive emotional environment, the most prominent feeding practices for these parents included restricting sweet foods, involving children in food preparation, and not pressuring their children to eat. For example one mother said “*if we’re trying something new it’ll be ‘come on do you want to help me chop this or do you want to help me stir that’*” (mother, daughter aged 7). A few of these parents did use some coercive practices such as rewards or verbal pressure, but were less likely to report conflict in relation to these practices than parents in other groups. These parents sometimes adapted the family meal, but did not tend to provide alternative meals and were more likely to believe that children would eat what they were given if they were hungry, for instance “*I don’t make different things like you know...I just cook one food for a time and we all have to eat*” (mother, daughter aged 9, younger sibling) (See Table 4.2.).



Table 4.2.

*Additional Quotes to Support Response Patterns*

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**Resistance-to-Acceptance Response – Shifts from Resisting Fussy Eating to Accepting Fussy Eating Over Time.**

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*“I definitely was getting quite het up about it and you know googling what can I do and trying this approach and trying that approach and then I just, I dunno, I just realised just it wasn't going to work and I just took a completely different approach that I was getting stressed for nothing”.*

*“I just learned to kind of let him go and he dictated to me, within reason, of what he would eat so the challenges did go away” (mother, children aged 10, 8 & 7)*

*“when it was a problem it was every day at mealtime... it became a thing I think for us all...I think back to the old house when I think about that kind of time so it must be about four years ago we had some kind of change in psyche about it” “for us in our journey if you like letting it go has been a big thing” (mother, daughters aged 9 & 7)*

*“So mealtimes there became very very stressful and were kind of me and her eh just head to head and she'd always win... so am I think me and [my wife] sat down and ...we tried to come up with other strategies” “That's when we resorted to kind of blending [food]” (father, daughters aged 9 & 7)*

*“at this stage now because I've been through so much it's probably I I kind of am calmer about it than I might have been...it kind of washes over me more than it might have in the past I'd say you know” “we're so used to it that's just the way things are you know we we've kind of evolved around it”. (mother, son aged 10)*

*“if you're trying to have a meal together as a family, em, and as I said when the kids were younger we did try to do that as much as possible, em you know if somebody's fussy about it...and it turns in immediately to a bit of a scrap and everybody whinging...it creates a certain amount of stress sometimes...you get used to it and you move on you know” (father, son aged 10, older siblings)*

*“I'm...learning to let go yeah and it's working” “they go 'oh we want pizza' 'oh we want chips' or so, sometimes I give in because I used to be very strict with mealtimes and I think it's very discouraging and traumatic for children” (mother, children aged 9 & 10)*

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**Fluctuating Response – Frequently Alternates Between Resisting and Accepting Fussy Eating**

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*“one of them is very fussy so he has to eat differently” “I find it hard to kind of try to keep everything you know a regular meal and then his on the side” “whenever we have beans I put a few beans on his plate and he has to eat them up and the last day we had fish and he had to have a bit of the fish or he wasn't allowed to go up and watch Youtube” (mother, children aged 9, 7 & 6)*

*“sometimes she'd say can I have pasta instead of that, occasionally, and I would give in and make it for her and put a bit of cheese with it or broccoli and at least she's eating something, I don't know if that's right or wrong” (mother, daughter aged 6)*

## Chapter 4. Parents' Experiences and Management of Fussy Eating

*“well if you don't want to eat that, ok, but you're not going to have that dessert afterwards' that kind of stuff”* (mother, children aged 9 & 8)

*“it comes back to like picking my battles and like trying to be better with eh yeah time management cus we get home and there's cleaning and there's homework and then dinner and then playing with her friends and bath and shower...then bed by a relatively normal amount of time so that's like two hours...some days it's possible some days it's not possible”* (mother, daughter aged 8)

*“I force them like 'you have to eat [or] you don't get this' ...threaten...it works, but the expression of the face is not nice...I don't think it's a good idea [to] force them to eat to tell you honestly”* *“sometimes I blend it”* (mother, children aged 6 & 10)

*“if she goes to [Italian restaurant] for lunch she likes pasta with cheese and that's all...I said it a few times 'I'm not bringing you unless you start eating something else' but it hasn't worked...I give in before the tears start”* (father, daughter aged 7)

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### Consistent Response – Maintains Approach Over Time

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*“he wouldn't get a lot of veg to be honest”* *“I wouldn't force him no I wouldn't”*

*“we never did have that much huge difficulty with him you know...he likes what he likes, and what he doesn't like he won't, you know that's the way he is”* (mother, son aged 7)

*“be consistent and persistent and have rules from day one and stick to them...a lot of energy goes into it like”* (mother, son aged 7).

*“I won't let them have anything until they eat their dinner d'you know so they'll mostly come in, sit, and eat their dinner and they're fussy enough like...I don't force them to eat... the way I look at it is if they're hungry they're going to eat it you know”* (mother, daughters aged 8 & 10)

*“I've always kind of said well he'll eat if he's hungry, and he will, and if his body is kind of needing something he will eat, em, so I've never forced him”* (mother, son aged 7)

*“we have a seven times policy cause that's the research is that you should try new foods seven times before you decide whether you like it or not...but we always make sure that there's something on the plate that she'll eat anyway”* *“Right from the beginning...we just gave her what we ate...the only thing we stopped doing was salting our food”* *“we've kind of always had a thing...if you're hungry try the fruit bowl first”* (mother, daughter aged 7)

*“I suppose [they've] been bred into it from an early stage really”* *“in our house there's a regiment so they know there's a line and we toe the line”* (father, son aged 7, younger siblings).

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## Discussion

Fussy eating behaviours are a significant challenge for many families of school-aged children. Responding to fussy eating in school-aged children is complex, comprising a number of dynamic processes, including adapting goals, dealing with negative emotions and figuring out what feeding practices work. In this study three distinct response patterns were identified: 1) Some parents resist fussy eating behaviours for a period of time, but due to high levels of conflict and stress, actively decide to change their approach and accept fussy eating behaviours, 2) others frequently fluctuate between accepting and resisting fussy eating behaviours, and 3) a final group of parents are relatively consistent in their approach over time.

Although parents' feeding goals, practices and the negative emotional impact of fussy eating have been reported in previous studies (Boquin et al., 2014; Moore et al., 2010; Trofholz et al., 2017), this study significantly adds to our understanding of how these processes interact, and evolve over time. Rather than goals, practices and emotions being static, as they have often been portrayed in the literature, they are dynamic and evolving, constantly changing depending on context, past experience and the increasing independence of school-aged children. This study also highlights the role of parent feeding goals in contributing to the family's experience of fussy eating, and how parent feeding goals relate to their practices and mealtime emotions. For instance, competing goals resulted in some goals being prioritised on some days (e.g. providing balanced diet) and other goals being prioritised on others (e.g. avoiding conflict), resulting in inconsistent practices (pressure to eat on some days, and accommodation of child preferences on others). This adds to the current qualitative fussy eating literature, as goals were not identified as a key construct in the synthesis of qualitative literature (Chapter 3).

While previous studies have reported the emotional impact of fussy eating (Goh & Jacob, 2012; Ramos-Paúl et al., 2014; Rubio & Rigal, 2017; Trofholz et al., 2017), this is one of the first papers to address how parents manage this emotional impact, by actively controlling their reactions at mealtimes, encouraging children to overcome aversive reactions, and by talking about fussy eating related challenges both within their family and with external social networks. Another important finding is parents' perception that their experience of managing fussy eating behaviours is unique and personal, and that

every family/child is different. It is important that this is acknowledged as this perception may prevent parents from engaging with more general or universal child feeding advice.

The stability of parent feeding practices across childhood is relatively unknown. While some quantitative studies have reported that parent feeding practices are relatively stable from two to five years (Farrow & Blissett, 2012) and over one year in later childhood (Houldcroft et al., 2016), some qualitative research suggests that parents of older fussy eaters tend to give up trying to improve their child's diet (Boquin et al., 2014). In addition, Garcia et al. (2018) found that parents' observed and self-reported feeding practices were only moderately stable across three meals over a two to three week period and across two meals 18 months apart. This study found that some parents report being relatively consistent over time, whereas others with a resistance-to-acceptance response do report 'giving up' or 'letting go', in line with findings from Boquin et al. (2014). In addition, other families use different approaches on a day-to-day basis depending on contextual factors, in line with Garcia's (2018) findings. This study highlights varying responses across families which may help to explain some of the contradictory findings in the literature regarding the relationships between feeding practices and fussy eating trajectories (Galloway et al., 2005; Lumeng et al., 2018).

These findings suggest that it may be difficult for parents to accurately report the complexity of their practices (including contexts in which they are used, frequency, and past experiences of implementing different practices) using quantitative measures. Garcia (2018) found that self-report measures showed greater stability over time than observational measures. This suggests that more sensitive measures/methods may be required in order to accurately capture the dynamic nature of mealtime interactions, for example ecological momentary assessment (as used by Berge et al., 2018).

It has been argued that the fussy eating literature must move away from a unidirectional approach and must recognise the bi-directional and non-linear nature of the feeding relationship (Walton et al., 2017). In this study, family systems theory (Broderick, 1993) and social relational theory (Kuczynski & De Mol, 2015) support our understanding of the complexity and dynamic nature of parents' responses to fussy eating. Specifically, family systems theory is useful for understanding how the priorities of different goals change and interact with other processes such as parenting practices, family communication and increasing child autonomy. This theory is also useful in

recognising that all individual parts (family members) contribute to the family system and that school-aged children's increasing ability to communicate plays an important role in family negotiation in the context of fussy eating in later childhood. It is recommended that future research considers similar approaches or frameworks, to develop our understanding of the complex and dynamic nature of family eating behaviours.

**Strengths and limitations.** The qualitative design was a key strength to this study as it captured the dynamic and contextual nature of family processes that is not always evident in quantitative studies. In addition, it was useful to include parents experiencing a full spectrum of fussy eating behaviours, as our findings suggest that the impact of fussy eating and a parent's response may not necessarily correspond with the severity of a child's fussy eating. For example one mother responded consistently over time and reported little concern or family conflict, despite her son eating little/no vegetables and in other cases parents reported higher levels of concern, guilt, uncertainty and conflict despite their child reportedly consuming a relatively balanced diet.

However, this study relies on parents' retrospective accounts of their experiences and responses. Their perceptions of past experiences may be influenced by different factors such as emotions, the passing of time, and their current experiences. It is also possible that parents who were categorised as having a fluctuating response may in fact move towards accepting fussy eating with time. In addition, it was beyond the scope of this study to address the role of cultural and societal influences in detail, however the importance of extended family, schools, health professionals and the internet in shaping family responses must be acknowledged.

**Recommendations for future research and practice.** Research of a longitudinal design would be useful for mapping family response patterns over time. Longitudinal studies on specific parent feeding practices and fussy eating have been carried out, reporting contradictory findings (Galloway et al., 2005; Jansen et al., 2017; Lumeng et al., 2018). Methods such as cluster analysis or latent class analysis might be useful in identifying different family response patterns over time, and a quantitative study of this nature would also allow for further investigation of the associations between parent responses and fussy eating trajectories. It may also be useful for future research to differentiate more clearly between the trajectories of fussy eating behaviours, fussy eating challenges/impact, and parent responses. For example, a child may continue to have

strong dislikes and reject certain foods, but the challenges, conflict and concern associated with this behaviour may fade over time.

It is recommended that interventions or guidelines on managing fussy eating behaviours address all of the key processes involved in the fussy eating response, including goals, emotions and practices, while also considering the important role of improved family communication and increasing levels of autonomy in school-aged children. The diversity of approaches found in this study also highlights the importance of taking the context and history leading to a parents' current approach into account, and tailoring guidelines and advice to individual contexts. The findings demonstrate that many parents are aware of strategies for managing fussy eating challenges, but encounter difficulties implementing these strategies. It may be beneficial to tailor guidelines and interventions to parents with different response patterns. For example, for parents with a fluctuating response, improving parents' awareness and understanding of their competing goals, and supporting parents to set and prioritise goals may help these parents to implement strategies more consistently and reduce levels of stress and conflict. In addition, some group interventions for feeding problems have positive results (Mitchell et al., 2013). In support of this format of intervention, the findings in this study suggest that talking about fussy eating with other parents may help to normalise fussy eating and reduce feelings of concern and guilt.

Walton and colleagues (2017) have argued that there is a need to reconceptualise fussy eating behaviours as a positive expression of autonomy rather than as deviant behaviour in order to promote positive feeding interactions. Interestingly the findings show that supporting child independence and autonomy is an important goal for many parents of school-aged children. Although 'letting go', accepting fussy eating, and giving children more responsibility over their diet reduces stress and family conflict, this response may result in less exposure to new and disliked foods which may be problematic. Therefore, outlining clear roles and responsibilities for parents and children for example by using the division of responsibility model (Satter, 1995) and suggesting ways in which child autonomy can be encouraged without compromising health or nutrient intake may be particularly beneficial for parents with a resistance-to-acceptance response.

## **Conclusions**

Despite previous research suggesting that fussy eating behaviours peak in early childhood, this study indicates that it is still a challenge for many families of school-aged children and these families should not be neglected by research or intervention. This research provides a comprehensive analysis of family processes in relation to fussy eating behaviours, highlighting the dynamic and evolving nature of parents' feeding goals, emotions and practices. This is one of the first qualitative studies to focus in detail on how the experience and management of fussy eating behaviours evolve over time. Addressing a combination of different family processes, and taking the broader context and history of a family's responses into account, may improve the effectiveness of interventions and guidelines which aim to improve children's nutrient intake and reduce mealtime stress.

## **Chapter 5. Parents' Perceptions: Beliefs about the Development and Management of Fussy Eating (Study 2B)**

### **Chapter Overview**

The qualitative synthesis (Study 1) identified three types of beliefs that relate to fussy eating. Specifically two types of beliefs (parent attributions and self-efficacy beliefs) require further investigation to understand how they relate to parents' feeding practices. Study 2A identified three different response patterns (resistance-to-acceptance, fluctuating, and consistent) that vary in relation to parent emotions, goals and practices. However, the role of parents' beliefs in impacting parents' responses is unclear. Therefore the aim of this study is to investigate parent beliefs about the development and management of fussy eating with parents of school-aged children, and to investigate how these beliefs relate to their feeding practices. First, a brief introduction is provided, summarising some of the relevant literature detailed in Chapter 1. Secondly, findings generated through thematic analysis of 20 interviews with parents from 17 families are presented, as well as a conceptual model illustrating parent beliefs, how they develop, and how they relate to parent feeding practices. The findings are discussed in relation to current literature, and how they relate to the findings of Study 2A. Finally, recommendations for future research and practice are provided.

### **Introduction**

As discussed in the previous chapters, extensive research has been carried out on the relationship between parent feeding practices and childhood fussy eating behaviours (Cole et al., 2017; Mitchell et al., 2013; Scaglioni et al., 2018). However, few studies have been carried out exploring other constructs, such as parent beliefs, that are important for health behaviour change (Ajzen, 2011; Michie et al., 2011), and are likely to impact parents' feeding practices. The synthesis of qualitative literature on fussy eating (Chapter 3) identified three categories of parent beliefs that relate to fussy eating (beliefs about hunger regulation, attributions and self-efficacy). This synthesis found that qualitative studies demonstrate a clear relationship between hunger regulation beliefs and parent feeding practices. However, how parent attributions and self-efficacy relate to parent feeding practices were less explored and require further investigation. Study 2 (Chapter 4) identified three different response patterns (resistance-to-acceptance, fluctuating, and



consistent responses) that involve interactions between parent feeding goals, emotions and feeding practices. The role that parent beliefs play in contributing to these response patterns is unknown.

As detailed in the introduction chapter (Chapter 1), only two qualitative studies have explored parents' attributions of fussy eating and parents' self-efficacy beliefs. In line with Attribution Theory (Weiner, 1985) which states that the perceived cause of an event determines one's emotional and behavioural responses to the event, the authors of these studies (Russell & Worsley, 2013) propose that parents' attributions about what causes their child's food preferences impact their feeding practices. However, these two studies present limited data illustrating how specific attributions relate to feeding practices. If it is the case that specific parent attributions relate to parent feeding practices, attributions of fussy eating may be an important focus for interventions. Harris and colleagues (2000) highlight the importance of understanding the cause of feeding difficulties when framing an intervention, yet little research has been carried out investigating parent perceived causes of fussy eating. Current interventions focus primarily on feeding practices, and the extent to which they focus on understanding the causes of fussy eating is unclear from the literature (Gibson & Cooke, 2017; Hendrie et al., 2017; Mitchell et al., 2013).

Some quantitative studies have reported that higher levels of parent self-efficacy are associated with increased variety of fruit and vegetable intake in infancy, more positive parent feeding practices with pre-school children, and reduced likelihood of perceiving a toddler as a picky eater (Campbell et al., 2010; Ernawati et al., 2016; Horodyski et al., 2010; Koh et al., 2014). Campbell and colleagues (2010) reported that parents' feeding self-efficacy diminishes during the first few years of life, indicating that parent beliefs are dynamic and change over time. However, all of these studies on parent beliefs in the context of fussy eating have been carried out with parents of pre-schoolers. How these beliefs differ, or develop, in later childhood is unknown. Investigating the beliefs of parents of school-aged children would provide some insight into how parent beliefs develop over time.

To date, the literature on parent beliefs in the context of fussy eating has drawn upon theories such as attribution theory (Weiner, 1985) and self-efficacy theory (Bandura, 1997). While these theories have offered some useful insights in relation to

understanding parent beliefs about fussy eating, these theories originate from a mechanistic (rather than dialectical) framework and are based on linear conceptions of causality and the concept of 'personal control'. These theories do not adequately account for the agency of two active individuals (parent and child) in an interpersonal relationship. It has been suggested that a dialectical conception of influence in which both parent and child are considered to have agency is more appropriate for understanding socialisation processes (Kuczynski & De Mol, 2015). As introduced in Chapter 1, Kuczynski & De Mol (2015) suggest that the idea of 'relational efficacy' is more appropriate than 'self-efficacy' for understanding interpersonal influence in socialisation processes. Relational-efficacy beliefs develop from the history of interactions between the parent and child and distinguishes interpersonal outcomes from control over the non-social environment (Kuczynski & De Mol, 2015). Social relational theory also highlights how parents and children are in an enduring relationship with a past, present and a future, and that past interactions, as well as future anticipations relate to family processes in the present (Kuczynski & De Mol, 2015). Very little research on fussy eating has been carried out from a dialectical perspective. However, Russell & Russell (2018), proposed a theoretical model of the biological and psychosocial processes in the early development of children's appetitive traits. This model draws on dialectical socialisation theory, proposing that parent beliefs develop over time through interactions with their children, and that parents' beliefs relate to their feeding practices. However, this model does not indicate relationships between specific types of beliefs and feeding practices, does not account for the role of contextual/cultural factors, and focuses on the early development of children's eating behaviour, rather than the management of these behaviours later in childhood. Exploring the beliefs of parents' of school-aged children using social relational theory would develop our understanding of some of the processes proposed in Russell & Russell's (2018) model, and how these processes develop in later childhood.

To the author's knowledge, parent beliefs about fussy eating have not yet been qualitatively investigated from a dialectic perspective. Therefore, this study aims to investigate parent beliefs about fussy eating with parents of school-aged children. Specifically, this study aims to investigate 1) Parent beliefs about the development and management of fussy eating behaviours, 2) how parents' beliefs about fussy eating relate to their feeding practices (and whether they relate to the response patterns identified in Study 2A).

## Results

Thematic analysis generated four themes. The first theme '*Beliefs about the Development of Fussy Eating and the Perceived Role of Parents*' discusses the factors that parents believe influence fussy eating, and varied perceptions of the parent's role. The second theme '*Perceived Relational-Efficacy Beliefs: Parents' Confidence That They Can Influence and Overcome their Child's Fussy Eating Behaviours*' discusses parents' current low and high relational efficacy beliefs, and how these relate to beliefs about the development of fussy eating described in Theme 1. The third theme '*A Hopeful or Worrying Future*' describes parents' beliefs and anticipations about the future and how these future expectations relate to their beliefs about the past and the present. Finally, the fourth theme '*Beliefs put into Practice*' describes the relationships between parents' beliefs and their use of feeding practices (e.g. pressure to eat and cooking alternative meals).

The ages of school-aged children (6-10 years) referred to by parents are provided in brackets after quotes. As in Study 2A, in the few cases where parents refer to the family as a whole including siblings outside this age-range it is noted whether siblings are older or younger. This provides context about the family system, in line with social relational theory (Kuczynski & De Mol, 2015) and family systems theory (Broderick, 1993).

**Theme 1. Beliefs about the Development of Fussy Eating and the Perceived Role of Parents.** Parents perceived a wide range of factors to influence fussy eating behaviours, including parent, child, contextual, and societal/cultural factors. These factors are presented in Table 5.1 with supporting quotes. Child factors included age, appetite/hunger, personality, anxiety about trying new foods, and sensory aspects of foods. Parent factors included knowledge, interests, preferences, personality, infant feeding practices and child feeding practices. Parents also referred to a number of contextual and sociocultural factors that influence fussy eating including peer and sibling influence, family schedule, as well as cultural norms and habits. All parents referred to some parent, child, and contextual/socio-cultural factors implying that they believe fussy eating develops due to a combination of different factors. Some parents gave examples of how these factors interacted, for instance "*the causes or influences [of fussy eating]...I'd say is a parent's response to a child, a child's eating habits*" (mother, daughters aged 6 & 9) or

*“the more you get stressed the more stress it would be for them and then they would have a negative association around the food you know... I was actually just talking to another parent about that...her son is... autistic, but she is also very stressed about the food he was eating”* (mother, son aged 10).

Although all parents acknowledged some child and some parent factors, the perceived role of parents in the development of fussy eating varied. Some parents believed that child factors had more of an influence on fussy eating development, whereas other parents believed that parent factors played a primary role.

***Perceiving child factors to be a primary influence.*** One group of parents emphasised the role of child factors (such as personality, sensory sensitivity, food preferences) in the development of fussy eating. Sometimes, these beliefs developed through observing differences between siblings, whom parents had felt were fed in the same way. For example, one mother said *“I’ve become very aware of personalities through the three of them [siblings], so I don’t think it’s anything that we did, it’s actually just in her, which has been a realisation”* (mother, daughters aged 9 & 7, younger sibling) and another mother explained variation within her family by child characteristics *“different people like, you know within the family...there’s all different ah tastes and things”* and *“there’s very little variation in what I’ve cooked and the way I’ve approached things, I don’t think it’s to do with that changing, I think it’s more to do with the child as well”* (mother, son aged 10, older siblings). Another mother emphasised the role of her child’s personality, saying *“she [is] quite slow to eat...slower than all the rest [siblings] and, but she’s like that in her nature as well”* (mother, daughter aged 6, older siblings). The belief that child factors (such as personality and sensory sensitivity) were the primary influence on fussy eating also developed through interactions in which they had tried to get their child to eat and had been unsuccessful, leading them to believe that child factors (such as sensory sensitivity) prevailed over parents’ efforts. For example, one mother explained

*“[she] will not eat any vegetables whole, or any fruit, like literally any...and we tried, we’ve tried...we could be here still sitting, waiting for her to try... she hates some kind of textures and things like that and I genuinely believe she does...there have been times when we were, you know, making her eat it...she*

*would kind of take a little bit and then gag and just run away and be sick...so we did give up"* (mother, daughter aged 9).

Another mother explained that everything she had tried in the past had not made any difference and that her son would not eat anything if he did not like how it looked.

*"I've tried telling him he needs to eat the good stuff cause he needs to grow healthy...still nothing...he doesn't really understand...this lady I know...was giving me kids recipe books to see would that help him...he still won't try them...I tried giving the foods that are good for him...he's just like 'that's disgusting'...so it wouldn't make any difference...with soup for instance you can disguise it...he still doesn't want to eat it...if he just doesn't like the look of it, then that's it"* (mother, son aged 9).

Although these parents emphasised the role of child factors, many parents in this group felt they had contributed to their child's personality, preferences or behaviour early in life, which had then become stable child characteristics or habits over time. This led to feelings of guilt and blame. For example, one father blamed himself for contributing towards his child's approach to food, *"[she's] very stubborn and especially around food, I don't know if that's maybe something that I've generated, you know you always have these feelings of guilt"* (father, daughter aged 9). Another parent blamed herself for contributing to her son's dislike of egg when she was weaning him at ten months, *"I was a bit too harsh with them I would say because I was forcing into them what they didn't want you know...I think that was what traumatised [son] about fried egg, boiled egg"*. Her son's dislike of eggs had persisted over time (*"to date, he's ten years old, going on eleven, he doesn't do eggs"*) (mother, son aged 10, younger siblings). Similarly, another mother also blamed herself for her weaning practices, saying *"He's just always been fussy since he was like teeny yeah because he got the sweeter stuff from the jars"* (mother, son aged 9).

***Perceiving parent factors to have a primary influence.*** In contrast to this group, a second group of parents talked little about the role of child factors and strongly emphasised the role of parents. These parents believed that parent factors (such as knowledge, attitudes and feeding practices) were the predominant influencing factors. For example, *"It depends on what's put in front of the child as to where the child is getting their fussiness from"* (mother, son aged 7); and *"they'd snack away all day if you let them,*

*but you can't, because then they won't be hungry enough for dinner"* (mother, son aged 9, younger sibling). Some of these parents also believed that parents had responsibility for managing the impact of societal or cultural influences (such as availability of fast food and advertising). One mother said

*"if we don't give them that taste outside [take-away food], I don't think they will look for it...twenty percent they know they hear from their friends, they want to eat outside, they saw in the ads and Supermacs for example...but eighty percent we can control it"* (mother, daughter aged 9)

and another mother explained,

*"you are being bombarded with ah with advertising with the likes of MacDonald's...but again [children] are being taken to them am so you know the child doesn't hop into the car and go driving down to MacDonald's am they you know it's it's am what you're exposed to as well"* (mother, son aged 7)

These beliefs that parents' were the primary influence on fussy eating were based on past experiences with their children in which they believed they had had a positive influence on their child's eating behaviours. For example one mother said *"that approach seems to have worked, in just you know, forming the basis of his diet based on kind of non-sweet non-sugary type of food"* (mother, son aged 7). Another mother explained *"if we all eat the same food, I think they will eat, they won't have any problems"* (mother, daughter aged 9, younger sibling) and she felt that she had successfully overcome feeding challenges in the past

*"she wasn't eating properly because...whenever she asked for milk I was giving [it to] her...then someone said to reduce the amount of milk...so that worked...when she [was] demanding for milk, when I start give her something to eat, she would eat... and stop drinking the milk".* (mother, daughter aged 9)

Another mother attributed her daughter's eating behaviours to her infant feeding practices *"my daughter is pretty good, she, we did baby led weaning, so am best thing ever, I recommend it to every parent"* (mother, daughter aged 7). These parents were also more likely to emphasise the importance of breastfeeding and weaning practices in the development of eating behaviours, for example *"I think you have to get in very young,*

*you know, at the get go...to try and build it up...you know a wider pallet*" (mother, son aged 7) and *"I breastfed all of them...I think it has a huge influence actually"* (mother, son aged 7, younger siblings).

Although these parents did encounter fussy eating behaviours, they were less likely to perceive fussy eating behaviours as a problem. Some of these parents blamed other parents who were experiencing more severe challenges, for causing their child's fussy eating, for example *"my auntie's young one will only eat waffles and chicken...and there's nothing wrong with her, do you know, she let her become fussy...I would blame the parents you know"* (mother, son aged 9); *"[my relative] created that situation...[children] can only be fussy if you let them"* (mother, son aged 7).

Table 5.1.

*Factors Parents Believe Contribute to Fussy Eating Behaviours and Supporting Quotes*

<b>Contributing Factor</b>	<b>Supporting Quote</b>
<b>Child Factors</b>	
Age	<i>"they got to the age of where kids start being fussy [3 yrs]"</i> (mother, son aged 9, younger sibling)
Appetite (Trait)	<i>"he's always had a good appetite"</i> (mother, son aged 7) <i>"She never was a big eater"</i> (father, daughter aged 7).
Appetite (Hunger Level)	<i>"In the winter time...you know they don't get out so they mightn't build up their appetite"</i> (mother, daughters aged 9 & 6)
Personality	<i>"I think it's your character"</i> (father, daughters aged 9 & 7)
Anxiety/comfort zone	<i>"we'll sit down and talk about trying new things and she's like 'yeah actually I do want to try new things because I get tired of things' but then when it comes time to do it it's just like she hits a wall"</i> (mother, daughter aged 8)
Mood or tiredness	<i>"she's fussy like that just depending on her form I suppose"</i> (father, daughter aged 7)
Bored of food	<i>"kind of fed up so they 'I don't want sandwiches any more' that kind of, so I have to find another food"</i> (mother, children aged 9 & 8)
Behaviour or exerting control	<i>"just like to test you...and see what they can have control over"</i> (mother, son aged 9, younger sibling)
Genetics or runs in the family	<i>"I don't know if it's genetic because I was a fussy eater myself"</i> (mother, children aged 9 and 10) <i>"I suppose it was in our family"</i> (mother, daughters aged 9 & 7)
Medical/health/developmental disorders	<i>"I know with autism and things there are food aversions"</i> (mother, son aged 10)
Language development	<i>"he will express himself a little bit more clearly now eh, around what he likes and what he doesn't like"</i> (mother, son aged 7)
Sensory factors (taste)	<i>"so I think people just like actually don't like how certain things taste"</i> (mother, daughters aged 9 & 7)
Sensory factors (texture)	<i>"For her it's a texture thing, she talks often, you know, about the feel of things"</i> (mother, daughter aged 9)



Sensory factors (smell)	<i>"[my sister] can explain now, she really doesn't like the textures and smells of certain things"</i> (mother, son aged 10)
Sensory factors (appearance)	<i>"He just doesn't like the look of it"</i> (mother, son aged 9)
Negative experience (trauma)	<i>"if somebody eats something and it's very hot they get their mouth burned or whatever they might sort of be reluctant to eat that food in the future"</i> (father, son aged 10, older siblings)
<b>Parent Factors</b>	
Parent awareness, knowledge and skill	<i>"not having a certain set of parenting skills, and not maybe having proper educational materials available...to know how to deal with fussy eating"</i> (father, son aged 7).
Parent interests, attitudes and values	<i>"there's a bit of a narrow attitude around you know, what kind of foods kids will eat"</i> (mother, daughter aged 7)
Parent preferences	<i>"to be honest I don't think it helps that my husband doesn't eat veg you know"</i> (mother, son aged 7)
Parent personality	<i>"if they're fussy and then you're a panicky type of mother...they are sensing you getting uptight"</i> (mother, daughters aged 9 & 6)
Parent feeding practices	<i>"allow[ing] the child to dictate what they're given...kind of escalates into...a child do you know kind of being a fussy eater"</i> (mother, son aged 7)
Parent infant feeding practices (breastfeeding/bottle feeding)	<i>"I don't have that stress...I think it stems back to breastfeeding"</i> (mother, son aged 7)
Parent infant feeding practices (weaning)	<i>"He's just always been fussy since he was like teeny yeah because he got the sweeter stuff from the jars"</i> (mother, son aged 9)
<b>Contextual Factors</b>	
Peer and sibling influence	<i>"whether it was a case that other children in the crèche were going I don't like carrots and all of a sudden he didn't like carrots"</i> (mother, son aged 7)
School and childcare influence	<i>"[my friend's children are] really fussy eaters... the way their child care arrangements are... they'll get fed in different places...they'll just get whatever they get and then they come home and then they won't eat this"</i> (mother, son aged 7)
Setting (child eats better at friends or childcare)	<i>"he was at my brothers...he thought it was lovely and of course I bought it then...he wouldn't eat it at all then in my house"</i> (mother, son aged 7)

Time/family schedule	<i>“people like me, it’s just a whole time thing as well so you don’t have the time maybe, or the patience, to stop that kind of picky eating”</i> (mother, children aged 10, 8 & 7)
<b>Societal and Cultural Factors</b>	
Cultural changes in food availability and variety	<i>“I think the variety makes it easier to be fussy...if you have a choice it’s easier to be fussy than when you don’t”</i> (mother, daughter aged 7)
Increased availability of processed foods	<i>“I’d say [fussy eating] is more common now because people like, have more money for takeaways and less time for cooking things from scratch”</i> (mother, son aged 7)
Families don’t cook and eat together	<i>“[children] would often say they just eat in front of the TV on their own their parents would never eat with them”</i> (mother, son aged 7)
Mothers are working outside the home	<i>“mothers used to be at home all the time, whereas now they’re working...they’re like just too tired because they’re working to make the effort...with the food”</i> (mother, son aged 9).
Media and marketing	<i>the change and the shift there is in food and the way it’s presented and what’s marketed to kids”</i> (mother, daughter aged 8).
Culture: Obsessive over food intake	<i>“a lot of places...wouldn’t place so much, create so much of a big deal about it [feeding children] ...and the child just gets on with it...I think we have a tendency to be a little more obsessive about what’s going in to what we’re feeding them em and kind of micromanaging it in a way that’s maybe not that healthy”</i> (mother, son aged 7).
Pressure to meet health and nutrition recommendations	<i>“we’re brainwashed into telling them you know you need to get fruit and veg into you, you know, to be healthy...it’s kind of hard then so you do have certain amount of worry about it”</i> (mother, son aged 7);
Cultural food preferences	<i>“the cultural background, what your parents are eating you might like them most... Irish children will be different, Indian children will be different”</i> (mother, daughter aged 9).

**Theme 2: Perceived relational-efficacy beliefs: Parents' confidence that they can positively influence their child's fussy eating behaviours.** Parents' relational efficacy beliefs (confidence that they can influence or overcome their child's fussy eating behaviours) in the present varied, and these beliefs were related to their perceived influences on fussy eating behaviours and their past interactions with their children, described in Theme 1.

**Lower relational-efficacy.** Parents who emphasised the role of child factors (such as personality and sensory sensitivity) in the development of fussy eating, and who had unsuccessfully tried to influence their child's eating behaviours in the past, expressed lower relational-efficacy beliefs in the present. They perceived that they were not able to influence or change their child's fussy eating behaviour. They reported low confidence that they could influence their child to eat or try foods, influence or work around food preferences, stick to routines or implement practices that would help their child's eating behaviour, and low confidence that they could solve specific problems such as school lunches or re-acceptance of a rejected food. For example "*we've tried different things but none successfully*" (father, daughter aged 7), "*I don't think there's anything that can help, you know*" (mother, daughter aged 9); "*I have to choose to eat healthy and model that for her [to influence the child's eating behaviour] and I'm not good at that*" (mother, daughter aged 8). One father believed that overcoming fussy eating was up to his child, and had low confidence that he (or anyone else) could influence her behaviour ("*she has to make the decision that it's right for her [to change] and nobody else is going to force her to do it, so she's a very strong character*" (father, daughter aged 9)). Another mother had given up and did not believe that she could influence her son's preferences ("*right now, it's just like I give up, I won't ask him to eat [egg] anymore*" (mother, son aged 10)).

**Higher relational-efficacy.** On the other hand, parents who believed that parents were the primary influences on fussy eating behaviours, and who had had positive experiences of influencing their child's eating behaviours in the past, had higher relational efficacy beliefs in the present. For instance they believed they could get their child to eat or try new foods, influence or work around preferences, stick to their philosophy or routine, implement practices consistently and solve specific problems such as school lunches or re-acceptance of a rejected food. For example, "*I can change [child's diet] as fast as I want*" (mother, son aged 7); "*[say] 'listen you have to try it, because I'm telling you, you have to try it' and then the kids are going to listen to you, they're going to do it*"

(mother, son aged 9); *“I just talk to her about the whole idea of the research and how as we get bigger our taste buds change...she was very much like ‘ok, I’ll give it a go”* and *“they eat more of what they cook eat more when they cook it themselves or help cook themselves anyway I always find”* (mother, daughter aged 7).

**Theme 3: A hopeful or worrying future?** Parents' beliefs about the development of fussy eating and their relational-efficacy beliefs related to their expectations for the future trajectory of their child's fussy eating behaviours.

Some parents with low relational efficacy believed that fussy eating would persist. This belief may be due to the experienced persistence of the child's behaviour thus far, the parents' own eating behaviours, or the belief that fussy eating developed due to relatively stable characteristics like personality that are unlikely to change. These parents expressed more negative expectations and concern for the future. For instance, one mother explained *“I’m not great at trying new things either...I don’t think you can grow out of it [fussy eating], I think it just kind of sticks, it sticks with you”* and said *“I’m constantly worried now that she’s not getting enough good stuff because I can see her in the future keeping these habits ...and being sick or you know, getting diabetes”* (mother, daughter aged 8). Another mother explained how her son's behaviour had persisted across childhood despite being told that he would grow out of it *“he’s always been a fussy eater, since he was a baby”*. She was concerned about health and had negative expectations for the future *“growing into a teenager, and then into an adult, and he needs to be able to do that properly and healthily so yeah, so we’ve a hard trek ahead of us I think”* (mother, son aged 9). Another mother said

*“it’s a big worry...if you grow up with it, it’s not good...they end up [with] anorexia, they end up not [wanting] to eat anything... they don’t want to hear about food...you end up [with] some of them very good, healthy, vegetarian, you know, and then some of them end up very heavy weight with...diabetes”* (mother, children aged 6 & 10).

Some parents who expressed low relational-efficacy believed that fussy eating would resolve itself, or that their child would naturally grow out of fussy eating, for example, *“I have found in general actually that people started off fussy but got better, their tastes kind of broadened as they got older”* (mother, son aged 10, older siblings), *“we tried a lot of different techniques...they didn’t seem to get through and I think she’s*

*just growing out of it*" (father, daughter aged 9). These parents expressed positive expectations and hope for the future "*there is hope, hopefully anyway for the fussy eaters*" (mother, son aged 10). Similarly another mother believed that preferences change in adolescence and said "*it would be nice if they all just tried new stuff...I am expecting that to come as they get older, that's what I am expecting to happen*" (mother, children aged 10, 8 & 7).

Finally, parents who had higher relational efficacy believed that fussy eating behaviours were temporary and that children would grow out of them. For example one mother talked about a stage at "*four to six kind of age where they start to get a bit like 'oh I don't like spicy things, oh I don't like onions'*" but her seven year old had "*started to like spice again now*" (mother, daughter aged 7). These parents either had positive or neutral expectations for the future, or did not talk about the future. For example one mother explained

*"the way I look at it, it's not really a problem when they're that age, because from my own experience I look back, well I didn't eat this and I didn't eat that, but then as I got older in my teenage years then I started saying 'oh yeah I'll try that I'll try that' and now I love them all"* (mother, daughters aged 10 & 8).

Another mother expected, or hoped, that her positive influence on her son's eating behaviours would last into adulthood

*"I think that to try and do as much now, when you do have that bit more influence over it...to give some sort of foundation, rather than him to, you know, reach his twenties and go off to university and have to discover all of this for himself"* (mother, son aged 7).

**Theme 4: Beliefs put into practice.** Parent beliefs described in the previous three themes (perceived influencing factors, relational efficacy and anticipated trajectories) were related to parents' feeding practices, and the response patterns identified in Study 2A. In particular, these beliefs were related to parent's use of coercive practices and accommodation of child preferences.

Parents who had low relational-efficacy but believed that fussy eating would persist and were more concerned about the future, reported frequently changing their practices. These parents corresponded with the fluctuating response pattern identified in

Study 2A. They accommodated child preferences and cooked alternative meals on some days and pressured their child to eat on other days, for instance *"I force them like 'you have to eat [or] you don't get this" and "[fussy eating] is the most difficult one challenge...always trying to create another thing [dish]"* (mother, children aged 10 & 6).

Parents who emphasised the role of child factors and had low relational efficacy but believed that fussy eating would resolve itself, corresponded with parents in the resistance-to-acceptance group in Study 2A. These parents had used coercive practices in the past, but now 'gave up' pressuring their child to eat, and accommodated their child's preferences (*"what we used to have to do is, he just wasn't allowed to leave the table...then I started to kind of mash the carrots...he wouldn't eat it...so you just end up having to cook something else for him"* (mother, son aged 8)). Some of these parents had expected their children to be compliant in the past, but now respected their autonomy more and negotiated with their children. For example, one mother said that in the past she *"was forcing into them what they didn't want"* but now she realised that *"consulting their opinion kind of makes it easier"* (mother, children aged 10 & 9).

Finally, parents who emphasised the role of parents in the development of fussy eating and had higher relational-efficacy were more consistent in their practices and corresponded with the consistent response pattern identified in Study 2A. Although they sometimes adapted the family meal to accommodate child preferences, they were more likely to only cook one meal. For example, *"we probably would have got a bit blander and she's started to like spice again now which is good so it's kind of coming back in"* (mother, daughter aged 7) and *"I'm not cooking ten different dinners for everybody, I'm cooking the same dinner for everybody, everybody's got to eat it or you can go hungry."* (mother, son aged 9, younger sibling). Some of these parents stated that they don't pressure their child to eat, and encourage self-regulation, for instance *"I don't force them to eat to finish the plate it's the way I look at it is if they're hungry they're going to eat it you know"* (mother, children aged 10 & 8) and *"I've never forced him to eat or never got stressed out when he was a small baby"* (mother, son aged 7). However, some of the parents in this group did report using coercive practices such as rewards or punishments,

*generally we'll try and threaten by saying 'oh well then in that case then there's no dessert', you know generally we do a lot of fruit for dessert...they'll eat a*

*little bit of it in the hope...it's a kind of negotiation process (father, son aged 7, younger siblings)*

but the use of these practices in this group was associated with negotiation and cooperation rather than resistance, resulting in continued and relatively consistent use of these strategies “*through that incentivisation process they're very keen to make sure that they clean up at dinner time or whatever, that really works a treat*” (father, son aged 7, younger siblings).

**Summary of findings.** Parents believed that a wide range of factors contributed to fussy eating behaviours, including child, parent, contextual, societal and cultural factors (Table 5.1). Based on past interactions with their children, and observations between siblings, one group of parents believed that child factors played a predominant role in the development of fussy eating and parents' played a lesser role. These parents expressed lower relational-efficacy beliefs in the present. Some of these parents believed fussy eating would resolve itself in the future and ‘gave up’ using coercive practices and instead accommodated child preferences. Others believed fussy eating would persist, expressing more concern for the future. These parents frequently alternated between accommodating child preferences and using coercive practices. In contrast, a second group of parents talked less about child factors and believed that parent factors (such as parent attitudes and feeding practices) played a greater role in the development of fussy eating. These parents were less likely to perceive fussy eating behaviours as a problem, expressed high relational-efficacy and tended to blame parents of other ‘fussy eaters’. These parents, had neutral or positive expectations for the future. These parents were more consistent in their approach and were more likely to report only cooking one meal, not pressuring children to eat, and promoting their child to regulate their own appetite. A few of these parents with high relational efficacy did use coercive practices but reported child cooperation or parent-child accommodation and negotiation in response to these practices, rather than resistance and conflict. The relationships between parent beliefs and feeding practices are illustrated below in Figure 5.1.

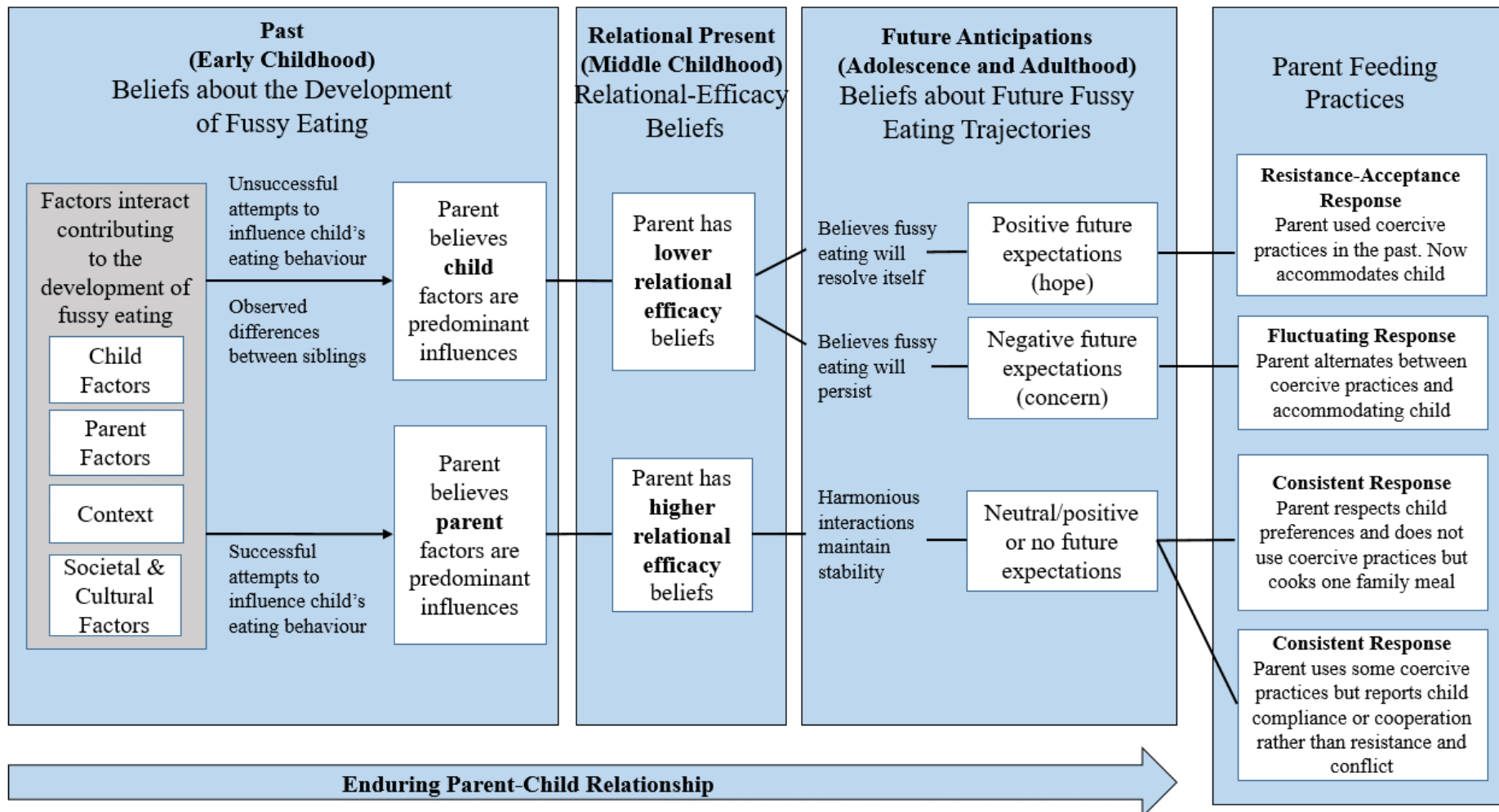


Figure 5.1. Dialectic social relational model of parent feeding beliefs and feeding practices



## Discussion

Overall, the conceptual model (Figure 5.1) illustrates that parent beliefs about the past development of fussy eating, beliefs about their ability to influence their child's behaviours in the present and beliefs about the future trajectory of their child's fussy eating all relate to one another, and relate to parents' use of feeding practices. The findings also highlight that whether or not parents feel successful in early parent-child interactions relates to their beliefs about managing fussy eating later in childhood. These findings are in line with social relational theory (Kuczynski & De Mol, 2015) which states that parents and children are active agents who construct meaning and beliefs through their interactions (or transactions). Social relational theory also states that parents and children are in an enduring relationship with a past, present and future and they begin to predict future interactions and behaviours based on their past experiences (Kuczynski & De Mol, 2015). The conceptual model (Figure 5.1) supports and extends Russell & Russell's (2018) model of the biological and psychosocial processes in the development of children's early appetitive traits. Their model proposes interactions between parent beliefs, practices and the development of appetitive traits in early childhood. The findings of this study support their model by providing evidence of the interactions between parent beliefs, practices and child factors, but also illustrate how these interactions continue in middle childhood. Parents in this study also report how contextual and sociocultural factors contribute to the development of fussy eating behaviours, not included in Russell and Russell's (2018) model. Finally, the findings extend their theory by illustrating the relationships between specific types of beliefs and practices. For instance, attributing fussy eating to child factors, having low relational-efficacy beliefs, and negative future expectations relate to more inconsistent and coercive practices.

In Theme 1, it was found that parents believe that fussy eating develops due to a combination of child, parent, contextual, societal and cultural factors. This is in line with a dialectical social relational perspective, in which parents and children are considered active agents who interact as components of an enduring relationship embedded in a cultural context (Kuczynski & De Mol, 2015). This also supports findings that demonstrate a bidirectional relationship between child fussy eating and parent feeding practices (Jansen et al., 2018; Jansen et al., 2017).

This was the first study to investigate parent attributions of fussy eating in school-aged children, and provides evidence that parent attributions in school-aged children are broadly in line with previously reported attributions of fussy eating and food preferences in pre-school children (Rubio & Rigal, 2017; Russell & Worsley, 2013). The parent, child, contextual and sociocultural factors identified in this study are also in line with correlates of fussy eating behaviours reported in the literature. Parents in this study perceived a range of societal and cultural factors to influence fussy eating including changes in food availability, availability of processed foods, mothers working outside the home, cultural obsessiveness with food intake, and pressure to meet nutrition recommendations. Some societal and cultural factors such as marketing, socio-economic status, cultural food preferences have previously been related to fussy eating (Birch et al., 1995; Cardona Cano, Hoek et al., 2015; Dovey et al., 2008; Flight, Leppard, & Cox, 2003; Tharner et al., 2014). Although social norms have been widely studied in relation to eating behaviour in general (for instance, in the context of obesity or pre-schoolers snacking behaviour (Hammond, 2010; Lally et al., 2012)), the impact of social and cultural norms and habits are under-researched in the context of fussy eating. A qualitative study in low socio-economic communities by Judd, Newton, Newton, & Ewing (2014) found that nutrition messages and programmes contributed to parents feeling bad or incapable in relation to their food socialisation practices. More research is required to fully understand the impact of social and cultural factors on fussy eating and how these can be overcome. For instance, if parents report that feeling pressured to meet nutrition recommendations exacerbates fussy eating challenges, appropriate feeding advice needs to be provided alongside nutrition recommendations.

Parents with higher relational-efficacy were more likely to emphasise the role of infant feeding practices and breastfeeding in being protective against fussy eating, whereas other parents did not think breastfeeding plays a role. This reflects contradicting findings in the literature. For instance, some studies have reported breastfeeding duration to play a role (Galloway et al., 2003) other studies have not identified a relationship between breastfeeding duration and fussy eating (De Barse et al., 2017). More research is required to determine whether infant feeding practices have a meaningful impact on fussy eating behaviours so that accurate information can be provided to parents in relation to infant feeding decisions.

Russell & Worsley (2013), suggest that parents may misperceive the causes of fussy eating, underestimating the role of socialisation and parental influence, and that these beliefs might impact children's eating behaviours. In contrast, this study found that some parents talked very little about child factors and strongly emphasised the role of parental influence. Some parents blamed themselves for contributing to their child's behaviours, personality and preferences early in life, and parents with higher relational-efficacy tended to blame parents of 'fussy eaters' for letting their child get fussy. These findings suggest that it is also possible that parents underestimate the role of genetics and child factors. Increasing awareness of genetic influences (Smith et al., 2017), and the role of child characteristics such as personality, temperament, and sensory sensitivity may reduce feelings of blame and guilt for parents who have low relational efficacy, and may increase empathy from parents with higher-relational efficacy. However, it is also important for parents to be aware that even if children have strong taste preferences, sensory sensitivity, or a personality that influences their fussy eating behaviours, that fussy eating behaviours can still be improved by optimal socialisation practices. In this case parents may require more specific recommendations, and in some cases professional intervention (Dovey et al., 2009), on how to overcome these challenges, to build up positive interactions with their child, and to develop higher relational-efficacy beliefs.

This is the first study to report parents' relational efficacy beliefs for managing fussy eating challenges in parents of school-aged children. It found that parents' levels of relational-efficacy varied, and was related to parents' beliefs about the development of fussy eating and their previous successful or unsuccessful interactions with their children. Some parents tried to influence their child's eating behaviour early in life but developed low relational-efficacy beliefs through unsuccessful interactions in which child factors (such as sensory sensitivity or taste preferences) prevailed over parent efforts to get their child to eat. This supports Campbell's (2010) finding that parents' feeding self-efficacy diminished during the first few years of their child's life. The findings suggest that whether parents' interactions with their child are positive or negative early in life, relates to their relational efficacy beliefs in later childhood. Mitchell et al. (2013) suggest that prenatal education on feeding and managing feeding difficulties prior to childbirth may prevent feeding problems as well as the associated negative emotional and psychological effects. The findings of this study support the need for early intervention, in order for

parents to build up positive interactions with their children and develop higher relational-efficacy beliefs.

To the author's knowledge, this is the first study to investigate parent beliefs about the future trajectories of fussy eating behaviours. In line with social relational theory, parents predicted the future trajectory of their children's fussy eating behaviours based on their understanding of what happened before (Kuczynski & De Mol, 2015). Specifically, their beliefs about the development of fussy eating, and their relational efficacy beliefs related to feelings of hope or concern for the future. Estimates of the prevalence of fussy eating at different ages varies considerably across studies and the trajectory of fussy eating across childhood is largely unknown (Lafraire et al., 2016; Taylor, Wernimont, et al., 2015). The findings of this study suggest that fussy eating trajectories may vary widely depending on the reason behind fussy eating behaviours (e.g. typical childhood food preferences versus a specific challenge such as anxiety or sensory sensitivity) as well as parent beliefs and feeding practices. Parents who develop low relational efficacy and believed that fussy eating would persist, expressing concern for the future, were more likely to continue using coercive practices than parents with other beliefs. This corroborates findings by Harris et al. (2018) who reported that concern fully mediated the relationship between fussy eating and persuasive feeding. This also supports the suggestion of Russell (2013) that if a parent believes that fussy eating is due to stable child characteristics, they may be more likely to pressure the child to eat. In addition, social relational theory proposes that when a sense of relational efficacy is lost, then the relationship is no longer a constructive power resource and only coercive power remains (Kuczynski & De Mol, 2015). Similarly, family systems theory (Broderick, 1993) states that if parents have an inadequate repertoire of responses they may fall back to a standard response. Together, these theories and research findings suggest that parents who are concerned about the future require education about the impact of coercive practices as well as alternative responses or strategies that may alter the expected trajectory of their child's fussy eating.

The previous study in this thesis (Study 2A) identified three different response patterns (resistance-to-acceptance response, fluctuating response, and consistent response) that involve different goals, emotions and feeding practices. This study adds to these findings by illustrating that parent beliefs also play a part in contributing to parents overall response to their child's fussy eating. Together these two studies build a more

complete picture of parent responses to fussy eating and the different constructs that could be targeted by interventions. Figure 5.2 below shows how findings from Studies 2A and 2B relate.

To conclude, parent beliefs about the past, present and future of fussy eating related to their use of parent feeding practices. Findings suggest that supporting parents to accurately understand the influences of their child's fussy eating, supporting them to build up positive interactions with their child, addressing future concerns, and providing parents with more specific strategies that are relevant to their child's individual needs, may increase relational-efficacy beliefs as well as the use of more effective and responsive feeding practices.

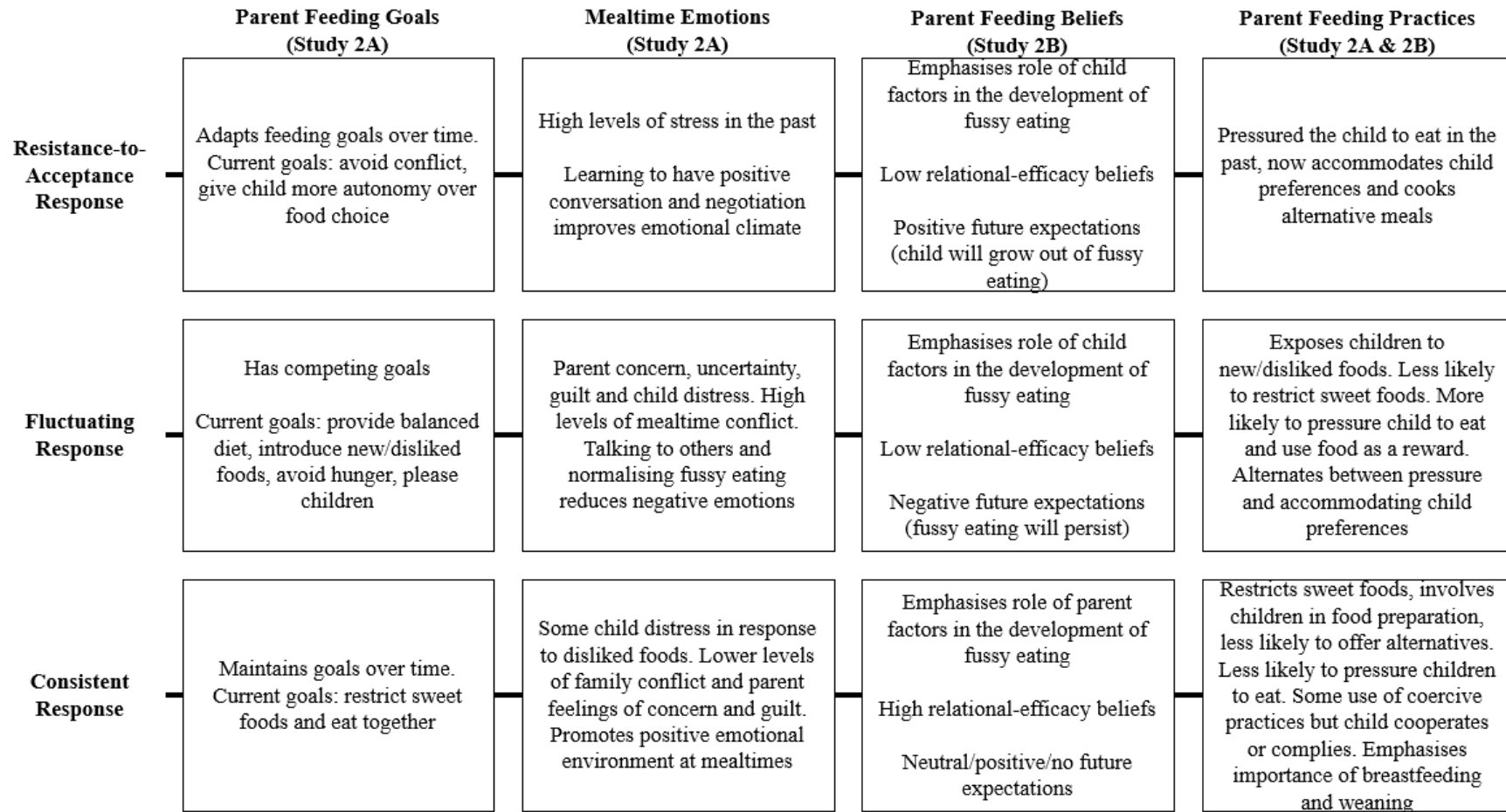


Figure 5.2. Relationships between findings of Study 2A and Study 2B

**Strengths and limitations.** This is the first qualitative study to investigate parent's beliefs from a social relational perspective. This theory offers some insight into how parent beliefs develop, and how they relate to children's behaviours. In addition, this is the first study to qualitatively investigate parent beliefs about fussy eating in families of school-aged children, illustrating that parent-child interactions in early childhood relate to parent beliefs that last in later childhood. However, this study is a cross-sectional qualitative study and parents' reports of the development of fussy eating and their interactions in early childhood were retrospective, therefore it is not possible to infer causal relationships between constructs (such as parent beliefs and feeding practices).

Parent-reported factors that influence fussy eating may have been impacted by the interview guide as parents were prompted to discuss certain factors such as child age and societal/cultural influences. However, keeping a reflexive diary throughout data collection and data analysis allowed the researcher to reflect on the influence of the researcher on the research findings, enhancing credibility and confirmability of the research (Hannes, 2011). Researcher notes indicated that even when prompted (to talk about child factors, or infant feeding practices, for example) some parents admitted that they did not know, or said they did not think these factors had an influence, suggesting that for the most part reported factors are representative of parent beliefs.

**Recommendations for future research and practice.** It would be useful to develop appropriate quantitative measures to assess parent perceived attributions of fussy eating, parent relational efficacy beliefs, and beliefs about future trajectories of fussy eating so that these factors can be accounted for in quantitative studies. A Parent Attribution for Child Eating Scale (PACES) has been developed (Hendy et al., 2014) but is only applicable to feeding problems in a hospital setting. The factors identified in this study (Table 1) may provide a useful basis for the development of a measure that can be administered in non-clinical community samples. It would also be useful to explore parent feeding beliefs longitudinally, commencing prenatally, to determine whether differences in feeding beliefs are present prior to parent interactions with their children and how these beliefs develop throughout childhood.

Previous interventions for increasing children's fruit and vegetable intake and managing children's feeding difficulties have had limited success (Hendrie et al., 2017; Mitchell et al., 2013). Although beliefs are considered an important aspect of health

behaviour change (Ajzen, 2011; Michie et al., 2011; Morrison & Bennett, 2012), very little research has investigated parent beliefs about fussy eating. This study suggests that targeting parent attributions and raising awareness about the factors that impact fussy eating and children's food preferences, along with specific strategies for overcoming certain factors (such as sensory sensitivity, 'stubborn' or 'headstrong' personalities) might increase parents' self-efficacy beliefs and support the use of effective practices. It has been suggested that raising parents' awareness of practices such as repeated exposure may be beneficial for parents. However, clinical interventions often use more specific strategies such as gradual exposure or systematic desensitisation to overcome children's anxiety about trying new foods, or to overcome sensory sensitivity to certain textures (Rowell & McGlothlin, 2015; Toomey & Ross, 2011). In cases in which parents believe that child characteristics are the predominant influences on fussy eating, providing parents with more specific strategies such as these, may help parents to overcome fussy eating challenges. Finally, these findings also suggest that it is important to address parents' concerns and negative expectations for the future, as these beliefs may lead parents to use counterproductive strategies.

### **Conclusions**

This study has contributed to our understanding of how parent beliefs about fussy eating develop and how these beliefs relate to feeding practices, by providing a dialectical, social relational theory perspective (Kuczynski & De Mol, 2015). It was found that parents' beliefs about factors that influence fussy eating (attributions), their relational efficacy beliefs (confidence that they can influence their child's behaviour), and beliefs about the future trajectory of their child's eating behaviours develop over time as a result of parent-child interactions. This is the first study to qualitatively explore parent beliefs about fussy eating in families of school-aged children. Findings suggest that early parent-child interactions can have an impact on parent beliefs (such as level of relational-efficacy) that last into later childhood. These beliefs all related to parent feeding practices. In particular, lower relational efficacy beliefs, and more negative future expectations (concern) were related to the use of more coercive and inconsistent practices. It is recommended that the beliefs identified in this cross-sectional study are investigated longitudinally, and that appropriate measures are developed so that these beliefs can be accounted for in quantitative studies. Supporting parents to correctly identify the factors that influenced



their child's fussy eating, providing strategies that are specific to a child's individual needs, and addressing concerns about negative future expectations may increase parent sense of relational efficacy and support the use of more responsive feeding practices.

## **Chapter 6. Fussy Eating Behaviours: Children's Perceptions, Experiences and Strategies (Study 3)**

### **Chapter Overview**

As outlined in the introduction chapter, adopting a dialectical approach to studying fussy eating means viewing the parent and child as equal agents in the feeding relationship and considering children's perspectives. Previous literature on fussy eating has been dominated by parents' perspectives. Therefore, the aim of this chapter is to investigate how children perceive food dislikes, food refusals and 'fussy eating' behaviours, and how they experience family processes relating to these behaviours (e.g. goals, emotions, and practices). First an introduction to the study is provided, reviewing relevant literature and outlining the aims of this study. Secondly, the findings are presented which were based on thematic analysis of interviews with 16 school-aged children (procedure detailed in Chapter 2). The findings are then discussed in relation to the current literature. Ethical, methodological and pragmatic challenges faced when carrying out research with children are discussed. Recommendations are provided for future research aiming to investigate similar topics with school-aged children. Finally, recommendations are made for practice, and key conclusions are summarised.

### **Introduction**

As described in the previous chapters, the development of fussy eating behaviours is complex and involves many factors relating to the child, family, peers, society and culture (Cole et al., 2017). Much research has focused on the influence of the home environment and parent feeding practices on fussy eating (Mitchell et al., 2013; Nekitsing, Blundell-Birtill, et al., 2018). In the past, many of these studies were carried out using a unidirectional parent-effects model in which the parent is considered to mould and shape their child. However, it has been reported that the use and effectiveness of certain strategies varies across children within one family, and across families (Berge et al., 2016; Harris et al., 2016; Holley et al., 2016b; Vandeweghe et al., 2016). These variations are explained somewhat by child factors. It is known that the relationship between fussy eating and parent feeding practices is bi-directional, with both the child and parent behaviours influencing one another (Jansen, Williams, et al., 2018; Jansen et al., 2017).

Given the prevalence of the unidirectional approach, almost all studies relating to fussy eating have relied on the parent perspective. This reflects the more traditional approach to research, as children were historically viewed as the object of investigation rather than as active participants in research (Greene & Hogan, 2005). However, the active role that children play in constructing their development is increasingly recognised, as is the importance of understanding their own experiences of their world. The right for children to participate in matters that affect their lives is widely recognised, and has been endorsed by The United Nations Convention on the rights of the Child (Cohen, 1989) for some time (Greene & Hogan, 2005; Söderbäck, Coyne, & Harder, 2011). Adult perceptions of children's thoughts, behaviours and needs may differ from what children tell us themselves (Greene & Hogan, 2005; Söderbäck et al., 2011). For example, one study found that parent reports of their children's fussy eating behaviour were not related to behavioural observations of their food acceptance (Werthmann et al., 2015) and another quantitative study found that parent and child attitudes to food differed (Le Bigot Macaux, 2001). In line with this cultural and research shift towards valuing children's perspectives, it has been suggested that we adopt a dialectical approach to studying fussy eating (Walton et al., 2017) which requires an understanding of children's own motivations and experiences at mealtimes (Walton et al., 2017). In line with a dialectical approach, family systems theory (Broderick, 1993) and social relational theory (Kuczynski & De Mol, 2015) view the child as an active agent within a family system, or as part of an enduring parent-child relationship, with their own perspectives and goals that may differ from those of parents and other family members.

Although there is little known in relation to the child's perception of fussy eating behaviours, studies have reported children's perspectives in relation to food preferences and food choice. For instance, when developing a Trying New Foods Scale, Johnson et al. (2018) asked pre-schoolers about reasons for not trying new foods. Reasons included a lack of knowledge or experience with the food, anticipating a bad taste or smell, colour, not wanting to eat it and fear that the food would make them ill (Johnson et al., 2018). In qualitative studies, school-aged children have reported that their food preferences and willingness to accept foods are influenced by sensory and aesthetic aspects of foods, health beliefs, how fun the food is to eat, whether the food fits with their self-image, family, school, advertising, cost, and curiosity among others (Alm et al., 2015; Atik & Ozdamar Ertekin, 2013; Ishak et al., 2013; Sick et al., 2019; Waddingham et al., 2018).

Food choice in the home environment often involves a compromise between parents and children. Older school-aged children and adolescents report more autonomy and value more control over food choice than younger children (Alm et al., 2015; Fitzgerald, Heary, Nixon, & Kelly, 2010; Lopez-Dicastillo, Grande, & Callery, 2013; Warren, Parry, Lynch, & Murphy, 2008). Although older children value autonomy in relation to food choice, it is unclear how school-aged children demonstrate agency in relation to 'fussy' eating behaviours, for instance how they exert control over their food intake or avoid disliked foods. Also, it is unclear whether school-aged children express willingness to overcome dislikes and try new foods, or whether these are primarily goals of parents. Lopez-Dicastillo et al. (2013), reported that school children did not tend to try new foods on their own initiative and only when pushed by their parents, but children said they planned to try disliked foods in the future.

Although some studies have reported children's views in relation to food preferences and family meals (e.g. Alm et al., 2015; McGuffin et al., 2015), few findings have been reported in relation to children's experiences of mealtime emotions, goals and practices in the context of fussy eating behaviours, neophobia or food refusal. When developing the Trying New Foods Scale mentioned above, Johnson et al. (2018) also asked pre-schoolers about their feelings when trying new foods and reported that pre-schooler's feelings were mostly negative (sad, angry, mad and scared), but a few children reported neutral and positive feelings. Adult picky eaters have reported strong emotional and physical reactions to disliked foods, that for some can be distressing and alienating, limiting their ability to eat socially (Fox et al., 2018; Thompson et al., 2015). Parents have also reported strong emotional responses to foods in their school-aged children (Boquin et al., 2014), but this has not been explored from the perspective of school-aged children. In addition, parents have reported high levels of stress and concern in relation to fussy eating (Harris, Ria-Searle, et al., 2018; Trofholz et al., 2017), yet children's perceptions of parents' mealtime experiences are largely unexplored. Regarding mealtime goals and practices, Alm (2015) found that avoiding disliked food was more important to children than avoiding arguments with their parents, but that in response to parent requests children did agree to eat small amounts of disliked foods, or to eat foods in order to get dessert. Some studies have explored child reports of parenting practices quantitatively, and have found that they do not always correspond with parent reports (Pulley, Galloway, Webb, & Payne, 2014; Taylor, Wilson, Slater, & Mohr, 2011), again highlighting the

importance of understanding the child perspective and gaining a more in-depth understanding of their first-hand experiences.

Although it has been suggested that we take a dialectical approach to studying fussy eating (Walton et al., 2017) and the importance of understanding children's perspectives is widely recognised, there were no studies with a primary focus on fussy eating behaviours from the child's perspective that met the inclusion criteria for the qualitative synthesis (Study 1, Chapter 3). It is critical that we understand children's perspectives in relation to food dislikes, food refusal and 'fussy' eating when developing interventions focused on overcoming fussy eating related challenges. Walton and colleagues (2017) suggest that qualitative methods can be useful in order to study both parent and child meanings, attributions and goals that make up the feeding experience. Therefore, from a family systems and social relational point of view, this study aims to qualitatively explore: 1) how food dislikes, food refusal, and 'fussy eating' behaviours are perceived by children and 2) how children experience family processes relating to these behaviours (e.g. mealtime emotions, goals and practices).

## Results

Thematic analysis resulted in the generation of three main themes. Theme 1, '*Typical Individual Differences or Bad Behavior?*' discusses what dislikes, food refusal and fussy eating mean to children. Theme 2, '*Different Motivations, Goals and Mealtime Emotions*' describes child motivations and emotions in relation to accepting or rejecting foods, perceived parent goals and emotions that relate to child food acceptance, and how children weigh up competing motivations and demands. Finally, Theme 3 '*Dealing with Dislikes*' presents children's own strategies for coping with, and overcoming, disliked foods, as well as perceived effectiveness and acceptability of parent strategies.

**Theme 1. Typical individual differences or bad behaviour?** Almost all children clearly described their food preferences, and had definite likes and dislikes. Although some children perceived food refusal and 'fussy eating' behaviours negatively, for the most part food preferences and dislikes were considered normal and children were accepting of individual differences.

Almost all children had clear, individual food preferences, for example "*I like to eat pizza, em, chicken nuggets, and noodles*" (daughter, aged 8); "*I love vegetables*"

(daughter, aged 9); *“salad, I hate salad”* (son, aged 7). Many children described how their preferences made them similar or different to other family members, for instance *“My brothers hate pasta, and I’m the only one who likes cheese with pasta”* (daughter aged 9, older siblings) and *“everyone in our family loves cheese”* (daughter aged 9). For the most part children perceived dislikes to be typical, or common, and almost all children could think of people they knew who were like Rosie and Mark (*“everyone has something they don’t like”* (son, aged 9)). A few children described their dislikes neutrally, for example *“I don’t like cheese...I don’t know, it’s not bad”* (son aged 7). Some children were accepting of diversity in relation to food preferences and acknowledged that different people have different opinions and preferences (*“other people have other opinions about different foods”* (daughter, aged 9)). Another child explained *“my friend...she’s really picky about fruits and vegetables...she would probably say ‘I don’t like this’ or ‘that’s disgusting’... I would probably say [to her] ‘That might be a feeling that you might feel, but I like it’”* (daughter, aged 8).

In contrast, some children perceived food refusal or fussy eating behaviours more negatively. In several cases these negative perceptions were expressed spontaneously before any moral terms (e.g. good/bad, Question 11, Appendix E) were introduced by the researcher. For example, one participant (daughter, aged 7, siblings aged 6 & 9) said her younger brother *“doesn’t like everything...he’s a fussy eater and my big one is too”*. In response to the vignette character she explained that not liking vegetables is *“naughty”* and *“it’s good if she tries”*, implying that she perceives her brother’s fussy eating behaviours to be naughty. This negative perception of ‘fussy eating’ was portrayed by another participant who described himself as fussy, saying *“I’m quite fussy to be honest...well my parents, my mom and dad say that, so yeah”* (son, aged 10), and in response to the vignette he said *“[Rosie]’s just like being really snobby”*. Another participant explained that the vignette character Mark should eat the food even if he does not like it because *“it’s rude, yeah it’s rude...if he doesn’t”* (son, aged 9).

**Theme 2. Different motivations, goals and mealtime emotions.** Children talked about a wide range of motivations for accepting or rejecting foods and provided vivid descriptions of physical and emotional responses to disliked foods. Children’s motivations were not always in line with parent mealtime goals and emotions and sometimes children had to weigh up competing motivations and demands.

***Children's reasons and motivations for accepting or rejecting foods.*** Most children talked about the sensory aspects of foods as reasons for accepting or rejecting foods. These included the taste, appearance, smell and texture of foods. For instance one child explained “[Dad] puts cheddar [on the pizza] and then it’s like some kind of shield and if I go near it I just the smell just puts me away because I don’t like the smell” (son, aged 7). Other children talked about taste, for example “[vegetables] don’t taste good...the first time [children] tried vegetables they won’t like it cus they like sugary, and nice tastings, like sweet and like nice tasting stuff, but then this taste is like sour and bitter for them” and explained how this would influence the vignette characters decision whether to try a new food (“She’ll only [try new food] if it’s sweet or something, like something not like vegetables” (daughter, aged 9)). Another participant explained that she liked carrots because of the taste and the appearance (“I like the flavour of them...I like the colour orange” (daughter, aged 8)). Often related to the sensory aspects of foods, many children talked about fear, unfamiliarity and negative expectations of foods. These aversive emotions motivated them to avoid certain foods, for example “they might be scared how it tastes so they just stay away from them [vegetables]” (daughter, aged 8); “[children] think that they might die because my big sister, she doesn’t like vegetables and she’s like ‘they’re so bad I’ll die if I eat them’” (daughter, aged 7, sibling, aged 9) and “they probably don’t like to eat it because they never tried it before...they just look at it and then they’re like ‘I don’t want to taste this, it’s bad’” (son, aged 9).

Some children were motivated to eat disliked foods for health reasons. “I used to hate onions but once my dad told me that it helps you with your eyesight I started to like them” (daughter, aged 9). In contrast, another child explained how children are motivated by taste and that they do not want to eat healthy foods, “some people know [vegetables] are healthy and they just think healthy foods isn’t nice” (son, aged 7). A few children gave other reasons for accepting or rejecting foods including appetite, allergies and cultural preferences, for instance “Maybe because she [Rosie] just is full” (son, aged 7); “they [children] might have an allergic reaction” (son, aged 7); “my mum’s from an Asian country, that’s why she gave me rice and I like rice” (son, aged 9).

A few children described external motivations to eat. These included activities used as rewards, such as playing outside or playing on a phone or tablet, for example “I just have to eat it, otherwise I won’t be allowed out...and I really like playing outside” (daughter, aged 7). However, in some cases these activities served as distractions from

eating *“most of the time my brothers use their gadgets to make themselves not eat... they're like distracted”* (daughter aged 9, siblings aged 8 & 11).

Finally, many children talked about the role of peer influence in relation to decisions about accepting or rejecting foods. Although children could be motivated to reject foods by their peers (*“other people tell them that like they're disgusting, don't try them and stuff”* (daughter, aged 9)), children talked more often about positive influences of peers, through peer modelling and social facilitation, for example *“Because [my friend], she had [peppers] for lunch before and then I tried it and then I liked it”* (daughter, aged 8) and

*“everyone, they didn't want to eat their peppers, so I wanted to like show them that they were really nice, but I actually hated them, so I just took a whole bunch in my hand and stuffed them in my mouth, and then that's when I got to love peppers”* (daughter, aged 9).

***Children's awareness of parents' mealtime goals and emotions.*** Some children referred to parent's mealtime goals and emotions relating to food acceptance. Perceived parent goals included getting children to eat or taste foods, avoiding food waste, and health. For example one participant explained *“actually my Mom's always saying I used to like that food and stuff, but now I don't. Like tomatoes and peppers...I'm pretty sure she's just like trying to get me to eat it”* (son, aged 9). Another child said that parents would say *“I need my kid to finish his [lunch] ...because we have a million food to eat, we have a bunch in the fridge, a bunch in our whole house, we need to eat them”* (daughter, aged 9), and another suggested *“they'd say 'you have to eat them because they're healthy'”* (daughter, aged 9). These parent goals were not always in line with children's motivations. One girl explained that Rosie's parents would say *“If you eat vegetables you might get even more healthier”*, but Rosie would think *“I'm healthy enough”* (daughter, aged 7). In addition, one participant explained that it was a good thing that his parents chose his food and took responsibility for health, as his own choices were not motivated by health. He said *“I'd just be choosing...things that I like all the time”* and *“It would probably be a bad thing for my health so yeah I'm glad I don't choose the dinner or I would just go crazy”* (son, aged 10).

Many children reported negative parent mealtime emotions which were often related to conflicting parent and child goals, for example *“I think they get very sad...cus*



*she's not eating her vegetables*" (son, aged 7); *"they probably get mad and sad that she doesn't like their food that they make"* (daughter, aged 8); *"they feel frustrated because they have to make two separate dinners at once"* (daughter, aged 9).

***Weighing up competing motivations.*** Sometimes children's decisions to accept or reject a food involved weighing up competing motivations. For example, one child explained that Mark wants to eat the food for one reason but does not want to for another,

*"Participant: [Mark] is probably just like 'ew how are you eating that, it's cheese it's gross', at the same time he might want to eat it too, but he doesn't like it, so",*

*Interviewer: "why do you think he might want to eat it?"*

*Participant; "Because everyone else is and they think it's like really nice, but he's just like 'ew it's just gross'"* (daughter, aged 9).

Another girl described trying to meet competing demands, as she was not able to finish her lunch at school, yet she knew she had to in order to avoid her mother's complaints

*"Sometimes I don't really eat [lunch], since we don't have time too much in school...our teacher... he won't let us finish almost all our food since um, I don't know why, but he's saying because we have to read...[children] have to eat their food or else their parents would be complaining like 'Why is it? Why aren't you having any food?'"* (daughter, aged 9).

In addition, another participant described how it is better to eat disliked foods than to go hungry, saying *"I still eat it, I don't like homemade [pizza] because it's all crispy...but I have to eat it anyways because otherwise I would just have chips"* (daughter, aged 7).

Overall, children were motivated to accept or reject foods by many different factors including appetite, physical or emotional responses to foods, health beliefs, peers and other activities such as playing or school work. Sometimes deciding whether to accept or reject a food involved weighting up different motivations and demands. Children's motivations were not always in line with perceived parent goals, contributing to parent's negative mealtime emotions.

**Theme 3. Dealing with dislikes.** Children demonstrated agency and came up with their own strategies for coping with dislikes and getting to like new foods, which were in line with children's motivation described in Theme 2. In addition, children talked about

many strategies that parents use to encourage them to eat, which related to parent mealtime goals. The reported effectiveness (in getting children to eat) and acceptability (emotional responses) of parent's strategies varied.

***Dealing with dislikes: Children's own strategies.*** Children were motivated to overcome dislikes and demonstrated agency in coming up with strategies for coping with dislikes. In line with their motivations described in the theme above, children came up with strategies that allowed them to at least eat something, while avoiding negative consequences of eating disliked foods. Some children reported picking out the disliked food, for example “[Mark] could peel the pizza off, he could peel the cheese off” (daughter, aged 7) and “Sometimes I just leave out the things I don't want to eat but I eat the rest” (daughter, aged 9) or by eating less of the disliked food (“he could eat a little bit but if he doesn't like it then just don't eat all of it (son, aged 10)). Some children said they dealt with dislikes by telling their parents that they are full, saying they don't like it, or by asking for something else, for example “I'm full. I don't want to eat it” (son, aged 7); “I just ask them ‘I don't want to eat it’ and then they normally give me something else” (daughter, aged 7). A few children also said they throw away the food they do not want, for instance “I just throw it out” (son, aged 7) and “Yeah let my dog have them” (daughter, aged 7). Some children also avoided disliked foods by choosing their own foods, or by suggesting preferred foods for dinner, saying “I always choose my food” (son, aged 7); “mom [chooses what's for dinner] but sometimes if I beg her like “please can I have pasta and cheese” she says “ok ok don't beg me anymore” cus she's like busy trying to make the food for my brothers” (daughter, aged 9). Overall, children proposed a diverse range of strategies for dealing with disliked foods.

In relation to overcoming dislikes and getting to like new foods, the majority of children believed that it was possible to get to like foods that you do not like, for example “yeah I didn't like peppers, and now I love peppers” (daughter, aged 8). However, a couple of children said that it was not possible to help children get to like foods they do not like. Several children reported that overcoming fussy eating and getting to like foods can take time, for example “I used to be like Rosie when I was em, when I was five...I was really picky about my fruits and vegetables...As I grew older I just kinda started liking vegetables more and more” (daughter, aged 8); “wait a few years and then they might like it...we could just ignore it, ignore the food...whenever it's around...eh maybe they might just forget about it and then they might just remember about it...then they'll like it” (son,

aged 7). Many children said you can get to like foods if you just try it, or keep trying, and some demonstrated agency by reporting voluntarily trying disliked foods, for example “*when I first tasted [sausages], I like, spitted them out...then I got used to them*” (son, aged 7); “*I was like ‘Ah um I’m going to eat these [carrots]’ and then I was like ‘ugh’ then I hurled...And then I went like ‘I’m going to try them again, hmm for some reason I’m not hurling’*” (son, aged 7). One participant suggested blocking your nose while trying foods and said that this is how she got to like carrots “*Just make them block their noses and eat it, eat like ten of them, and then unblock your nose and eat another one and see if you like it*” (daughter, aged 8). Some children also suggested mixing disliked foods with preferred foods and reported doing this themselves, for instance “*eating the vegetables with the curry will make them taste nice*” (daughter, aged 8) and “*it [cauliflower] tasted a little bit bitter but when I put cheese on it, it tasted like heaven*” (daughter, aged 9). Overall, children did not perceive their preferences as fixed, and were open to change and learning to like foods.

***Parents’ strategies: Perceived effectiveness and emotional responses.*** In addition to children’s own strategies for dealing with dislikes, children talked about strategies that parents use to get children to eat, and to meet parent goals described in Theme 2. Children reported that parents pressure children to eat, use rewards and punishments, repeatedly offer disliked foods, and disguise foods or use trickery. According to some children, parents sometimes changed their strategies as children got older. The perceived effectiveness (in getting children to eat) and the acceptability (child’s emotional response) of parent’s strategies varied.

Many children referred to parents’ use of pressure in response to the vignettes, and some children described their own experiences of being pressured to eat. For instance, one girl described having to taste different foods before playing outside. Although this was challenging for her and lead to some negative emotions, playing outside was motivating and she managed to taste the foods and experienced more positive feelings afterwards:

“Participant: *Yeah I was feeling a bit like let down*

Interviewer: *Let down? How do you mean?*

Participant: *That I didn't, not exactly let down like, like, that I didn't really want to try it and if I didn't I wouldn't get to go and play outside and so I had to try them, so I did.*

Interviewer: *And then afterwards? How did you feel then?*

Participant: *Better*" (daughter, aged 7).

Similarly, another child described how threatening to take away Rosie's phone or tablet may result in her accepting the food, but would also result in negative emotions ("*She'll probably be kind of mad and go on a tantrum and then probably just pick it up and just shove it in her mouth with the anger*") (son, aged 9)). In several cases, pressuring children to eat did not result in accepting the food, if consequences were not in line with the child's motivations. For example, one child said "*[my parents] don't let me have dessert, anyway sometimes I don't even want dessert*" (son, aged 7). Similarly, another child explained that if Rosie's parents pressured her to eat by saying "*If you won't eat vegetables you won't have anything for dinner*", [*Rosie would think*] "*I'm not hungry anyways so it doesn't matter to me*" (daughter, aged 7).

Some children talked about parents repeatedly offering disliked and new foods. One girl suggested that exposure was an important influence on preferences and that Rosie did not like vegetables "*because she got too much sweets and her mom never cooked vegetables*" (daughter, aged 8). A few children reported that repeated exposure resulted in them liking the food, and considered this strategy acceptable when they were not under pressure and when the choice to try the food was within their control, for example

*"my mum always asked me, because she cooks peppers and she was like 'do you want to try a pepper' and I said 'Yeah' and then I liked it...I didn't even bite it, I just put it in my mouth and spitted it out before"* (daughter, aged 8).

Another girl explained that being able to taste things without pressure of having to eat it was associated with positive emotion "*if she likes it, she would feel happy and if she doesn't like it, she wouldn't have to taste it anymore, so she would also feel happy*" (daughter, aged 7). However, in another instance, when a child felt not listened to, the exposure was out of her control, and she was not motivated to try the food, repeated exposure was less effective. She said she felt angry because "*I tell my mom I don't like Brussels sprouts and then she keeps on giving them to me*" (daughter, aged 9).

Several children reported parents adjusting their requests to be less challenging, or negotiating and meeting the child in the middle. This resulted in children trying the food or feeling more positive. For example one girl explained if she didn't want to eat her Brussels sprouts, her parents would adjust the request and ask her to just eat one ("*...then my Mum and Dad are like 'Come on you should try one, just eat one' so I eat one, and then that's it*") (daughter, aged 9)). Another girl explained how her parents had stopped blending vegetables. She was scared at first, but when her parents allowed her to have a separate bowl for trying new vegetables, she was more accepting of the change,

*"we used to have just veg blended in, now we don't, we have big pieces of veg";*  
*"I was a bit scared that like...I didn't want to have it, but now it's ok, because we can have a little bowl and put the veg that we want to try into it"* (daughter, aged 7).

Several children suggested that parents trick children into liking foods, for example "*get [Rosie] a vegetable that she's never tried before and don't tell her it's a vegetable*" (son, aged 9); "*if you like painted the fruits and vegetables...maybe she might like it*" (daughter, aged 8). However one child explained that trickery would not be effective if he knew he was being tricked,

*"Participant: by tricking them [to eat vegetables]...that one of them makes you fly...one of them can make you actually go through the ground super quickly...*

*Interviewer: Do you think that would make you eat something you didn't want to eat?*

*Participant: Not really, cus I know it wouldn't be true, but if, but if it was true and I seen it happen, then I would do it"* (son, aged 7).

To conclude, children reported many strategies parents use to get children to eat but the reported effectiveness in getting children to eat, and children's emotional responses varied. Parent strategies were more effective when in line with children's motivations, and were associated with less negative emotions when children were in control of their decision to try foods, or when parents adjusted initial requests to be less challenging.

Table 6.1.

*Children's Perspectives on Fussy Eating: Additional Quotes to Support Themes and Subthemes*

<b>Themes</b>	<b>Supporting Quotes</b>
<b>Typical individual differences or bad behavior?</b>	
Likes and dislikes	<i>"I only like cheese on pizzas...cus it's all melted and stuff"</i> (son, aged 7); <i>"At school I would like to eat strawberries"</i> (daughter, aged 7) <i>"Eh I don't like cabbage on it's own, I only like it with bacon"</i> (daughter, aged 9)
Individual differences: Similar or different to others	<i>"they don't like it, but I like carrots"</i> (daughter, aged 9); <i>"sometimes I don't really like [black pudding], but my mum has it"</i> (daughter, aged 7); <i>"he might feel like he's on his own or he's by himself because everyone else likes cheese but he doesn't"</i> (daughter, aged 9)
Describes self or other as 'fussy'	<i>"Well my sister was very fussy...and I'm a bit fussy"</i> (daughter, aged 7). <i>"[Rosie]'s very fussy"</i> (daughter, aged 8); <i>"My friend, she's a breathetarian, she doesn't eat anything, she hates vegetables"</i> (daughter, aged 9).
Dislikes are typical, or common	<i>"well a lot of my friends say they hate vegetables and stuff"</i> (son, aged 10); Interviewer: <i>"Can you think of anyone who's a bit like Rosie and Mark?"</i> Participant: <i>"eh...five people"</i> (son, aged 7).
Accepting individual preferences	<i>"[mark's friends]'ll probably just be like "oh he doesn't, just like doesn't like cheese, ok"</i> (son, aged 9).
Negative judgement of dislikes or food refusal	<i>[Marks's friends] probably think he's a bit weird that he doesn't like cheese"</i> (son, aged 10).
<b>Different motivations, goals and mealtime emotions</b>	
Child motivations and reasons for accepting or rejecting foods	
Child motivations: Sensory characteristics of foods	<i>"Rosie is disgusted because she doesn't know how it's going to taste...how it looks...how it feels to eat it"</i> (daughter, aged 9).
Child motivations: Avoiding negative physical and emotional responses to foods	<i>"[eating olives] makes me move around when I don't want, it controls my body"</i> (son, aged 7); <i>"they kind of don't know what they're eating...they could be eating poison or something"</i> (son, aged 7)

Child motivations: Health beliefs	<i>"Because it's healthy for them to eat different things that they don't like. Cus if they don't eat food they won't have strongness and stuff if they don't eat cheese or vegetables (daughter, aged 7)</i>
Child motivations: Appetite	<i>"I'd say...I'm not hungry" (daughter, aged 9).</i>
Child motivations: Other activities and competing demands	<i>"sometimes I don't have any time [at school] sometimes I do" (daughter, aged 7) "because she likes playing on the swing more" (daughter, aged 7)</i>
Child motivations: Peer influence	<i>"[Mark's friends would say] just try it, it's not that bad!" (daughter, aged 8)</i>
<b>Parent mealtime goals and emotions</b>	
Parent mealtime goals and emotions: Get child to eat	<i>"[Rosie's parents would be] very sad...they want her to eat it but she just won't" (daughter, aged 7);</i>
Parent Mealtime goals and emotions: Don't waste food	<i>"very disappointed because it's a waste of food" (daughter, aged 7);</i>
Parent Mealtime goals: Health	<i>"[her parents] might tell her like "you have to try this it's n- it doesn't taste bad too much sugar is bad for you" (daughter, aged 9)</i>
<b>Weighing up competing motivations</b>	
Weighing up competing motivations	<i>"[mark feels] upset, I think he would like to eat the pizza but he just doesn't like cheese" (daughter, aged 7). "[Mark] feels embarrassed maybe...he would feel like sick, a little...he should just eat it because it's rude" (son, aged 9). "if he really doesn't like it, he shouldn't eat it, and if he kind of doesn't like it, he should eat it" (daughter, aged 7).</i>
<b>Dealing with Dislikes</b>	
<b>Children's own strategies</b>	
Pick out foods	<i>"I eat my dinner and leave the parts I don't like" (son, aged 10),</i>
Eat less of disliked foods	<i>"I just eat less and then I eat some...a bit of room for dessert sometimes" (son, aged 7)</i>
Say you are full	<i>"I'd say...I'm not hungry, and if my mum says I have to eat something, I just make a bowl of noodles for myself." (daughter, aged 9)</i>
Ask for something else	<i>"just ask them can you have a different thing" (daughter, aged 7)</i>
Throw food away	<i>"throw it away" (son, aged 7)</i>
Suggest preferred foods for dinner	<i>I get to choose what I want to eat" (daughter, aged 8), "I give my mom a suggestion" (son, aged 9)</i>
Keep trying disliked foods	<i>"I think he should just try it and I if he likes it he should eat it more." (daughter, aged 7) "You should do like testing for them...like you should tell them like we can test some...if you want to see if they're good and like we done this thing in our school tasting vegetables and we tasted beetroot and I kind of like it and spinach and a lot of like vegetables what people haven't tried before" (daughter, aged 9)</i>

	<i>"Like mmm maybe you could just like tell them to try it like loads of times because then they might get to like it if they try it loads of times (daughter, aged 9)"</i>
Mix disliked foods with preferred foods	<i>"Well I like carrots because I put honey on them, they're sweet" (daughter, aged 7). "Maybe you could...mix them up with something, once I used to not like avocado... but I don't like avocado by with salad, but I really like the only way but I like it like with stuff like I like it with sushi" (son, aged 7)</i>
<b>Parent strategies: Perceived effectiveness and emotional responses</b>	
Parent feeding practices change	<i>"like broccoli and stuff, I had to try it, when I was only like little" (daughter, aged 7) "Sometimes when I was younger...my mum would make me something else, I'd get sausages and chips" but now "she says "Eat it or you're not getting anything else" so then I'm made eat it" (daughter, aged 8).</i>
Resistance to pressure practices	<i>"[Rosie] feels annoyed cus she'll know she has to [eat vegetables]" (son, aged 9) "Am [Rosie] feels upset, because there's, she kind of feels angry, because there's nothing else to eat, and what if she's starving and there's only vegetables to eat in the entire house, so she might feel angry and say "Why is there no other food than vegetables?" (daughter, aged 9).</i>
Responses to repeated exposure	<i>"I tried it seven times...yeah and I liked it" (daughter, aged 7)</i>
Disguising foods or trickery	<i>"help them to taste it...just it has the cheese or vegetable in it but they can't taste it" (daughter, aged 7)</i>
Parents adjusting requests to be easier reduces child negative emotion	<i>"give her a bit less, they might eat some of it and then there might be a bit less for her to eat...[they might say] 'We've eaten most of your dinner so now there's not as much for you'...[Rosie] might think it's ok now". (son, aged 7).</i>



## Discussion

This study aimed to qualitatively investigate how food dislikes, food refusal, and 'fussy eating' behaviours are perceived by children and how children experience family processes relating to these behaviours. In line with family systems theory (Broderick, 1993), and social relational theory (Walton et al., 2017), the findings illustrate that children are active agents, with individual preferences, emotions and motivations that may not always be in line with the preferences, emotions and goals of other family members. Children demonstrated agency in relation to overcoming dislikes and a willingness to try new or disliked foods. Children's responses to parents' strategies to get them to eat varied. When parent requests were in line with children's motivations or supported child agency (rather than using pressure), children reported more cooperative mealtime interactions and less negative emotions.

Firstly, it was found that almost all children had clear individual food preferences and dislikes. In general, dislikes were considered common and children were accepting of individual differences. On the other hand, some children perceived dislikes and 'fussy eating' behaviours negatively, and in some cases food refusal was conceptualised as bad behaviour while trying different foods was perceived as good behaviour. This reflects some adult conceptualisations of fussy eating reported in the literature, for example in a study by Harris and Ria-Searle et al. (2018), parents described their child's fussy eating behaviours using language that implied moral judgement, presented fussy eating behaviours as bad or wrong and conceptualised their child as defiant. Although the researchers did not use the terms 'fussy' or 'picky' during the interviews with children, over a quarter of children used these terms to describe themselves or others. For a few children, the perception that they were fussy was based on what they had heard others (e.g. parents) say about them. Walton and colleagues (2017) suggest that labelling a child as 'fussy' or 'picky', and perceiving fussy eating behaviours as non-compliance, may contribute to feeding problems and increase parent and child stress. They suggest that 'picky eating' should be re-conceptualised as eating preferences in which children are demonstrating agency. The findings of this study support this suggestion, as many children were accepting of individual differences in relation to food preferences, and reported less negative emotional responses when their autonomy was supported.

Secondly, it was found that children's individual food preferences and their decisions to accept or reject foods were motivated by a range of factors including sensory characteristics of foods, avoiding negative physical and emotional responses to foods, health beliefs, appetite, peer influence, and competing activities such as playing and school work. These findings are in line with previous studies exploring factors that influence children's food choice (Alm et al., 2015; Atik & Ozdamar Ertekin, 2013; Ishak et al., 2013) as well as pre-schoolers reasons for not trying new foods (Johnson et al., 2018). School-aged children's motivations for rejecting foods (such as strong physical and emotional responses to foods) are also in line with reports of adult picky eaters (Fox et al., 2018; Thompson et al., 2015) and parent attributions of fussy eating behaviours (Rubio & Rigal, 2017; Russell & Worsley, 2013). However, this study builds on these previous findings by describing how children weigh up multiple motivations when deciding whether to accept or reject foods. For example a child may want to eat for one reason (such as participating in a social activity), but does not want to, or is not able to, for another (such as strong feelings of disgust). Some children also talked about parents' goals at mealtimes including health, not wasting food and getting their children to eat, which were in line with parent-reported mealtime goals (Moore et al., 2010; Snuggs et al., 2019) as well as negative parent emotions such as anger and frustration when these goals were not met. Children's awareness of parent mealtime goals such as health and not wasting food, that are not in line with their own motivations may result in conflict, or may pressure children to eat in response to external motivations rather than in response to their own internal cues. If parents are informed that many school-aged children are aware of their parents' goals, emotions, and strategies used to get them to eat, it may support parents to recognise their child's agency, and support more cooperative parent-child mealtime interactions.

Thirdly, children in this study demonstrated agency in relation to overcoming dislikes and getting to like new foods. This finding contrasts Lopez-Dicastillo's (2013) finding that school children did not tend to try new foods on their own initiative and only when prompted by adults. The majority of children in this study were willing to try foods repeatedly and some reported doing this on their own accord. In fact, children reported negative emotions in response to pressure from their parents (such as being annoyed and angry) and talked more positively about instances in which they decided to try something themselves. However, the extent to which children try foods on their own accord is

unclear from these findings. It is likely that some level of prompting or encouragement from parents (with minimal pressure) is beneficial for many children (Edelson et al., 2016). It must also be noted that the studies have reported the perspectives of a mixed sample with varying levels of food fussiness and it is possible that children with more severe fussy eating would not be as willing to try new foods.

School-aged children in this study reported their own strategies for dealing with disliked foods, such as picking out the parts they like, or telling their parents that they are full. In social relational theory, Kuczynski & Mol (2015) state that children are active agents that contribute to their life circumstances and that in middle childhood children start to effectively use coercive and covert strategies to achieve their own goals, while resisting parental requests and evading parent's ability to enforce compliance. Saying "I'm full", or suggesting preferred foods prior to mealtime, may be strategies that children use to achieve their goal of avoiding disliked foods, while also avoiding confrontation with their parents or requests to finish a disliked meal.

Finally, in relation to parent feeding practices, children reported many practices that are frequently reported by parents, including pressure, use of rewards and punishments, disguising foods, and repeatedly offering disliked foods (Russell et al., 2015). It is likely that some of these practices, such as using punishments, contributes to children's conceptualisation of fussy eating as a bad behaviour. The perceived effectiveness and acceptability of these practices were in line with parent reports and experimental studies that have found that pressure tactics can sometimes be effective in getting children to eat in the short term, but are also associated with negative emotional responses (Galloway et al., 2006). Some children also suggested tricking children to eat, or disguising disliked foods. Although this is often done covertly, the findings suggest that some children are aware that parents use these strategies. Disguising dislikes unknowingly to children can improve nutritional intake in the short term but also reduces opportunities for exposure and can be associated with other challenges (Pescud & Pettigrew, 2014). Some children in this study recommended mixing dislikes with preferred foods and disguising the flavour of dislikes (e.g. adding cheese, or juicing), and reported accepting dislikes knowingly when presented in this way. In some cases, allowing children to mix disliked foods with preferred foods themselves (rather than discretely disguising disliked foods) may result in intake while also increasing exposure and learning opportunities. In some cases, children reported that parents adjust their

requests to be less challenging (for example expecting the child to eat Brussels sprouts but when they are refused asking the child to just try one). Adjusted requests were considered more acceptable by children, resolving tension or resistance. This type of interaction reflects the ideas of accommodation and negotiation in social relational theory, in which both the child and parent are active agents who accommodate each other's goals to avoid conflict. Accommodation and negotiation are considered appropriate outcomes in dialectical models of socialisation, rather than immediate and complete compliance in behavioural or mechanistic models (Kuczynski & De Mol, 2015). This theory, along with the findings that children were more accepting of parent practices that were in line with their motivations and supported their agency, suggests that informing parents about child motivations and how to support their agency may be an important target for intervention.

**Methodological, ethical and pragmatic limitations and recommendations for future research.** It must be acknowledged that due to the nature of the data, some findings are based on relatively few examples and may not be transferable beyond the context of this study. However, these findings offer a first step towards understanding children's perceptions of 'fussy eating' behaviours, as well as their mealtime goals, emotions and practices in the context of food refusal and neophobia. It is likely that some methodological, ethical and pragmatic factors limited the richness of the data. This section outlines some of these factors, making recommendations for future qualitative research with children.

In relation to methodological factors, a range of data collection tools were used including visual methods such as drawings and vignettes. Some of these tools proved to be more useful than others. The use of drawings are widely used in qualitative research with children (Fargas-Malet et al., 2010; Pain, 2012; Søndergaard & Reventlow, 2019). In this study, drawings were useful for engaging children at the start of the interview, creating a comfortable atmosphere by using a familiar activity, and for leading into the more structured interview (Literat, 2013; Søndergaard & Reventlow, 2019). However, children's drawings did not produce rich data or in-depth discussion in relation to the specific research question. It has been suggested that visual tools such as drawing are useful for tapping into abstract, emotional, or complex ideas that are difficult to express verbally (Pain, 2012). It is likely that the drawing activity used in this study (draw a picture of you having dinner at home) was too general, and that a more specific prompt relating to a complex scenario (such as 'Draw a picture of what happens when you do not

like your dinner'), may have produced more diverse drawings, and may have prompted more relevant, interesting and in-depth conversations. Similarly, it has been reported that emojis/feeling-faces are useful for discussing emotions with children (Fane et al., 2018; Fargas-Malet et al., 2010). Some children in this study spontaneously reported more nuanced feelings (such as feeling let down, energetic, or calm) than were provided on the emotion sheets (sad, angry, disgusted etc.). It is possible that without using emotion sheets, participants would have produced a broader set of emotions and a more in-depth and honest discussion of feelings in relation to eating liked and disliked foods. It may be useful to use activity sheets and emotion sheets as prompts after an initial discussion, rather than as the basis for the interview. The vignettes about Rosie and Mark and the semi-structured questions that followed were the most useful and efficient interview tools, providing the richest data. In line with Palaiologou (2017), vignettes often prompted children to volunteer their own experiences, without being asked directly to share their personal experience. The recent shift to carrying out research with children has facilitated the development of new visual methods of generating data (Søndergaard & Reventlow, 2019). Other methods of data collection such as photo voice or role play that have been used to explore children's food preferences (e.g. Alm & Olsen, 2017) may also provide a rich insight into children's perceptions of family processes and mealtimes. However, it is also important not to underestimate the ability of many children to communicate experiences verbally, and in the same way as adults (Wills, 2012).

Regarding ethical and pragmatic considerations, obtaining children's informed assent is a critical and important part of the interview process (Huang et al., 2016; Mishna et al., 2004). However, it was found that reading the children's information sheet was time consuming for some children and impacted their concentration span prior to commencing the interview. It may be helpful to plan for this and to obtain assent separately to the interviews (e.g. before and after a lunch break). Finally, as reported in the literature (Fargas-Malet et al., 2010), some scheduling challenges were encountered when carrying out interviews in school settings, and in some cases the interview length was impacted by lunch breaks or other activities such as sports that participants wished to attend. It is also possible that children attempted to give the 'right' answers, particularly when being interviewed in a school setting (Kirk, 2007) or that their responses may have been influenced by other children in the room.

This study presents the perspectives of a typically developing group of 16 school-aged children who are not all perceived to be 'fussy eaters'. This may have limited the quality of the data relating to children's experiences of fussy eating. However, due to subjectivity involved in defining a child as a 'fussy eater' (Taylor, Wernimont, et al., 2015; Trofholz et al., 2017) it is challenging to categorise children as 'fussy' or 'non-fussy'. In addition, assigning children to categories may lead to important information across the continuum of fussy eating to be overlooked (Kerzner et al., 2015). In this study, it was found that most children reported disliked foods and even some children with low levels of fussiness on the screening questionnaire reported strong emotional and physical responses to disliked foods as well as pressuring or coercive parent practices. In addition, some children with low levels of fussiness talked about siblings or friends who they perceived to be fussy. Therefore it is likely that this research area is relevant to many children, not just those described as 'fussy' or 'picky' by their parents. However, researching experiences of children with more severe feeding challenges may lead to different findings, and perhaps richer data on the phenomenon of interest. It is common for children to provide shorter and less detailed responses to questions than adults, leading to less rich data. It was hoped that it would be possible to compare the experiences of children of different ages, but due to the nature of the data this was not possible.

It is recommended that further qualitative research is carried out with school-aged children to expand on the findings of this study. Specifically it would be interesting to explore how children's experiences change as they get older, and to explore whether experiences differ for children with more severe feeding difficulties. It would also be useful to further explore children's experiences of parent feeding practices and the contexts in which children perceive their parents' strategies to be effective and acceptable. Research in this area may benefit from larger sample sizes, as well as consideration of the methodological and pragmatic issues outlined above.

### **Conclusions**

This study provides valuable insight into children's perspective of fussy eating behaviours. Although there were some methodological, ethical and pragmatic limitations that may have impacted the depth and quality of the data, this is the first qualitative study to explore how children perceive food dislikes, food refusal, and fussy eating behaviours and how they experience family processes relating to these behaviour (e.g. mealtime

goals, emotions and practices). In general food dislikes were considered common and children were accepting of individual differences. However, some children conceptualised food refusal as bad behaviour, which, as suggested by Walton et al. (2017), may increase parent and child stress and contribute to feeding problems. Children's own motivations to accept foods were not always in line with their perceptions of parent mealtime goals and emotions. Sometimes children weighed up competing motivations to decide whether to accept or reject a food. Children demonstrated agency and a willingness to overcome food dislikes, and reported their own strategies for dealing with disliked foods. Children expressed more positive responses to parent strategies that were in line with their own motivations and when offered foods without pressure. It is recommended that future research explores children's views on 'fussy eating' behaviours further, and explores whether perspectives differ between ages and for more severe feeding difficulties. Children's perspectives, including their motivations, emotions and preferred strategies should be considered when developing fussy eating interventions.

## Chapter 7. Discussion

### Chapter Overview

This chapter provides a discussion of the research findings presented in Studies 1 – 3. Firstly, key findings are summarised in relation to the four aims of this thesis. The findings are then discussed in relation to previous research and current theoretical approaches to studying fussy eating. Following this, the strengths and limitations of the research are detailed. Finally, recommendations for future research and practice are provided, and overall conclusions are drawn.

### Summary of Findings

The aims of this thesis were to 1) qualitatively explore family perceptions (e.g. descriptions, beliefs), experiences (e.g. impact and emotions) and management (e.g. goals and practices) of fussy eating behaviours across childhood, 2) investigate these constructs in families of school-aged children, 3) account for both parent and child perspectives, and 4) explore how family perceptions, experiences and management of fussy eating relate to each other. These aims were addressed by a synthesis of qualitative literature (Study 1), interviews with parents of school-aged children (Study 2), and interviews with school-aged children (Study 3). These studies found that:

- Parents perceive fussy eating as the limited intake or limited variety of foods, or frequent changes in food preferences, for a variety of reasons including novelty, sensory sensitivity, context, personality, age, and genetic or learned food preferences (Study 1).
- Both parents and children are active agents with their own beliefs, goals, strategies and emotions that contribute to the feeding relationship and how fussy eating behaviours are experienced and managed (Study 1, 2 & 3).
- Fussy eating, feeding beliefs, feeding goals, feeding practices and mealtime emotions are dynamic constructs that change over time (Study 1, 2 & 3). Some parents of school-aged children significantly adapted their approach to managing fussy eating over time (resistance-to-acceptance response). A second group changed their approach on a day-to-day basis (fluctuating response). A third group



of parents responded relatively consistently to fussy eating (consistent response) (Study 2).

- A number of parent beliefs relate to feeding practices in the context of fussy eating, specifically: beliefs about hunger regulation, attributions (perceived causes of fussy eating), relational-efficacy beliefs, and expectations for the future (Study 1 & 2). Parent awareness (or knowledge) of food preference development may relate to feeding beliefs, practices and mealtime emotions (Study 1).
- Parents' feeding goals and children's motivations for accepting or rejecting foods are not always in line with each other, relating to conflict at mealtimes. Both parents and children describe processes of weighing up competing goals and demands (Study 2 & 3).
- Feeding practices are reciprocally related to child fussy eating and other child characteristics. The perceived effectiveness of different feeding practices varies across children and families. The process of figuring out what works lasts into later childhood (Study 1, 2, & 3). Children have their own strategies for dealing with dislikes including picking out disliked foods, eating less, asking for something else, suggesting preferred foods for dinner, trying foods repeatedly, and eating dislikes with preferred foods (Study 3).
- Fussy eating can, but does not always, negatively impact the family. However, many families experience stress and conflict in relation to fussy eating which lasts into later childhood (Study 1, 2 & 3). Parents manage negative mealtime emotions by actively promoting a positive environment and by talking with family and support networks (Study 2).
- Some school-aged children conceptualised fussy eating as bad behaviour, but children perceived dislikes to be typical and were accepting of individual differences (Study 3).
- School-aged children are aware of parents' mealtime goals, emotions and feeding practices and describe parents' feeding practices more positively when they are in line with children's motivations or support the child's autonomy (Study 3).
- Family perceptions (e.g. descriptions, beliefs), experiences (e.g. impact, emotions), and management (e.g. goals and practices) of fussy eating relate to

each other. Relationships are illustrated in the conceptual model produced in Study 1 (See Figure 3.2, Chapter 3, page 86). Relationships between constructs can be seen with respect to three distinct parent response patterns identified in Study 2 (resistance-to-acceptance response, fluctuating response and consistent response) in Figure 5.2 (Chapter 5, page 152). Children also highlighted relationships between mealtime practices, feeding goals and mealtime emotions in Study 3.

Building on the models presented in Studies 1, 2A and 2B, the key findings of all studies, and the relationships between them are summarised below in Figure 7.1. The key findings and aspects of this model are described in detail below in relation to previous research and theory.

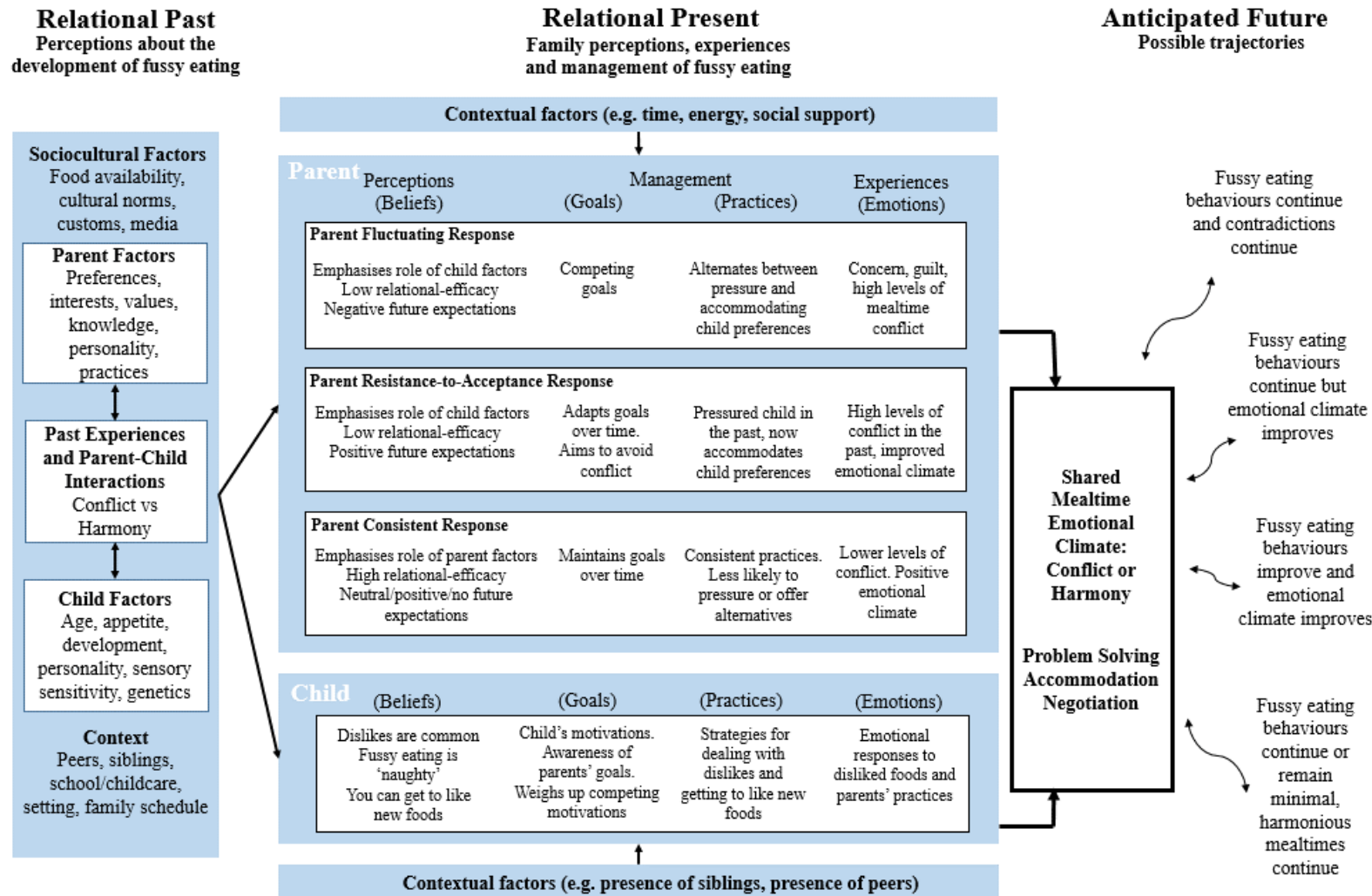


Figure 7.1. A dialectical model of family perceptions, experiences and management of fussy eating behaviours

### **Contribution of this Research**

As highlighted in the introduction (Chapter 1), the majority of research on fussy eating has been quantitative and has relied on parent-report measures. Although this type of research helps us to understand the relationships between certain factors and outcomes (such as feeding practices and fussy eating), it is somewhat reductionist and does not adequately capture the complex, dynamic and contextual nature of fussy eating. In addition, much research has focused on parent feeding practices, but few studies have investigated other constructs such as beliefs and goals that are considered important in behaviour change models and intervention development literature (Ajzen, 1991, 2011; Michie et al., 2011). Qualitative research allows participants to provide information about the context and complexity of child feeding and to clarify beliefs, meanings and goals that make up the experience of feeding (Braun & Clarke, 2013; Walton et al., 2017). The qualitative research in this thesis adds to our understanding of fussy eating, and complements the quantitative literature by providing an insight into the dynamic nature of the feeding relationship as well as the context, motivations, beliefs and emotions that underpin feeding practices used in the context of fussy eating behaviours.

Although numerous systematic reviews and narrative reviews have been carried out on the quantitative fussy eating literature (e.g. Brown et al., 2016; Cardona Cano, Hoek, et al., 2015; Dovey et al., 2008; Lafraire et al., 2016; Taylor, Wernimont et al., 2015), Study 1 presents the first systematic review and synthesis of qualitative studies. This review found that previous qualitative research has primarily focused on pre-school children and despite the relevance of fussy eating to children, their perspective has not been reported. Therefore, the following studies (Study 2 and 3) contribute to our understanding of fussy eating experiences and trajectories in later childhood. In addition, in line with a dialectical theoretical perspective which views the parent and child as equal agents (Walton et al., 2017), these studies present parents' and children's perspectives. This approach offers an alternative view to the traditional approach to fussy eating research that has been dominated by parent-report measures. Study 3 is a first step to understanding children's perspectives, specifically their own perceptions, motivations, mealtime emotions and strategies that contribute to the development and management of fussy eating behaviours.

Overall, the qualitative approach of this thesis highlights that family perceptions, experiences and practices relating to fussy eating are dynamic constructs developing through complex parent-child interactions (or transactions) over time that are part of a broader context (parent-child relationship, family, and sociocultural context). The following discussion provides an overview of the key findings in relation to the current literature.

**Perceptions and beliefs about fussy eating.** The findings in this thesis contribute to our understanding of how fussy eating is perceived by families, specifically how fussy eating is defined and conceptualised, as well as beliefs about how fussy eating develops and the parents' role in managing fussy eating.

***Defining and conceptualising fussy eating.*** By synthesising parent perceptions and descriptions of fussy eating across ten qualitative studies (Study 1), it was proposed that fussy eating is an umbrella term describing the rejection of one or more food items, the limited intake or variety of foods, and/or frequent changes in food preferences due to novelty, sensory sensitivity, context/presentation of food, temperament/personality, age/developmental stage, and/or genetic and learned food preferences. Fussy eating can be expressed verbally or non-verbally (e.g. gestures, gagging, avoidance) and can (but does not always) have a perceived impact on the physical or psychological wellbeing of the child, parent or family. This definition accounts for varying degrees of food fussiness and encompasses the term 'fussy' being used to describe a specific behaviour in response to a food, as well as a more persistent and prolonged food refusal that may negatively impact the wellbeing of the child or family. This definition may be useful for future researchers, as it has been widely reported that a comprehensive, consistent and operational definition of fussy eating is lacking (Boquin et al., 2014; Taylor, Wernimont, et al., 2015; Trofholz et al., 2017). Fussy eating is frequently defined as the unwillingness to eat an adequate quantity or variety of foods (Dovey et al., 2008; Taylor, Wernimont, et al., 2015). The definition proposed in this thesis adds to previous definitions by including additional behaviours that parents perceive to be 'fussy eating', including the rejection of just a few foods, or frequent changes in food preferences. In addition, this definition specifies reasons for fussiness, differentiating it from other forms of food refusal (e.g. based on medical or religious grounds).

Previously, research studies have either defined and measured fussy eating dichotomously (i.e. ‘fussy eaters’ versus ‘non-fussy eaters’), or continuously (i.e. ranging from mild to severe) (Cole et al., 2017). In studies 2 and 3, it was originally planned to distinguish between ‘fussy eaters’ and ‘non-fussy eaters’. However, it was found that conceptualising fussy eating continuously was more reflective of parent perceptions of fussy eating. A number of challenges were faced with a dichotomous conceptualisation of fussy eating, for instance: 1) many families had multiple children with varying degrees of fussy eating, 2) in qualitative interviews, some parents expressed uncertainty in relation to whether they perceived their child as ‘fussy’ or not, placing them somewhere in between or describing them as sometimes fussy, 3) some children who refused entire food groups (e.g. vegetables) were not perceived to be particularly fussy by parents, and 4) some children in Study 3 described strong physical and emotional responses to foods, or described themselves as ‘fussy’ despite having relatively low food fussiness scores reported by parents on the screening questionnaire. It was found that dichotomous conceptualisations of fussiness overlook the complexity and subjectivity involved in defining fussy eating, whereas viewing fussy eating behaviours on a continuum allows more variations of fussy eating behaviours to be captured.

The broad, inclusive and continuous definition of fussy eating adopted throughout this thesis, and reflected in the definition developed in the qualitative synthesis (Chapter 3) may be useful for future researchers, as it has been widely reported that a comprehensive, consistent and operational definition of fussy eating is lacking (Boquin et al., 2014; Taylor, Wernimont, et al., 2015; Trofholz et al., 2017). However, given that ‘fussy eating’ is used to refer to a wide range of different behaviours, it may be important to consider different definitions for different contexts. The definition used throughout this thesis is useful for research aiming to understand perceptions, experiences and management strategies used in the general population, and for capturing diverse experiences in a community sample. However, this broad definition may not be useful for clinical classification, or for research aiming to determine the risk factors or consequences associated with clinically significant feeding challenges. In these contexts, a definition more similar to ARFID (American Psychiatric Association, 2013) or Paediatric Feeding Disorder (Goday et al., 2019) diagnoses (detailed on page 8) may be more appropriate.

Many children in Study 3 perceived food dislikes and food refusal to be typical individual differences. However, some children perceived fussy eating behaviours to be

bad behaviour, reflecting adult conceptualisations of fussy eating reported in the literature (Harris, Ria-Searle, et al., 2018) in which parents portrayed food fussiness as defiant or non-compliant behaviour. Social relational theory states that meanings and understandings are actively constructed through parent and child interactions (Kuczynski & De Mol, 2015). It is possible that some children develop the belief that fussy eating is bad behaviour based on the way it is managed by parents, as many children referred to children being rewarded or punished for their eating behaviours (Study 3). In addition, some children described themselves as fussy, and this belief was based on what they had heard other people (including parents) say about them. In line with social relational theory (Kuczynski & De Mol, 2015), these findings suggests that based on parent-child interactions children construct meanings about themselves and their eating behaviours.

***Beliefs about the development and management of fussy eating.*** Despite beliefs being considered an important component of health behaviour change intervention (Ajzen, 1991, 2011; Michie et al., 2011), very few studies have investigated parent beliefs in the context of fussy eating. This thesis adds to our understanding of the types of beliefs that may be important to target in interventions aiming to improve parent feeding practices and overcome fussy eating challenges. The qualitative synthesis (Study 1) identified three types of beliefs that relate to feeding practices in the context of fussy eating: beliefs about hunger regulation, attributions (or perceived influences), and self-efficacy beliefs. Previous studies that have investigated parent feeding beliefs (e.g. Ernawati et al., 2016; Koh et al., 2014; Russell & Worsley, 2013) have been carried out using a more mechanistic-deterministic framework. Therefore, Study 2B extends our knowledge of parent beliefs by drawing upon dialectical socialisation theory (explained in detail on page 32), which is useful for understanding how beliefs are constructed and how they develop over time in a parenting context (Kuczynski & De Mol, 2015). This study found that parents' perceived influences on fussy eating (attributions), parents' relational-efficacy beliefs, and parents' beliefs about the future related to their feeding practices. Specifically, parents who attributed fussy eating to child factors (such as sensory sensitivity and personality), and who expressed lower relational-efficacy and more negative expectations for the future were more likely to report using coercive and non-responsive feeding practices, and experienced continued conflict and tension into later childhood (reflecting the fluctuating response pattern, Figure 7.1). In line with social relational theory (Kuczynski & De Mol, 2015), parent beliefs related to their previous

interactions with their children and whether they had been successful or unsuccessful at influencing their child's eating behaviours in the past. As recommended by Mitchell et al., (2013), these findings suggest that early intervention for feeding difficulties is critical so that parents and children can build up positive, successful and cooperative mealtime interactions and higher relational-efficacy beliefs. However, the research in this thesis was cross-sectional, and further longitudinal research is required to develop our understanding of how parents' feeding beliefs change over time.

Findings in Study 3 illustrated that parents' and children's beliefs are broadly in line with each other. For instance, children's reasons for accepting and rejecting foods reported in Study 3 were in line with parent attributions of fussy eating behaviours reported in Study 2B. Although many parents expressed low relational-efficacy beliefs (believing that they could not influence their child's fussy eating behaviours or food preferences), almost all children in Study 3 believed that it was possible to get to like disliked foods, and some gave examples of getting to like dislikes after multiple exposures, by trying foods repeatedly or by mixing dislikes with preferred foods. Informing parents about children's beliefs, and providing strategies for supporting children to autonomously increase their variety of foods (such as education, involvement and negotiation (Vaughn et al., 2016)), may increase parents' relational-efficacy beliefs.

*Conceptualisations of the parents' role in the development and management of fussy eating.* Study 2B found that parents' perception of their role in the development of fussy eating varied, with some parents perceiving parents to play a larger role than others. In addition, parents' perception of their role in managing fussy eating varied, with some parents expressing higher relational efficacy than others. When adopting a dialectical perspective of fussy eating in research, it is also important to consider whether parents themselves have a dialectic conceptualisation of their parenting role (expecting to accommodate and negotiate with children), or if they have a top-down (parent → child) perspective, perceiving themselves to have 'control' and expecting the child to comply with their demands (Kuczynski & De Mol, 2015). In Study 2A, supporting children's independence and autonomy was an important goal for some parents, and in Study 2B, all parents acknowledged both parent and child factors that contribute to the development of fussy eating. These findings reflect a dialectical conceptualisation of the parents' role in the development and management of fussy eating.



However, the findings of Study 2 indicate that the extent to which parents have a dialectical conceptualisation of their role varies. Parents with a resistance-to-acceptance response pattern (See Figure 7.1) had used coercive practices in the past, expecting their child to comply with their requests, but when this approach was challenged by child resistance and high levels of conflict, these parents adopted more dialectic perspective engaging in processes of accommodation and negotiation. How parents with a fluctuating response pattern conceptualise their feeding role is unclear, as these parents use coercive practices on some days, and accommodate child preferences on other days. It is possible that these parents may have a dialectical view, respecting child independence and autonomy, but high levels of concern about their child's health drives them to use coercive practices (in line with findings of Harris, Jansen et al., 2018 who identified concern as a mediator between fussy eating and coercive practices). Alternatively, these parents may have a unidirectional (parent → child) conceptualisation of parenting, believing that they should be able to 'control' their child's food intake, but do not implement coercive practices consistently due to child resistance, lack of energy, time constraints, and other family priorities. Some parents with a relatively consistent response pattern (in Study 2) reported never pressuring their child to eat, only cooking one meal, but adjusting family meals to accommodate child preferences and abilities, promoting child autonomy and self-regulation. This approach is the most reflective of a dialectical conceptualisation of parenting, and is in line with a responsive feeding framework (Black & Aboud, 2011). In contrast, some parents with a consistent approach did report using some coercive practices (such as rewards), and referred to 'controlling' their child's food intake and preferences (reflecting a more unidirectional conceptualisation of parenting). Overall, these findings indicate that parents' conceptualisation of their role varies, but that a dialectical perspective of parenting aligns with more responsive and less coercive feeding practices.

It would be useful for future research to investigate parents' conceptualisation of their role more directly, and to investigate differences in feeding goals, practices, beliefs and mealtime emotions between parents with a dialectical perspective and those with a more top-down (parent → child) perspective. Targeting parents' conceptualisations of their feeding role may be an important area for intervention. In line with Satter's division of responsibility model (Satter, 1986, 1995), framing parents' role as providing appropriate foods at structured times and supporting their child's autonomous decisions

about how much food to eat may help to resolve conflict and promote more harmonious meals.

Several children in Study 3 perceived their parents to play an important role in children's food preferences and food choices. For instance, one child said that the vignette character did not like vegetables because her mother gave her too many sweets and never cooked vegetables. Similarly, another child said he was happy that his parents chose his meals because he would be unhealthy if he chose what he wanted to eat. These examples suggest that children perceive their parents to have an important role in providing, and exposing children to, appropriate foods. However, children talked more positively about instances where they autonomously decided to try new foods rather than when they were pressured by parents. This provides some evidence from children's point of view to support a responsive feeding framework (and the division of responsibility) (Black & Aboud, 2011; Satter, 1986, 2007).

***Summary of perceptions and beliefs.*** Overall, the findings of this thesis suggest that parent and child perceptions, conceptualisations and beliefs about fussy eating relate to how fussy eating is experienced and managed by the family. Fussy eating challenges and family conflict may be improved by addressing beliefs about self-regulation, correctly identifying causes or influences of fussy eating, improving relational-efficacy beliefs, addressing concerns about the future, and by supporting parents to adopt a dialectical conceptualisation of their parenting role, respecting child autonomy.

**Management of fussy eating: Goals, practices and strategies.** While much previous research has been carried out on parent feeding practices in the context of fussy eating, very little is known in relation to parent feeding goals. This research contributes to our understanding of parents' goals in the context of managing fussy eating and how they relate to parents' feeding practices.

***Feeding goals.*** Very little research has investigated feeding goals in the context of fussy eating, although some research has focused on this more recently. For instance, Schuster and colleagues (2019) found that parents had both psychosocial feeding goals and nutrition-oriented goals that were sometimes in conflict with each other and were associated with the use of different feeding practices. This is in line with findings from Study 2A in which parents had competing goals (such as wanting their child to eat vegetables while also promoting autonomy, or providing a balanced diet while also

avoiding conflict). In Study 2A, parents who talked more about competing goals described using less consistent practices and changing practices on a day to day basis, highlighting the importance of clarifying and prioritising certain feeding goals when managing fussy eating. Children in Study 3 reported similar processes as adults. They also reported experiencing competing goals and demands and weighing up options (such as wanting to eat with peers, but not wanting to eat disliked foods). This may offer an explanation for some characteristics of fussy eating reported by parents such as frequent changes in food preferences, or eating differently in different contexts (Rubio & Rigal, 2017; Trofholz et al., 2017). Family systems theory (Broderick, 1993) is useful for understanding family goal-seeking processes. It states that families' goals are hierarchically structured with higher priority goals defining priorities among lower level goals. This offers an explanation for why some goals (such as providing a balanced diet) may not be prioritised, if achieving a higher level goal (such as avoiding conflict) is considered more important. In addition, prioritising certain goals depends on contextual factors (Broderick, 1993; Kuczynski & De Mol, 2015), for instance if a parent has more time and energy, they may try to get their child to eat a balanced meal, whereas if they are low in time and energy, they may prioritise avoiding conflict.

In Study 3, some children were aware of parents' mealtime goals (e.g. to be healthy, to not waste food, and to get their children to eat). These goals were not always in line with children's motivations to accept or reject foods (e.g. sensory characteristics of foods, appetite, peer influence). In line with social relational theory (Kuczynski & De Mol, 2015), this can be a source of conflict (or contradiction, see Figure 1.2, page 55). In contrast, if parents' and children's goals are in line with each other, or if parents and children accommodate and negotiate, finding a middle ground, they may experience more cooperative and harmonious mealtime interactions. As children reported in Study 3, parents often reason with children about the health benefits of foods (Russell et al., 2015). The findings of Study 3 show that these types of strategies are only likely to be effective if in line with the child's motivations. If parents are aware of their children's motivations they may be able to use more effective practices, tailored to their individual child. As stated in family systems theory (Broderick, 1993), this highlights the importance of good communication and negotiation between family members when managing fussy eating challenges.

In line with the child socialisation literature (Broderick, 1993; Kuczynski & De Mol, 2015) as well as health behaviour change models that state that goals and intentions predict health behaviours (e.g. Ajzen, 1991), the findings in this thesis suggest that parents' feeding goals relate to their feeding practices in the context of fussy eating. However, more research is required to understand these relationships. A parent mealtime goals questionnaire has also been developed recently (Snuggs et al., 2019). However the final version of this measure does not contain items relating to fussy eating behaviours (such as trying new foods). In order for future quantitative research to investigate the role of feeding goals in the management of fussy eating, relevant measures including specific goals that relate to overcoming fussy eating (increasing variety, increasing quantity, trying new foods, reducing conflict etc.) need to be developed.

***Practices and strategies.*** Much research has focused on the role of parents (specifically the role of parent feeding practices) in the development, maintenance and management of fussy eating behaviours. This focus may arise from the traditional model of parenting which viewed fussy eating as non-compliant behaviour that is 'controllable' by parent feeding practices (Walton et al., 2017) and perhaps due to the perception that parent feeding practices are more amenable to change through intervention than other factors such as cultural norms, media, and genetics. The conceptual model produced in the qualitative synthesis (Figure 3.2, Chapter 3, page 86) illustrates that published qualitative research has depicted parent feeding practices as central to the family experience and management of fussy eating. This thesis highlights the important role of parent feeding practices in contributing to fussy eating behaviours, but builds on our understanding by placing feeding practices in context and illustrating how they relate to a wide range of other factors including parents' goals, emotions, beliefs, awareness, child characteristics, family structure and characteristics, societal and cultural factors, the parent and child's history of interactions, and their expectations for the future. While some studies have investigated how parent beliefs, parent emotions and concern, and child characteristics relate to parents' feeding practices in the context of fussy eating (Blissett & Farrow, 2007; Harris, Jansen, et al., 2018; Horodyski et al., 2010; Ramos-Paúl et al., 2014; Rubio & Rigal, 2017; Russell & Worsley, 2013), these factors have been largely neglected by past research.

Study 1 and 2 found that whether parents implemented practices consistently depended on contextual factors such as energy levels, work schedules, other family

priorities, as well as the child's previous reactions to disliked foods. These findings are in line with social relational theory, which states that an individual's ability to exercise agency and act on their environment depends on their individual (e.g. energy, strength), relational (e.g. support from a spouse), and cultural (e.g. rights, entitlements, laws and customs) power resources (Kuczynski & De Mol, 2015). Similarly, in family systems theory, an individual's responses are constrained by characteristics of the individual (e.g. personality, knowledge), the family system (e.g. family size), and the broader socio-cultural context (e.g. socio-economic status) (Broderick, 1993). This contextualised perspective is represented in Figure 7.1 above, which depicts parents as playing an important role in how fussy eating is experienced and managed, but depicts feeding practices as just one of many components that make up the family's experience of fussy eating. This perspective opens up considerable opportunities for future research to investigate parent feeding practices in the context of these other factors.

In addition to the impact of contextual factors on child feeding practices, previous research had identified bidirectional relationships between parent feeding practices and child fussy eating (e.g. Farrow, Galloway, & Fraser, 2009; Harris et al., 2016; Jansen, Williams et al., 2018; Jansen et al., 2017; Mallan et al., 2018). This was supported by findings in this thesis. For instance, the qualitative synthesis in Study 1 identified reciprocal relationships between parent feeding practices and child fussy eating, with many parents reporting changes in their parent feeding practices in response to their child's behaviours. In addition, in Study 2, parents reported many child factors that contribute to fussy eating and how it is managed. Finally, Study 3 highlighted that children have their own strategies for dealing with dislikes that contribute to the parent-child feeding relationship, including picking out foods, eating less and asking for something else. Children reported strategies used to influence their parents' practices, for example by begging their parents to cook their preferred meal.

Parents in Study 2 also explained that the effectiveness of strategies varies for different children and different families. This supports some findings in the literature that the effectiveness of strategies to get children to eat may depend on child characteristics such as reward sensitivity and level of food fussiness (Holley et al., 2016b; Vandeweghe et al., 2016). Some parents reported high levels of conflict and stress in relation to using coercive or pressuring practices. In contrast, a few parents with a consistent response pattern did report using some coercive practices (such as rewards or verbal pressure to

eat) without creating significant levels of conflict, resulting in continued use of these practices. It is possible that if these practices are used in certain contexts, or in a certain manner, they may not disrupt the state of harmony. For instance, these strategies may be more effective with children who are high in reward sensitivity (Vandeweghe et al., 2016) and have a low need for autonomy, or whose need for autonomy has been met in other ways (Kuczynski & De Mol, 2015; Vansteenkiste et al., 2010; Vaughn et al., 2016). Some parents may also use these coercive strategies in combination with respect for the child's autonomy leading to less conflict and more harmonious meals. For instance one parent reported using rewards to encourage his children to finish their meal, but in line with a dialectical perspective he accommodated and negotiated with his children, perceiving their partial cooperation with his request to be sufficient and not expecting them to eat the full amount.

Previous research studies have reported conflicting results in relation to the stability of parent feeding practices over time (Boquin et al., 2014; Farrow & Blissett, 2012; Houldcroft et al., 2016; Garcia et al., 2018). The findings in this thesis show that some parents respond relatively consistently from early childhood to later childhood (consistent response), for instance some of these parents reported never pressuring their child to eat. In contrast, other parents completely change their approach over time, reporting high levels of coercive practices in early childhood, and more responsive feeding practices in later childhood (resistance-to-acceptance response). Finally, other parents change their feeding practices on a day-to-day basis depending on contextual factors (fluctuating response). This dynamic nature of parent feeding practices was supported by children in Study 3 who reported changes in their parents' practices over time. In Study 2A, parents described a constant process of trying to figure out what works and trying numerous different strategies. Regardless of the parents' response pattern parents reported having to adapt over time as their children get older and they face new situations such as packing school lunches, eating at friends' houses and children becoming increasingly more independent. The findings support a dialectical approach to studying fussy eating recognising that the management of fussy eating and the parent-child feeding relationship involves constant negotiation and change (Kuczynski & De Mol, 2015; Walton et al., 2017). This has implications for the interpretation of quantitative studies that measure feeding practices and fussy eating at one or two time

points, as parent feeding practices and child eating behaviours continuously change and must not be perceived as static or stable outcomes.

To the author's knowledge, Study 3 is the first study to report school-aged children's perceptions of their parents' feeding practices in the context of fussy eating behaviours. In addition to the practices frequently reported in the literature, children also talked about instances of parents adjusting their initial requests (e.g. to eat Brussels sprouts) to be less challenging (e.g. "ok, just try one"). In line with social relational theory, this process of accommodation and negotiation reduced children's negative emotions, resolving tension (Kuczynski & De Mol, 2015). According to Kuczynski & De Mol (2015) accommodation and negotiation are considered appropriate outcomes of parent-child interactions, rather than complete and immediate compliance to the parents' request and it is in the parents' and the child's best interest to accommodate each other's goals as it maintains the future of their relationship. On the other hand, if contradictions were not resolved by accommodation and negotiation, both parents and children in Studies 2 and 3 reported examples of high levels of conflict until one individual gives in to the other's pressure (which was referred to by several parents as 'winning' the battle). Family systems theory states that if families have an inadequate repertoire of responses, they fall back to using a standard response (Broderick, 1993). If families are unaware of alternative approaches to managing fussy eating behaviours, they may continue to fall back into a negative cycle of coercive feeding practices and conflict. This may offer an explanation for continued tension in families with a fluctuating response pattern, and highlights the importance of educating parents about alternative strategies that support the child's agency and promote cooperation rather than conflict.

**Experiences of fussy eating: Perceived impact and trajectories.** Given that the majority of previous research focused on fussy eating in pre-school children, less is known about how fussy eating is experienced in later childhood. The findings in this thesis contribute to our understanding of the perceived impact and trajectories of fussy eating in school-aged children.

***Impact and consequences of fussy eating.*** In relation to the impact and consequences of fussy eating behaviour, much research has focused on the effect of fussy eating on nutrient intake, weight and other health indicators (e.g. Galloway et al., 2005; Haszard et al., 2015; Taylor, Wernimont et al., 2015; Taylor, Northstone et al., 2015

Tharner et al., 2015). Other studies have reported that fussy eating has an impact on families' emotional, social and psychological wellbeing (Ramos-Paúl et al., 2014; Stapleton, Griffiths, & Sherriff, 2012). Qualitative findings in this thesis show that even in a general sample with varying levels of fussy eating, many parents of school-aged children were highly concerned about their child's health both now and in the future. In line with findings from Harris, Jansen et al. (2018), this concern was related to more coercive practices and less harmonious mealtimes. The findings are also in line with previous research, that have associated fussy eating with parent stress, increased parent workload and family conflict at mealtimes, as well as child distress, and challenges in relation to eating socially (Boquin et al., 2014; Goh & Jacob, 2012; Harris, Ria-Searle et al., 2018; Rubio & Rigal, 2017).

However, this thesis significantly contributes to our understanding of negative emotions that relate to fussy eating and how the emotional impact of fussy eating is managed by families. Firstly, the qualitative synthesis (Study 1) highlighted that fussy eating relates to a negative emotional climate in two ways: fussy eating behaviours directly relate to parents' emotions (stress, concern) and also impact mealtime conflict via the use of coercive feeding practices. In Study 2A, parents discussed how negative emotions are managed by actively promoting positive mealtimes, negotiating with children, and seeking support from friends and family. Study 2B found that some parents develop low relational-efficacy beliefs through interactions with their children, which relate to negative feelings and negative expectations for the future. Finally, Study 3 was the first study to report children's views of mealtime emotions in the context of fussy eating. Many school-aged children reported feeling angry, sad, or worried about trying new or disliked foods and reported negative emotions in response to coercive parent feeding practices. A particularly novel finding from this study was that children are aware of parents' mealtime emotions in the context of food refusal (mad, sad, and frustrated) and the reasons for these emotions (wasting food, health, having to cook more than one meal). This finding that children are in tune with parent mealtime emotions highlights the importance of parents managing these emotions and actively promoting positive mealtimes, as reported in Study 2.

From a social relational theory perspective (Kuczynski & De Mol, 2015), considering the parent and child relationship as an enduring relationship with an anticipated future explains the importance of managing negative emotions and mealtime



conflict in order to maintain a harmonious relationship. In addition, viewing the holistic relationship and acknowledging that parents and children may experience other emotional challenges outside of the feeding context explains the use of some practices that may not be effective for increasing food acceptance or variety, but serve the purpose of avoiding conflict (such as offering alternative meals, not re-offering previously rejected foods).

It is important to note, however, that findings across studies indicated that fussy eating does not always have negative social and psychological consequences. This is in line with findings from Trofholz et al. (2017) who reported that not all parents found fussy eating disruptive to family meals. Although Trofholz and colleagues (2017) did not present data explaining why this was the case, they suggested that this was due to the way in which parents have adapted to fussy eating behaviours, or that less disruption may reflect less severe fussy eating behaviours. The findings presented in this thesis suggest that whether fussy eating has a negative impact on mealtimes depends on many factors including how fussy eating manifests, parent feeding practices (qualitative synthesis, Figure 3.2, Study 1), parents' feeding goals (Study 2A), parents' beliefs, knowledge and extent of their concern (Study 2B), and strategies children use to deal with disliked foods (Study 3) as well as whether family tension is resolved through processes of problem solving, accommodation and negotiation (Studies 2A and 3).

Parents in Study 2A with a consistent response pattern reported fussy eating behaviours in their children, but also reported more positive emotional climate at mealtimes. This is in line with social relational theory, which states that harmony and consensus between family members maintains continuity. Although harmony is a pleasant state, it still requires active input from individuals within the relationship to be maintained. According to social relational theory, as children get older they start to use strategies to avoid confrontations or unwanted requests from their parents (Kuczynski & De Mol, 2015). In addition to parents' efforts to promote a positive mealtime environment, some of the strategies that children reported in Study 3, such as eating the parts they like and leaving the rest, saying they are full and making suggestions of what they would like to eat, may help to avoid confrontations with parents and may actively contribute to maintaining harmonious mealtimes. While previous quantitative research in this area has primarily treated fussy eating behaviours or food intake as the outcome (e.g. Jansen, et al., 2018; Koh et al., 2014), it would be beneficial for future research to treat mealtime emotional climate or level of parent-child conflict as the outcome measure, and

to investigate the impact of fussy eating, feeding practices, goals and beliefs on the mealtime emotional climate.

***Fussy eating trajectories in later childhood.*** In relation to fussy eating prevalence and trajectories, it is widely reported that fussy eating peaks in early childhood, that for many children fussy eating is transitory, and that for a small group of children fussy eating may persist into later childhood or adolescence (Cardona Cano, Hoek, et al., 2015; Cardona Cano, Tiemeier et al., 2015; Carruth et al., 2004; Mascola et al., 2010; Orun et al., 2012; Taylor, Wernimont et al., 2015). However, many prevalence studies have only included pre-school children so the trajectory in later childhood is relatively unknown. This focus of previous research on pre-school children was evident in the qualitative synthesis (Study 1), in which only three out of ten qualitative studies included families of older children. However, the findings of Studies 2 and 3 show that a significant number of families experience fussy eating into later childhood.

According to social relational theory (Kuczynski & De Mol, 2015), conflict (or contradiction) is a source of change, as it drives processes of problem solving and the development of novel understandings. Whether, and how, this conflict is managed through problem solving, accommodation and negotiation puts the parent-child relationship on a new trajectory (See Figure 1.2, page 55). The findings from Study 2 suggest that there are two distinct aspects of fussy eating trajectories, firstly the fussy eating behaviour itself and secondly, the impact of these behaviours on the family and how it is coped with (e.g. conflict, tension, stress and concern). Boquin et al. (2014) reported that fussy eating behaviours persist into later childhood and adolescence, but parents stop coercing their child to eat, resulting in reduced conflict. The findings of Study 2 show that this is the case for some families (resistance-to-acceptance response pattern). However, for other families both the fussy eating behaviours and the associated challenges (e.g. conflict, tension, stress and concern) continue into later childhood (e.g. fluctuating response pattern).

Based on these two aspects of fussy eating trajectories, there are four potential future trajectories illustrated in Figure 7.1. Firstly, fussy eating may continue and tension and conflict may also continue (likely parents with a fluctuating response pattern). Secondly, fussy eating behaviours may continue but the emotional climate could improve (likely reflecting parents with a resistance-to-acceptance response pattern). Thirdly, fussy

eating behaviours may improve and the emotional climate may also improve (potentially parents with any response pattern). Finally, fussy eating behaviours may remain the same or remain minimal and harmonious mealtimes may continue (reflecting parents with a consistent response pattern).

Given that the associated stress and family conflict in relation to fussy eating may be a significant barrier to engaging in family meals (Fulkerson et al., 2011) and may aggravate food rejections (Ramos-Paúl et al., 2014), it is important to consider the trajectory of family coping. In support of this distinction between the fussy eating behaviours and associated mealtime challenges, using factor analysis on six eating behaviours, Marchi & Cohen (1990) found that two child eating behaviours (meals unpleasant and struggle over eating) loaded on one factor referred to as ‘problem meals’ and four behaviours (eating little, pickiness, eating slowly and low interest in food) loaded on a second factor labelled ‘pickiness’. They found that the prevalence of both ‘problem meals’ and ‘pickiness’ were relatively stable with a slight decrease from childhood to adolescence. Although ‘pickiness’ was common at all ages, ‘problem meals’ was much less common, supporting the findings in Study 2A, that picky eating does not always negatively impact mealtimes. Although a strength of this study is that it distinguishes between the eating behaviour and the mealtime climate, ‘unpleasant meals’ and ‘struggle over eating’ are conceptualised as the child’s problematic behaviour rather than as a mismatch between parent and child needs or goals. Other than this study, most quantitative studies reporting the trajectory of fussy eating rely on items such as ‘child does not eat well’/‘child refuses to eat’ (Cardona Cano, Tiemeier et al., 2015), ‘does your child have definite likes and dislikes’ (Taylor, Wernimont, et al., 2015) and do not account for the trajectory of family coping or mealtime emotional climate. In line with social relational theory, family conflict and stress in relation to fussy eating behaviours may negatively impact other areas of the parent-child relationship as well as the future of their relationship (Kuczynski & De Mol, 2015; Walton et al., 2017) and conflict and stress may also exacerbate fussy eating behaviours (Ramos-Paúl et al., 2014), potentially impacting the child’s physical health. Therefore, based on the findings of this thesis, and in line with the approach of Marchi and Cohen (1990), it is recommended that future studies investigating fussy eating prevalence and trajectories consider both eating behaviour and family coping or mealtime emotional climate.

***Summary of family perceptions, experiences and management of fussy eating.***

In sum, both parents and children are active agents with their own perceptions, beliefs, goals, strategies and emotions in relation to fussy eating. In line with socialisation theories (social relational theory and family systems theory) (Broderick, 1993; Kuczynski & De Mol, 2015), as well as health behaviour change literature (Ajzen, 1991, 2011), all of these constructs relate to each other. How fussy eating is managed relates to how it is perceived, conceptualised and experienced. In addition, whether fussy eating has a negative impact on the social and psychological wellbeing of the family relates to how it is perceived and managed. The relationships between these constructs are illustrated in Figure 7.1. This model may be useful for guiding future research investigating fussy eating from a dialectical perspective. In addition, it may be useful for intervention developers and practitioners to conceptualise the range of beliefs, goals, practices and emotions that could be addressed in order to improve fussy eating challenges, and to recognise the importance of acknowledging both parent and child perspectives.

**Theoretical implications: developing our knowledge of fussy eating from a dialectical theoretical perspective.** As detailed in the introduction (Chapter 1), the majority of research on fussy eating has been carried out from a mechanistic-deterministic theoretical framework, investigating associations and causal relationships between factors (such as parent feeding practices and child fussy eating). Much of this research does not adequately account for the child's agency in contributing to the parent-child feeding relationship and conceptualises fussy eating as bad behaviour which is 'controlled' by parent feeding practices. A theoretical paper was published in 2017 by Walton and colleagues. Drawing from the child socialisation literature, they proposed that a dialectical approach to studying fussy eating is adopted. A dialectical approach involves considering the parent and child as equal agents who co-create the feeding relationship, considering continuous change rather than static outcomes, and considering the broader parent-child relationship, family context and sociocultural context. As highlighted previously, research has shifted to a bi-directional perspective, acknowledging both parent and child influences (e.g. Harris et al., 2016; Russell & Russell, 2018; Vaughn et al., 2016). However, research on fussy eating from a dialectical perspective is in its infancy.

In this thesis, acknowledging the child's agency and investigating their own perceptions, experiences and strategies significantly develops our understanding of

family processes in the context of fussy eating. Overall, the findings in this thesis illustrate that parents and children are both active agents with their own motivations, beliefs and practices that contribute to the feeding relationship. The findings in this thesis also illustrate how managing fussy eating behaviours is an ongoing process involving continuous processes of contradiction (e.g. competing goals, conflict), problem solving (e.g. trying new strategies, coming up with new solutions), accommodation, negotiation and the construction of new meanings and understandings (perceptions and beliefs about fussy eating). This highlights the importance of not viewing feeding practices or fussy eating behaviours as static or stable outcomes, but as dynamic constructs that change over time. Furthermore, the findings illustrate how the broader parent-child relationship, and the future of the relationship, the family context (e.g. presence of siblings) and socio-cultural factors (e.g. income, cultural norms) relate to the management of fussy eating. Taking a holistic perspective and accounting for these contextual factors can significantly enhance our understanding of fussy eating behaviours as well as parents' motivations for using various feeding practices.

Together, the findings in this thesis significantly contribute to our understanding of fussy eating from a dialectical theoretical perspective. The findings highlight that family perceptions, experiences and practices relating to fussy eating are dynamic constructs developing through complex parent-child interactions (or transaction) over time that are part of a broader context. Furthermore, in line with recommendations of Walton and colleagues (2017), these findings support the adoption of a dialectical social relational approach to studying fussy eating in future research.

**Advancing qualitative research methods in fussy eating research.** This thesis has advanced the qualitative methods in fussy eating research. In the introduction (Chapter 1) it was highlighted that there is a need for 1) a review of the current state of qualitative research on fussy eating, 2) the adoption of a constructivist epistemological approach, allowing for the exploration of diverse perspectives and 3) an exploration of the usefulness of more diverse research designs, methods, and analysis approaches that can capture the complexity of family experiences over time.

In Chapter 3 the current qualitative literature was reviewed. As can be seen in Table 3.4, almost all studies used traditional qualitative data collection methods (focus groups and interviews) with only one study investigating calls to a help-line (Harris,

2018), and one other study using projective technique drawings to elicit discussion (Norton, 2016). In addition, the studies on fussy eating were relatively homogenous, with only the parent perspective (primarily mothers) reported. Although a constructivist perspective was adopted when carrying out this review, with the aim to investigate diverse perspectives of parents and children, the outcomes of the review were limited by the homogenous perspective presented in previous studies. This resulted in a model (Figure 3.2) that only depicts a part of the picture of family experiences. It was found that adopting a pragmatic constructivist approach and investigating multiple perspectives in Study 2 and Study 3 led to a more in-depth and balanced understanding of the entire family's experience (depicted in Figure 7.1) which includes both parent and child beliefs, emotions, goals/motivations and strategies.

The majority of past qualitative research has been cross-sectional, providing an insight into the family's experience at one point in time. The research presented in this thesis is also cross-sectional, however it was found that with appropriate interview guides, and by drawing upon theories that emphasise the importance of process and the passing of time (such as Family Process Theory (Broderick, 1993) or Social Relational Theory (Kuczynski & De Mol, 2015)), it is possible to gain an insight into the participants experiences and practices in the past as well as their beliefs or hopes about the future. Although there are some limitations to analysing retrospective reports, this approach may overcome some pragmatic challenges associated with longitudinal qualitative research, such as attrition and difficulties associated with analysing longitudinal qualitative data outlined by Thomson & Holland (2003).

In Study 3, the use of novel and creative data collection methods were explored in relation to investigating food related topics with children. These tools were reviewed in detail in Chapter 6. To summarise, the use of drawings and emotion faces are likely to be useful for investigating children's food preferences, but they did not adequately capture family dynamics or family processes. If drawing prompts are specific and target abstract questions that are difficult to put into words, they may produce more diverse, nuanced, and richer drawings that elicit more in-depth conversation (Pain, 2012). Vignettes were the most useful qualitative method for capturing information about children's perspectives on fussy eating.

Wills (2012) states that many researchers rely on a toolkit of secondary methods including vignettes and that these can be a prop for the researcher but do not necessarily generate a different form of data or a more in depth narrative. It can be argued that in this research, the use of vignettes did produce a different type of data than a standard interview, as it allowed children to discuss their perspective of children's eating behaviours without the researcher using terms such as 'fussy eating' or 'picky eating'. There are a number of studies that have qualitatively investigated children's food preferences, however these types of studies rarely report children's perceptions, experiences and emotions at mealtimes. Methods such as vignettes may be useful for exploring more sensitive topics such as feelings and family dynamics at mealtimes that go beyond the findings of previous studies that report children's food likes, dislikes and reasons for food choices. Wills (2012) also writes that tools such as vignettes can 'dupe' participants into revealing more information than they would otherwise wish to do. However, it was observed that in this study these tools gave the participant more control over the information they wished to disclose. It can be argued that when asked to draw, write or respond to vignettes, children have more control over what they disclose about themselves than when asked direct questions about their lives, thoughts, feelings and behaviours. It would be useful to explore the use of vignettes and other creative methods in fussy eating research with adults.

To conclude, this thesis has developed our understanding of qualitative research methods, designs and approaches that are useful for exploring fussy eating. It is recommended that future qualitative research in this area considers the use of diverse designs, methods, tools, theories, and epistemological perspectives that facilitate an exploration of changing experiences over time and potentially diverse perspectives of different family members.

### **Strengths and Limitations of the Research**

This thesis offers an in-depth understanding of family perceptions, experiences and practices in relation to fussy eating behaviours, from a novel dialectical social relational theory (Kuczynski & De Mol, 2015) perspective. Study 1 provides a comprehensive review of the current qualitative fussy eating literature, highlighting gaps for future research. Study 2 significantly contributes to our understanding of parents' feeding goals, beliefs and emotions which are important constructs for behaviour change interventions.

To the author's knowledge, this is one of the first studies to provide children's perspectives of fussy eating and family processes in the context of fussy eating. A multiple perspective approach allowed the comparison of parent and child views, providing insights into the conflicting motivations of parents and children which may be a source of mealtime conflict in the context of fussy eating.

The sample in (Studies 2A, 2B and 3) was diverse in terms of nationality, family size, income, education and severity of fussy eating, which increases the transferability of findings to different contexts (Hannes, 2011). Although participating schools represented diverse socio-economic areas, all were located in urban areas. This is a potential limitation of the study as a number of studies have found differences between rural and urban populations. For instance one study found that in Texas, urban children were offered and consumed a greater variety of fruit and vegetables than rural children (Etienne-Gittens et al., 2013). Another study found that perspectives in relation to social support for child feeding differed between rural and urban parents in Bangladesh (Naila et al., 2018). In addition, Flight et al. (2003) found that levels of neophobia differed between rural and urban adolescents in Australia but this was explained by differing exposure to cultural diversity and different levels of socioeconomic status. In addition, it must be noted that families were purposefully selected for interview to represent a range of fussy eating scores from mild to severe. However, the final sample of families who accepted the invitation to participate in the interviews had children with a slightly higher average food fussiness score (3.06) on the Children's Eating Behaviour Questionnaire (Wardle et al., 2001) than the average reported by the full sample who completed the screening questionnaire (2.61). Despite this difference, the sample was still a typically developing sample so the findings may not be transferable to populations with more severe feeding challenges, feeding disorders, disabilities or health conditions that impact eating behaviour. In addition, parents volunteered their family to participate in interviews by expressing interest on the screening questionnaire. Therefore participants may have had a particular interest in the topic of fussy eating, or may have been experiencing significant challenges and were seeking some insight through participation. This may have impacted some findings (for instance, that many families of school-aged children experience challenges into later childhood). Originally it was planned to compare qualitative findings between mother and father participants. However, only 20% of parent participants in this research were fathers, so this was not possible. This is higher than



other qualitative studies on fussy eating as the qualitative synthesis (Study 1) found that an average of 8% of participants were fathers across ten studies, however further research with fathers is required.

Accessing children to participate in research is frequently reported as a challenge, due to the need to obtain permission or consent from multiple gatekeepers (e.g. school principals, teachers and parents) (Fargas-Malet et al., 2010). However, a particular strength of this research was that interviewing parents first allowed parents to have an opportunity to meet the researcher, participate in an interview themselves, find out more about the study, and have the chance to ask questions in person. After this process, almost all parents were happy to provide consent. Only one parent wanted to discuss it with the child before giving consent. In this case the consent form was not returned, and this child did not participate in an interview. In addition, carrying out interviews at primary schools during school time reduced the time commitment for parents. Knowing that children would be interviewed in a familiar environment, using familiar activities such as drawing, and that other children in their class would also be participating may have increased parents' willingness to give consent.

However, recruiting children through this process meant that child interviews were carried out several weeks after the parent interviews. Therefore, it is possible that the interview process may have prompted discussions of fussy eating at home, or parents may have made alterations to parent feeding practices after reflecting on their current practices during interviews (Zartler, 2010). This may have influenced child responses (for instance the perception that they were 'fussy', or reporting changes in parent feeding practices). In addition, the interview guides and wording of the questions and prompts shaped the data produced in the interviews. For instance, all parents were prompted to discuss whether fussy eating behaviours changed with age, or whether there were any societal or cultural factors that influence fussy eating. These prompts may have influenced parent responses that contributed to findings in Study 2B that child characteristics such as age, and societal-cultural factors play a role in the development of fussy eating. However, prompts also facilitated discussion and were unlikely to influence or alter parents' perspectives as participants were reminded that they did not have to answer questions if they did not know. In addition, the researchers' reflexivity notes highlighted that many parents responded to prompts by saying they were unsure, or contradicted the researcher's prompts if they did not agree.

Reporting children's perspectives is a major strength of this research. An open, participative environment using activities such as drawing and vignette characters enabled children to contribute as much or as little as they wanted (e.g. to respond generally in relation to the characters, or to volunteer personal experience). These methods also allowed children to share their perspectives through different mediums including writing, drawing and talking. However, some methodological and pragmatic challenges in relation to interviewing children (Greene & Hogan, 2005; Kirk, 2007) were encountered. These challenges have been discussed in detail in Study 3 (Chapter 6).

Regarding the analysis methods used in this research, the meta-ethnography qualitative synthesis approach was a strength of this research, as it involved a secondary analysis of published studies, identified general patterns across studies and highlighted findings hidden within individual studies that have more meaning when related to the findings of other studies (Noblit & Hare, 1988). However, both meta-ethnography and thematic analysis have been criticised for being used inconsistently and for a lack of guidance in relation to carrying out the steps involved. More detailed guidelines and reporting standards are still in development (e.g. Braun & Clarke, 2019; France, Uny et al., 2019). In this research study, the most up to date available guidance was considered and adhered to as closely as possible, and analysis methods used were reported as transparently as possible. In addition, the author engaged in regular supervisory meetings and reflexivity throughout the analysis process.

One limitation of thematic analysis is that it focuses on themes across accounts, so does not lead to exploration of conflicting thoughts or statements within accounts (Braun & Clarke, 2013), or between different members of the same family. Given the decision to analyse parent and child data separately, in order to provide the child's perspective in its own right and to protect participant confidentiality, case study analysis at the dyad or family level was not carried out. Finally, across all studies, relationships between constructs were investigated (e.g. goals, emotions and practices) and in Study 2A and 2B parents' retrospective accounts of past experiences were analysed and reported. It must be noted that due to the cross-sectional qualitative research design, it is not appropriate to infer causal relationships between concepts or time points.

## Recommendations for Future Research

It is recommended that future research is carried out from a dialectical perspective, using theories such as social relational theory. In line with recommendations from Walton and colleagues (2017), this involves viewing the parent and child as equal agents, challenging linear thinking and considering continuous change as an expected outcome, conceptualising fussy eating behaviours as child agency rather than non-compliance, considering the long-term relationship context, and considering conditions or contexts in which change occurs (rather than studying direct causation between constructs). Figure 7.1 may guide researchers to consider relevant constructs or factors and how they relate to each other from a dialectical point of view.

Parent feeding practices are just one component of many that contribute to fussy eating behaviours and how they are experienced by families. However, much research has focused on relationships between parent feeding practices and fussy eating. Parent feeding practices do not occur in isolation but relate to a wide range of other factors such as mealtime emotions, feeding beliefs, parent knowledge, and feeding goals. It is recommended that more research is focused on these constructs when exploring parent feeding practices. A first step will be to develop tools for measuring feeding goals in the context of fussy eating, parent attributions of fussy eating behaviours and parent relational efficacy.

As highlighted in the qualitative synthesis in Chapter 3, the majority of qualitative research on fussy eating has reported mothers' perspectives and has focused on pre-school children. In addition, the majority of research has been carried out in Australia and the USA. The research presented in this thesis has filled some gaps in the literature by providing children's perspectives, including fathers in parent interviews, by focusing on families of school-aged children, and exploring fussy eating in an Irish context. However, further research is still required to further understand fathers' and children's perspectives and the experiences of fussy eating in more diverse contexts. Much research has reported parents' perspectives of their children's behaviours, however much more research is required that explores children's perspectives of their parents' behaviours. Study 3 in this thesis provided a first step to understanding school-aged children's perceptions of family processes in the context of fussy eating (e.g. mealtime goals, emotions and practices). Some children in Study 3 talked about their siblings' eating behaviours. It would be useful

for future research to further explore children's perspectives of their siblings' fussy eating behaviours as well as the impact of their siblings' behaviours on their own eating behaviour and on the emotional climate at mealtimes.

The analysis approach used in this thesis focused on themes across participants' accounts and did not allow for exploration of contradictions within accounts or between family members. It would be beneficial for future research to analyse interviews at the parent-child dyad or family level to explore similarities and differences between the perspectives of members within one family (Kendall et al., 2010; Zartler, 2010). Future research should explore constructs such as mealtime goals, emotions and practices in more detail, with children of different ages, and in different contexts. Finally, longitudinal qualitative studies with parents and children would help to understand how perceptions, experiences and practices change throughout childhood.

The research in this thesis focused on understanding family perceptions, experiences and practices in relation to childhood fussy eating. Specifically, a social relational theory and family systems theory approach was adopted, focusing on family interactions, family dynamics and socialisation processes. Importantly, this research prioritises families' perceptions, beliefs, and experiences as reported by participants and does not aim to understand biological processes. For instance, although many parents discussed being concerned about their child's health, this research did not measure actual health consequences or nutrient deficiencies associated with fussy eating. It would be interesting for future research to use both quantitative and qualitative methods to combine data on biological processes such as child health outcomes, growth, nutrient deficiencies, and genetic influences with qualitative data on family perceptions, goals and practices. For instance it would be interesting to investigate relationships between qualitative reports of parent concern or family conflict with quantitative measures of nutrient intake. Russell & Russell's (2018) model of biological and psychosocial processes in the development of early appetitive traits, along with the models in this thesis (Figure 3.2 and Figure 7.1) may inform future research exploring the interactions between biological and psychosocial processes.

### **Recommendations for Practice**

In line with a dialectical conceptualisation of fussy eating, the research findings suggest that children's agency should be recognised in practice. Children's own motivations,

emotions and preferred strategies should be taken into consideration in the design of interventions (both population level and individual). For instance, given that many children talked about the sensory aspects of foods they disliked but believed that it is possible to get to like disliked foods, it may be useful to teach children strategies for gradual exposure to disliked tastes, textures or smells. For example, it may be helpful for children to taste a crumb sized piece of a disliked food before being expected to try a larger bite. In addition, parents and practitioners should work collaboratively with children, finding a middle ground between parent and child needs and goals, rather than expecting the child to immediately comply with parent demands (representing a top-down parent → child model of parenting). The conceptual model (Figure 7.1) may help practitioners to conceptualise how both parents and children have equal agency in contributing to the development, maintenance and improvement of fussy eating behaviours, and to consider other factors such as the broader relationship, past interactions and experiences, and future expectations. For instance some strategies used in behavioural approaches to treating feeding challenges, such as escape extinction in which the child cannot leave the meal until they have eaten a specified amount of the disliked food, or in which the spoon or drink is presented to the child's lips until it is accepted (Williams & Seiverling, 2018), may result in tension and parent-child conflict, negatively impacting the parent-child relationship. Due to child resistance (as described by some parents in Study 2A and 2B), such strategies may also be difficult for parents to implement and may contribute to parents' feelings of guilt, failure and low relational-efficacy.

In addition, feeding practices such as repeated exposure are often the focus of fussy eating interventions (Gibson & Cooke, 2017). While these are important and effective strategies (Holley et al., 2017; Nekitsing et al., 2018), the findings of this thesis suggest that interventions may benefit from targeting different factors alongside feeding practices. It may be beneficial for parent-focused interventions to address negative emotions that directly relate to children's food refusal (e.g. concern, frustration), as well as negative emotions associated with parent feeding practices (e.g. family conflict, stress). It may be useful to target parent beliefs, specifically regarding factors that contribute to fussy eating behaviours, children's hunger regulation, and relational-efficacy beliefs. Relational-efficacy beliefs may be supported by giving parents clear evidence based strategies early in life so that they can build up positive, successful and cooperative

interactions with their child. Relating to these beliefs, it may also help to encourage parents to conceptualise their role as influencing and supporting their child's eating behaviours rather than controlling their child's eating behaviour (support a dialectic conceptualisation of parenting). In line with recommendations from Walton et al. (2017), supporting parents to conceptualise fussy eating as child agency rather than challenging/bad behaviour may reduce conflict and the use of coercive practices. Given that many parents report competing goals (in Study 2), it may also be helpful for interventions to support parents to clarify their feeding goals. Actively prioritising specific goals, or coming up with new solutions that address competing goals, may support parents to be more consistent in their practices. In line with these recommendations, interventions that have included some of these components such as goal setting, coping skills, empathy and compassion regarding the child's experience have positive results (Adamson et al., 2015; Stapleton et al., 2013). In relation to the delivery of interventions, some group education programmes and emotional support interventions have had positive results (Mitchell et al., 2013). The findings of Study 2A support the use of group interventions, as it was reported that parents manage negative emotions and normalise their children's eating behaviours through talking to friends, family and other parents.

## **Conclusions**

Previous research on fussy eating has been parent-focused and primarily quantitative. The limited number of qualitative studies (synthesised in Chapter 3) relied on parent reports and mainly focused on pre-school children. In addition, previous research has focused on feeding practices, with less exploration of other constructs such as goals, beliefs and emotions. By investigating fussy eating across childhood, with a focus on families of school-aged children, and by exploring both parent and child perspectives, this thesis found that family perceptions, experiences and management of fussy eating behaviours are complex, dynamic and contextual (related to a range of child, parent, family, social and cultural factors).

Both parents and children are active agents with their own conceptualisations of fussy eating, beliefs, motivations, emotions, and strategies that are dynamic, changing over time. A number of parent beliefs relate to feeding practices in the context of fussy eating: beliefs about hunger regulation, attributions, relational-efficacy beliefs and

expectations for the future. Contradicting goals and motivations of parents and children can create conflict in relation to fussy eating behaviours. Conflict can be resolved through processes of accommodation and negotiation, contributing to happier mealtimes. If contradictions are not resolved, challenges and tension in relation to fussy eating may continue. Fussy eating behaviours do not always negatively impact the family, and this relates to how they are perceived and managed. Parent feeding practices and children's eating behaviours are reciprocally related to each other, effectiveness of practices varies across families and the process of figuring out what works best lasts into later childhood. Children have their own strategies for dealing with dislikes and getting to like new foods, and describe parents' feeding practices more positively when they support the child's autonomy and are in line with children's motivations.

It is recommended that future research is carried out from a dialectical perspective, and views fussy eating on a continuum (rather than categorising children as 'fussy' or 'non-fussy' eaters). In addition, future research should focus more attention on factors other than feeding practices, such as emotions, beliefs, knowledge, goals and contextual factors. More research is required to understand children's perspectives of family processes in the context of fussy eating. Intervention for fussy eating should consider the child's point of view (their own motivations, emotions and preferred strategies), should support parents and children to work collaboratively to increase food acceptance and intake, and should take the broader parent-child relationship, wider family, and social and cultural context into account.

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## Appendices

### Appendix A: School Recruitment Letter and Information Sheet

Hazel Wolstenholme



Dear \_\_\_\_\_

My name is Hazel Wolstenholme. I am a PhD student at the National University of Ireland, Galway, and I am studying people's beliefs and attitudes towards children's food behaviours and food practices, specifically fussy eating.

I would like to invite your school to participate in the project. The information sheet I have attached explains what my research is about and how children and parents in your school can take part.

If you have any further questions in relation to the project, please do not hesitate to contact me at the contact details below. I will follow this letter up with a phone call in the coming weeks if I do not hear from you before then.

Email: [Redacted]

Phone: [Redacted]

I greatly appreciate your time spent reading this letter and I am looking forward to talking to you further.

Kindest regards,

A handwritten signature in blue ink that reads "Hazel Wolstenholme".

Hazel Wolstenholme.

## Family Food Practices Project

### School Information



### About the Project

Many families experience difficulties in relation to eating and mealtimes. Difficulties like fussy eating are so common and are usually not severe enough to require professional attention. Therefore, few families get any professional support or advice. This research is about listening to children and parents so we know more about the kind of support that families would like in relation to food and mealtimes.

We are inviting all 1<sup>st</sup> and 3<sup>rd</sup> class children and their parents to get involved as we are interested in comparing the perspectives of families with children of different ages.

### About the Researchers



My name is Hazel. I have been studying psychology for 5 years and have been working with children

for over 10 years. I am interested in researching family and child health. I am working on this project with Dr. Caroline Heary, a developmental psychologist and lecturer as well as Dr. Colette Kelly, a registered nutritionist and health promotion lecturer, both based at NUI Galway.

### Useful Services and

#### Resources

Factsheets and advice on healthy eating:

[www.safefood.eu](http://www.safefood.eu)  
[www.healthpromotion.ie](http://www.healthpromotion.ie)

Child feeding guide website and app:  
[www.childfeedingguide.co.uk](http://www.childfeedingguide.co.uk)

Family support services:  
[www.tusla.ie](http://www.tusla.ie)

Irish Nutrition and Dietetic Institute  
[www.indi.ie](http://www.indi.ie)

The Psychological Society of Ireland  
[www.psychologicalsociety.ie](http://www.psychologicalsociety.ie)

#### ~Contact~

If you have any further questions about the research project, please feel free to contact Hazel:

[h.wolstenholme1@nuigalway.ie](mailto:h.wolstenholme1@nuigalway.ie)

If you have concerns about this study and wish to contact someone in confidence, you may contact:  
 The Chairperson of the NUI Galway Research Ethics Committee,  
 c/o Office of the Vice President for Research NUI Galway  
[ethics@nuigalway.ie](mailto:ethics@nuigalway.ie)

## Family Food Practices Project

### What does the Project Involve?

- 1 A meeting will be arranged with the principal or another teacher to discuss running the project in your school.
- 2 An information pack and a short questionnaire will be given to all families of 1<sup>st</sup> and 3<sup>rd</sup> class children.
- 3 Parents can volunteer to take part in an interview. These can take place in your school, the family home, or the school of psychology, NUI Galway.
- 4 With parental consent, short activity based interviews will be carried out with some 1<sup>st</sup> and 3<sup>rd</sup> class children. This will take place in your school.

### Interviews

During interviews we will talk about problems such as fussy eating, attitudes towards advice and support from professionals, and family mealtimes practices.

Children's interviews will be based on short stories and fictional characters and will involve activities such as drawing and games, depending on the child's interests.

### Why Participate?

- We are approaching this project with a participatory philosophy which views children as experts and active co-researchers. This means that children will have an opportunity to learn a bit about research and the work we do at universities.
- It is a great opportunity for children to voice their opinions about their food behaviours and to think critically about the topic. This is an exciting project as it is the first time children of this age are involved in research on this subject.
- Parents will have the chance to voice any concerns they have in relation to food and family meals.

- All families will be provided with a 'tips and strategies sheet' and information about useful services and resources.

- We will learn about family food practices which will contribute towards helping other families in the future.

- We are happy to arrange a workshop/meeting with your teachers and/or families to share some information about fussy eating, healthy eating practices and the findings of this project.

### Are There Any Risks?

Some families may feel slightly distressed when talking about family life and eating. However, interviews are designed so that participants do not have to offer personal information and participants can withdraw from the study at any time without giving a reason. If families wish, we are happy to recommend services or resources that they may find helpful.

### What Happens with the Data?

Interviews will be audio-recorded, transcribed and used as part of the research project so that we know what support families would like in relation to eating well. Results will likely be published in academic journals and presented at conferences.

### Data Protection and Confidentiality

School and participant names will never be used in any reports or publications. All data files will be kept anonymous and confidential (unless concerns arise relating to the safety of a child) and access will be limited to the research team. Any identifying information (such as consent forms) will be stored separately from the data files. All materials will be kept in a safe and secure file on a password protected computer in a swipe-card access office at the school of psychology, NUI Galway.

## Appendix B: Parent Invitation Letter and Study Information Brochure



Scoil na Siceolaíochta

School of Psychology

Hazel Wolstenholme,  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]

Dear parent,

Your school has decided to participate in the Family Food Practices Research Project being carried out by the School of Psychology at the National University of Ireland, Galway. We are inviting all families of children in 1<sup>st</sup> and 3<sup>rd</sup> class to take part. Please read both sides of the information sheet attached carefully.

If you would like to take part, please return the questionnaire in the envelope provided, to the school office by [Redacted]. Your responses are private and confidential and will not be opened by school staff.

If you would like help completing the questionnaire please contact a teacher in your school or the researcher Hazel ([Redacted]).

Thank you for your time.

Kind regards,

A handwritten signature in blue ink that reads 'Hazel Wolstenholme'.

Hazel Wolstenholme.

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## Family Food Practices Project

### Information for Parents

#### About the Project

Many families experience difficulties in relation to eating and mealtimes. Difficulties like fussy eating are so common and are usually not severe enough to require professional attention. Therefore, few families get any professional support or advice. This research is about listening to children and parents so we know more about the kind of support that families would like in relation to food and mealtimes.

Your school has volunteered to participate. We are inviting all 1<sup>st</sup> and 3<sup>rd</sup> class children and their parents to get involved as we are interested in comparing the perspectives of families with children of different ages. We are interested in talking to families who are experience difficulties, as well as those who are not.

#### About the Researcher

My name is Hazel. I have been studying psychology for 5 years and have been working with children for over 10 years. I am interested in researching family and child health. I am working on this project with Dr. Caroline Heary, a developmental psychologist and lecturer as well as Dr. Colette Kelly, a registered nutritionist and health promotion lecturer, both based at NUI Galway



OÉ Gaillimh  
NUI Galway

#### What does the Project Involve?

##### 1. Questionnaire

The first part involves completing the questionnaire in this pack which takes approximately 20 minutes. It asks you some questions about your family and behaviours around food.

##### 2. Parent Interview

At the end of the questionnaire you can indicate whether or not you would like to be invited for a parent interview (20min-1 hour depending on your availability). This can take place in your child's school, your home, or the School of Psychology at NUI Galway. During interviews we will talk about problems such as fussy eating, attitudes towards advice and support from professionals, and family mealtime practices.

##### 3. Child Interview

At the end of the parent interview we will discuss whether or not you would like your child to participate in a short activity based interview at school. Children's interviews are based on fictional characters and various activities such as drawing depending on the child's preferences and interests. Participants do not have to offer personal information.

#### Why Participate?

- You will have a chance to voice any concerns or opinions that you have in relation to feeding children, family meals, and any support or advice you have been given.
- This will help us learn about family food practices which will contribute towards families getting the help they need in the future.



- All families that take part will be provided with information about useful services and resources and a useful tips and strategies sheet. Even if you do not experience concerns or difficulties, your views and opinions are still important for the project.
- It is a great opportunity for children to voice their opinions and to think critically about food, as well as to learn about research and the work that we do at universities. This is an exciting project as it is the first time that children of this age are involved in a project on this topic.
- If you are interested, I will share the results and findings of this project with you and other families in your school.

### Are there any risks?

Some families may feel slightly distressed when talking about family life and eating. However, discussions will mainly be general and participants do not have to talk about their personal experiences. You and your child can withdraw from the study at any moment if you decide you no longer wish to participate. I am happy to recommend useful services and support if you feel you need it.

### What Happens After Participation?

Interviews will be audio-recorded, transcribed and analysed as part of the research project so that we know more about the support that families would like in relation to eating well. Data from the questionnaires will also be analysed. Results will likely be published in academic journals and presented at conferences.

[Image of vegetables removed]

### Data Protection and Confidentiality

The original recordings will be kept securely for the duration of the project and will then be destroyed. All data files will be kept anonymous and confidential (unless issues arise relating to child harm or abuse) and access will be limited to the research project team. Any identifying information (such as consent forms) will be stored separately from the data files to protect your anonymity. Results will be reported as group data and will not identify you or your school in any way. All materials will be kept in a secure file on a password protected computer in a locked office at NUI Galway.

[Image of berries removed]

### Useful Services and Resources

Factsheets and advice on healthy eating:

[www.safefood.eu](http://www.safefood.eu)  
[www.healthpromotion.ie](http://www.healthpromotion.ie)

Child feeding guide website and app:

[www.childfeedingguide.co.uk](http://www.childfeedingguide.co.uk)

Family support services:

[www.tusla.ie](http://www.tusla.ie)

Irish Nutrition and Dietetic Institute

[www.indi.ie](http://www.indi.ie)

The Psychological Society of Ireland

[www.psychologicalsociety.ie](http://www.psychologicalsociety.ie)

### ~Contact~

If you have any further questions about the research project, please feel free to contact Hazel:

[h.wolstenholme1@nuigalway.ie](mailto:h.wolstenholme1@nuigalway.ie)

If you have concerns about this study and wish to contact someone in confidence, you may contact:

The Chairperson of the NUI Galway Research Ethics Committee, c/o Office of the Vice President for Research NUI Galway  
[ethics@nuigalway.ie](mailto:ethics@nuigalway.ie)

**Appendix C: Family Screening Questionnaire**

**Note: Questionnaire completion is voluntary. By completing and returning this questionnaire you consent to your responses being used for the purposes of this research project, as outlined in the attached information sheet. All responses are strictly confidential.**

**Child and Family Characteristics**

Child's age	_____ years and _____ months	
Child's date of birth		
Sex	Male <input type="checkbox"/> Female <input type="checkbox"/> Other <input type="checkbox"/>	
Number of older siblings		
Number of younger siblings		
Number of same-age siblings		
Please indicate if you have other children in 1 <sup>st</sup> or 3 <sup>rd</sup> class participating in this project	Names or Project ID:	
Does your child have any disability, medical condition or mental health diagnosis that may influence the way he/she eats, or the things that he/she eats?	If yes, please indicate:	
Is your child receiving any professional support/treatment/therapy programme?		
Does your child follow any particular diet (e.g. vegetarian, vegan, gluten-free)?	If yes, please indicate:	
What is/are your family culture(s) or ethnicities?		
What is your approximate weekly family income (gross)?		
What are your occupation(s)?	Parent/Guardian 1	Parent/Guardian 2 (if applicable)
What is your highest level of education? (Primary School, Secondary School, Post Leaving Cert Course, Undergraduate Degree, Masters Degree, PhD, Other – please specify)	Parent/Guardian 1	Parent/Guardian 2 (if applicable)

Please read the following statements and tick the boxes most appropriate to your child's eating behaviour.

	Never	Rarely	Sometime	Often	Always		Never	Rarely	Sometime	Often	Always
My child loves food						Given the choice, my child would eat most of the time					
My child eats more when worried						My child looks forward to mealtimes					
My child has a big appetite						My child gets full before his/her meal is finished					
My child finishes his/her meal quickly						My child enjoys eating					
My child is interested in food						My child eats more when she is happy					
My child is always asking for a drink						My child is difficult to please with meals					
My child refuses new foods at first						My child eats less when upset					
My child eats slowly						My child gets full up easily					
My child eats less when angry						My child eats more when s/he has nothing else to do					
My child enjoys tasting new foods						Even if my child is full up s/he finds room to eat his/her favourite food					
My child eats less when s/he is tired						If given the chance, my child would drink continuously throughout the day					
My child is always asking for food						My child cannot eat a meal if s/he has had a snack just before					
My child eats more when annoyed						If given the chance, my child would always be having a drink					
If allowed to, my child would eat too much						My child is interested in tasting food s/he hasn't tasted before					
My child eats more when anxious						My child decides that s/he doesn't like a food, even without tasting it					
My child enjoys a wide variety of foods						If given the chance, my child would always have food in his/her mouth					
My child leaves food on his/her plate at the end of a meal						My child eats more and more slowly during the course of a meal					
My child takes more than 30 minutes to finish a meal											

(Wardle, J., Guthrie, C. A., Sanderson, S., & Rapoport, L. (2001). Development of the children's eating behaviour questionnaire. *Journal of Child Psychology and Psychiatry*, 42(7), 963-970.



**Interview**

I would like to be invited for an interview, as was described on the information sheet.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If <b>YES</b> please provide:		
Email Address		
Phone Number		
Name(s) (optional) <b>Note:</b> This sheet will be separated from your questionnaire responses to protect your confidentiality and anonymity		
If <b>NO</b> , please indicate:		
Lack of time	<input type="checkbox"/>	
I am not interested	<input type="checkbox"/>	
Other (please indicate)	<input type="checkbox"/>	_____
Prefer not to say	<input type="checkbox"/>	

**Thank you for completing this questionnaire. Please return it in the sealed envelope to your school reception/principal, or post it to:**

Hazel Wolstenholme  
School of Psychology  
National University of Ireland Galway,  
University Road,  
Galway.

**If you are experiencing any concerns relating to the topics dealt with in this questionnaire, please talk to your GP who may be able to refer you to an appropriate service. In addition, some useful services and resources include:**

Factsheets and advice on healthy eating  
[www.safefood.eu](http://www.safefood.eu)  
[www.healthpromotion.ie](http://www.healthpromotion.ie)

Irish Nutrition and Dietetic Institute  
[www.indi.ie](http://www.indi.ie)

Child feeding guide website and app  
[www.childfeedingguide.co.uk](http://www.childfeedingguide.co.uk)

The Psychological Society of Ireland  
[www.psychologicalsociety.ie](http://www.psychologicalsociety.ie)

Family support services  
[www.tusla.ie](http://www.tusla.ie)

## Appendix D: Parent Interview Guide

**Introduction:** Recorder, Consent, No right or wrong answers, Confidentiality.

**I wonder if we could start by telling me a bit about your family?** How many children do you have? How old are they?

**Could you tell me about a typical mealtime in your house?** Who prepares the food? Where do you eat? Who is there? Do you like cooking? What kind of things do you cook? Do your children help you with the cooking? Do you eat out? Where? Do your children enjoy mealtimes?

**Are there any challenges you experience when feeding your child(ren)?** Could you tell me about them? How did/do you deal with the challenge?

**How would you describe a fussy eater?** Do you think this is something you have experienced? Have you come across other children like this before? How common do you think fussy eating is? Is it becoming more or less common, why?

**What do you think the causes of fussy eating are?** Are there influences in the home? Are there any influences from society? Are there particular things about children that are likely to make them more or less fussy? Are children fussier at any particular age? Do you think the way you fed your child as a baby (breast feeding, bottle feeding, and weaning) influences their attitude towards food now?

**Do you have any experiences living in different countries?** or feeding children from different cultures? Do you think there are different approaches to feeding children in different countries?

**Do you think fussy eating is a concern for some people?** Does it have an impact on the parents? Does it have an impact on the child? Does it have an impact on the family? Compared to other worries as a parent, is fussy eating a big worry or a small worry?

**If you knew a parent who was concerned about their child's fussy eating, what advice would you give them?** Are there any other strategies you use to encourage your child to eat well? What works, what doesn't work?

**Do you know of any useful resources about feeding children (such as books, websites, blogs)?** Could you tell me about them, do you find them useful? Do you think parents would benefit from more information?

**If you wanted professional advice about your child's fussy eating who would you go to? Why?**

**Is there anything else you would like to talk about?** Are there any other important issues in relation to feeding children that come to mind? Could you tell me more about...?

**Conclusion** Thank participant, Debrief, Tips and Strategies Sheet and Useful Resources Sheet, Consent for child interviews.

## Appendix E: Child Interview Materials and Interview Guide

Note: images are removed from materials for copyright

### Being A Researcher

#### **What Is Research All About?**

Research is all about finding out new information.

We can do research on any topic in many different ways.

A lot of research takes place at universities like the National University of Ireland, Galway.

#### **Why Do We Do Research?**

Research helps us to gain knowledge and understand things better.

Also, it often helps to improve our world and people's lives in the future.

#### **How Do We Do Research?**

There are lots of ways to do research including reading books, talking to people, doing surveys and carrying out science experiments.

Then we write about what we have found so other people can read and use the knowledge we have found.

[Images removed for copyright]

**...if you could research anything, what would it be?**

Draw a picture, or write about, you having dinner at home:

A large, empty rectangular box with a double-line border, intended for a drawing or written response. The box occupies most of the page below the instruction.

For breakfast I like to eat...

---

At school I like to eat...

---

At home in the evening I like to eat...

A dinner I like is \_\_\_\_\_.

When this is for dinner, I feel...

[Emoji images removed for copyright]

Happy                  Excited                  Surprised                  Normal                  Sad

[Emoji images removed for copyright]

Angry                  Scared                  Worried                  Disgusted "Yuck!"                  Sick

Anything else? \_\_\_\_\_

Is there anything you don't like for dinner? What is it?

\_\_\_\_\_

When this is for dinner I feel...

[Emoji images removed for copyright]

Happy                  Excited                  Surprised                  Normal                  Sad

[Emoji images removed for copyright]

Angry                  Scared                  Worried                  Disgusted "Yuck!"                  Sick

Anything else? \_\_\_\_\_

When I am asked to try a new food that I have never seen before I feel...

[Emoji images removed for copyright]

Happy

Excited

Surprised

Interested

Normal

Sad

Angry

Scared

Worried

Disgusted "Yuck!"

Sick

Anything else? \_\_\_\_\_

## Vignettes/Story Cards

### Vignette 1

Hello, my name is Rosie. I'm the same age as you. I don't like vegetables, especially new ones I have never tried before. My dad says I have to eat some vegetables, and try new things. But I don't think I will like them so I don't want to try them.

[image of girl on a swing – removed for copyright]

### Vignette 2

Hello, my name is Mark. I'm the same age as you. I really don't like cheese. When I go to birthday parties everyone has pizza and I can't eat it because of the taste of cheese. At my friend's house we often get pasta with cheese - ugh...I don't like it at all.

[image of boy carrying school bag – removed for copyright]



### Child Interview Schedule

#### Interview Plan:

1. Read through info sheets, discuss research, and sign consent forms together.
2. Ice-breaker game – e.g. HeadBanz
3. Start activity sheets and interview children 1-1

#### Interview:

1. **Can you tell me about the picture you drew of dinner time?** Where do you eat your dinner? Who is usually there when you are eating? Who chooses what is for dinner? Who makes the food? Do you like to help make the dinner? What do you like about helping with the dinner?
2. **What is your favourite meal of the day, what do you like about it?** Activity sheet
3. **Do you have a dinner that you don't like at all, what is it?** (If they say no: Are there any foods you don't like, what foods?)

#### Rosie:

4. **Some children like to eat lots of vegetables and other children do not like to eat vegetables, can you tell me about what makes some children like Rosie not like vegetables?** Do you like vegetables? What kind of things make vegetables nice? What kind of things make vegetables not nice?
5. **What do you think Rosie's Mum and Dad do if they cook vegetables for dinner and she doesn't want to eat them? What might they say?** What does Rosie think when they say that? What happens if you don't want to eat something for dinner in your house? Do you have any rules about eating in your house?
6. **How does Rosie feel when vegetables are served for dinner? How do her Mum and Dad feel when they make vegetables for her for dinner? How does she feel when she's asked to try something new?** (Can you show me your activity sheets and tell me about how you feel when there's something you like, something you don't like, and something new for dinner?)

#### Mark:

7. **How does Mark feel when he goes to birthday parties or his friend's house and doesn't like to eat what other people are eating?**
8. **What do his friends say to him when he won't eat what they are eating?**
9. **What do you think he should do when he is given something he doesn't like at his friend's house?**
10. **Are there a lot of children your age like Rosie and Mark, who have foods they really don't like?** Do you know anyone who is a bit like Rosie or Mark around food? What kind of things do they say about food?
11. **Is it a good thing or a bad thing that Rosie and Mark don't like vegetables and cheese?**
12. **Do you think we could help Rosie and Mark like the things they don't like? What kind of things could we do?** What do you think is the best way for them to get to like it? Is there anyone or anything that could help him/her get to like it?

**(Is there anything else about food that you'd like to tell me?)** (Relevant for some children: Have you ever lived in another country? Could you tell me about the food you ate there? Do you think the food there is different to the food here? Which do you prefer?)

## Appendix F: Ethical Approval Letter and Statement of Compliance



Leas-Uachtarán  
um Thaighde

Vice President  
for Research

Date: 29 August 2016

Ref: 16-July-17

Hazel Wolstenholme  
School of Psychology  
NUI Galway

**Re: 16-July-17 - Family Food Practices Project** ("Investigating Perceptions of Picky Eating, Family Processes, and Attitudes towards Action: Integrating Parent, Child and Professional Perspectives using a Mixed Methods Design - phase 1")

Dear Ms Wolstenholme,

I write to you regarding the above proposal which was submitted for ethical review. Having reviewed your response to my letter, I am pleased to inform you that your proposal has been granted **APPROVAL**.

All NUI Galway Research Ethic Committee approval is given subject to the Principal Investigator submitting annual and final statements of compliance. The first statement is due on or before 29 August 2017. Section 7 of the REC's Standard Operating Procedures gives further details, and also outlines other instances where you are required to report to the REC.

Yours sincerely

Allyn Fives  
Chair, Research Ethics Committee

## 1 APPENDIX 5: Final Statement of Compliance

Name: Hazel Wolstenholme

Project Title: Investigating Perceptions of Picky Eating, Family Processes, and Attitudes towards Action: Integrating Parent, Child, and Professional Perspectives using a Mixed Methods Design (phase 1 only –investigating child and parent perspectives)

REC Reference: 16-Jul-17

I confirm that the above referenced project (including any amendments hereto) has been carried out in accordance with the approval of the Research Ethics Committee (REC) at the National University of Ireland, Galway

PI signature:



Date: 21-01-2020

## Appendix G: Participant Information Sheets

### Parent information for the overall study (screening questionnaire, parent and child interviews)

## Family Food Practices Project

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### Information for Parents


#### About the Project

Many families experience difficulties in relation to eating and mealtimes. Difficulties like fussy eating are so common and are usually not severe enough to require professional attention. Therefore, few families get any professional support or advice. This research is about listening to children and parents so we know more about the kind of support that families would like in relation to food and mealtimes.

Your school has volunteered to participate. We are inviting all 1<sup>st</sup> and 3<sup>rd</sup> class children and their parents to get involved as we are interested in comparing the perspectives of families with children of different ages. We are interested in talking to families who are experience difficulties, as well as those who are not.

#### About the Researcher

My name is Hazel. I have been studying psychology for 5 years and have been working with children for over 10 years. I am interested in researching family and child health. I am working on this project with Dr. Caroline Heary, a developmental psychologist and lecturer as well as Dr. Colette Kelly, a registered nutritionist and health promotion lecturer, both based at NUI Galway



**OÉ Gaillimh  
NUI Galway**

#### What does the Project Involve?

- ##### 1. Questionnaire

The first part involves completing the questionnaire in this pack which takes approximately 20 minutes. It asks you some questions about your family and behaviours around food.
- ##### 2. Parent Interview

At the end of the questionnaire you can indicate whether or not you would like to be invited for a parent interview (20min-1 hour depending on your availability). This can take place in your child's school, your home, or the School of Psychology at NUI Galway. During interviews we will talk about problems such as fussy eating, attitudes towards advice and support from professionals, and family mealtime practices.
- ##### 3. Child Interview

At the end of the parent interview we will discuss whether or not you would like your child to participate in a short activity based interview at school. Children's interviews are based on fictional characters and various activities such as drawing depending on the child's preferences and interests. Participants do not have to offer personal information.

#### Why Participate?

- You will have a chance to voice any concerns or opinions that you have in relation to feeding children, family meals, and any support or advice you have been given.
- This will help us learn about family food practices which will contribute towards families getting the help they need in the future.

- All families that take part will be provided with information about useful services and resources and a useful tips and strategies sheet. Even if you do not experience concerns or difficulties, your views and opinions are still important for the project.
- It is a great opportunity for children to voice their opinions and to think critically about food, as well as to learn about research and the work that we do at universities. This is an exciting project as it is the first time that children of this age are involved in a project on this topic.
- If you are interested, I will share the results and findings of this project with you and other families in your school.

### Are there any risks?

Some families may feel slightly distressed when talking about family life and eating. However, discussions will mainly be general and participants do not have to talk about their personal experiences. You and your child can withdraw from the study at any moment if you decide you no longer wish to participate. I am happy to recommend useful services and support if you feel you need it.

### What Happens After Participation?

Interviews will be audio-recorded, transcribed and analysed as part of the research project so that we know more about the support that families would like in relation to eating well. Data from the questionnaires will also be analysed. Results will likely be published in academic journals and presented at conferences.

[Image of vegetables removed]

### Data Protection and Confidentiality

The original recordings will be kept securely for the duration of the project and will then be destroyed. All data files will be kept anonymous and confidential (unless issues arise relating to child harm or abuse) and access will be limited to the research project team. Any identifying information (such as consent forms) will be stored separately from the data files to protect your anonymity. Results will be reported as group data and will not identify you or your school in any way. All materials will be kept in a secure file on a password protected computer in a locked office at NUI Galway.

[Image of berries removed]

### Useful Services and Resources

Factsheets and advice on healthy eating:

[www.safefood.eu](http://www.safefood.eu)  
[www.healthpromotion.ie](http://www.healthpromotion.ie)

Child feeding guide website and app:

[www.childfeedingguide.co.uk](http://www.childfeedingguide.co.uk)

Family support services:

[www.tusla.ie](http://www.tusla.ie)

Irish Nutrition and Dietetic Institute

[www.indi.ie](http://www.indi.ie)

The Psychological Society of Ireland

[www.psychologicalsociety.ie](http://www.psychologicalsociety.ie)

### ~Contact~

If you have any further questions about the research project, please feel free to contact Hazel:

[h.wolstenholme1@nuigalway.ie](mailto:h.wolstenholme1@nuigalway.ie)

If you have concerns about this study and wish to contact someone in confidence, you may contact:

The Chairperson of the NUI Galway Research Ethics Committee, c/o Office of the Vice President for Research NUI Galway  
[ethics@nuigalway.ie](mailto:ethics@nuigalway.ie)



## Parent Interview Information

# Family Food Practices Project

## Parent Interview Information



### What is this research about?

This research is about parents' experiences of feeding their children. Challenges like fussy eating are so common and are usually not severe enough to require professional or medical attention so few families get any professional support or advice. We are interested in hearing your opinions about common mealtime challenges and concerns and any advice you have experienced (from the media, other parents, doctors etc.). We would like to talk to parents who are experiencing challenges, as well as those who are not.

### Where will the interview take place and how long do they last?

Parent interviews can take place in your school, the NUI Galway School of Psychology, or your home, where ever suits you best! We can arrange a suitable time and place for you by email or phone. It is up to you how long the interviews last – any time you can give is valued but they will most likely last between 20 minutes and 1 hour.

### What will we talk about?

I would like to hear about your opinions and beliefs on fussy eating, the way children eat and the things that they eat, your beliefs about what influences children's diet and your experience of any support or advice you have received in relation to feeding children. There are no right or wrong answers – this is just an opportunity for you to voice your thoughts.

### Who should get involved?

Most research on this topic so far, has only focused on the views of mothers. I am interested in working to change this, and hope to account for the opinions and experiences of both mothers and fathers. For this reason, it would be great to interview both parents. If this is not possible for any reason, an interview with one parent would still be greatly appreciated.

### What will happen with the information?

The interviews will be audio recorded. Access to the recordings will be limited to the research team working on this project. The recordings will be transcribed for analysis. The original recordings will be kept for the duration of this project and will then be destroyed. All information provided will be kept strictly confidential (unless concerns arise relating to the safety of a child). Transcriptions will be anonymous and it will not be possible to identify you from the data file. Your name and school name will never be used in any publications, presentations, or reports.

### Are there any risks involved, and who can I talk to?

Feeding children isn't easy! If you experience any distress or negative emotion while talking you can choose to turn off the recorder or terminate the interview. Your participation is voluntary and you can stop at any moment without giving a reason. If you have any concerns, don't hesitate to talk to a doctor, community nurse, dietician or a psychologist. Below are some useful contacts and resources:

#### Useful Contacts and Resources:

- [www.safefood.eu](http://www.safefood.eu) (Factsheets and advice)
- [www.healthpromotion.ie](http://www.healthpromotion.ie) (Factsheets and advice)
- [www.childfeedingguide.co.uk](http://www.childfeedingguide.co.uk) (Child feeding guide)
- [www.tusla.ie](http://www.tusla.ie) (Family support services)
- [www.indi.ie](http://www.indi.ie) (Irish Nutrition and Dietetic Institute)
- [www.psychologicalsociety.ie](http://www.psychologicalsociety.ie) (Irish Psychological Society).

Email Hazel with any questions:

[h.wolstenholmel@nuigalway.ie](mailto:h.wolstenholmel@nuigalway.ie)

If you have any concerns about this study and wish to contact someone in confidence, you may contact:

The Chairperson of the NUI Galway Research Ethics Committee, c/o Office of the Vice President for Research, NUI Galway, [ethics@nuigalway.ie](mailto:ethics@nuigalway.ie).

## Child Interview Information

## Family Food Project



Hello, my name is Hazel. I am doing a research project about families and food. Research means collecting information to find out something new. I would like to learn about how children like, or don't like different foods. I would like to hear what you think about this!

Lots of families said they would like to take part in the project. There is not enough time to talk to everyone so we randomly picked a few – including you!

If you would like to take part, I will come to your school to talk with you and some other kids in your class. We will play some games and do some activity sheets. I will ask you some questions like “Do you have a favourite dinner?” and “Do you like to help make the dinner?” Together, everything will take less than one hour, and I will talk with each person on their own for about 20 minutes.

I will record the talk on a small computer so I can remember what you said later on. No one else will hear the talk. When I tell other people about the project, I change people's names so no one knows who took part.

It is important that you know that if I am worried about you I will have to tell someone else, but I would talk to you before I talk to anyone else.

Hopefully, we'll have some fun and learn something new. This project might help other children to eat well in the future. You will also learn a bit about what it is like to do a research project.

You can decide if you want to take part. If you say “yes” now you can say “no” later on. If there are any questions you don't want to answer, or anything you don't want to do, you can just say pass.



Do you have any questions about the project? Please ask me anytime!

**Appendix H: Participant Consent/Assent Forms**



**Centre:** School of Psychology, NUI Galway  
**Researcher:** Hazel Wolstenholme  
**Title of Project:** Family Food Practices Project  
**Participant Identification Number:**

**Parent Consent Form**

**(To be completed with the researcher at the beginning of the interview)**

**Please circle:**

I confirm that I have read the information sheet dated \_\_\_\_\_ for the above study and have had the opportunity to ask questions. Yes    No

I am satisfied that I understand the information provided and have had enough time to consider the information as well as any risks and benefits associated with taking part. Yes    No

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected. Yes    No

I agree to participate in an interview as part of the above study. Yes    No

**Name:** \_\_\_\_\_ **Signed:** \_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_  
 (Parent/Guardian)

**Name:** \_\_\_\_\_ **Signed:** \_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_  
 (Researcher)

1 copy for participant, 1 copy for researcher

**Contact:**  
 Hazel Wolstenholme,  
 School of Psychology, NUI Galway  
[h.wolstenholme1@nuigalway.ie](mailto:h.wolstenholme1@nuigalway.ie)





**Centre:** School of Psychology, NUI Galway  
**Researcher:** Hazel Wolstenholme  
**Title of Project:** Family Food Practices Project  
**Parent Identification Number:**  
**Child Identification Number:**

**Parent Consent Form: Child Interview**  
 (To be completed at the end of the parent interview)

**Please Circle:**

I confirm that I have read the information sheet dated _____ for the above study and have had the opportunity to ask questions.	Yes	No
I am satisfied that I understand the information provided and have had enough time to consider the information and any risks and benefits associated with my child's participation.	Yes	No
I understand that my child's participation is voluntary, he/she will be given the option to take part, and can withdraw at any time, without giving any reason and without our legal rights being affected.	Yes	No
I agree for my child, if he/she wishes, to take part in an interview at school as part of this project.	Yes	No

**Name of Child:** \_\_\_\_\_

**Signed:** \_\_\_\_\_

(Parent/Guardian)

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Researcher:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

1 copy for parents, 1 copy for researcher

**Contact:**

Hazel Wolstenholme,  
 School of Psychology, NUI Galway  
[h.wolstenholme1@nuigalway.ie](mailto:h.wolstenholme1@nuigalway.ie)

Child Assent Form



ID: \_\_\_\_\_

## Family Food Project

- |  |                          |                          |
|--|--------------------------|--------------------------|
|  | YES                      | NO                       |
| • I understand what Hazel has told me                        | <input type="checkbox"/> | <input type="checkbox"/> |
|  | YES                      | NO                       |
| • I can ask Hazel questions if I want                        | <input type="checkbox"/> | <input type="checkbox"/> |
|  | YES                      | NO                       |
| • I know that I can put my hand up or say<br>"stop" any time | <input type="checkbox"/> | <input type="checkbox"/> |
|  | YES                      | NO                       |
| • I would like to be part of the project                     | <input type="checkbox"/> | <input type="checkbox"/> |

Child's Name: \_\_\_\_\_

Researcher's Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix I: Debriefing Letters

### Parent Debriefing Letter

#### Useful Services and Resources

If you are concerned about anything that we have talked about during the interviews, please talk to your doctor or a health nurse who may be able to refer you to a dietician, a psychologist, speech and language therapist, or another health professional depending on your needs.

Alternatively you may be able to find a suitable health professional in your area using the following websites:

<https://www.indi.ie/find-a-dietitian.html>

<http://www.psychologicalsociety.ie/find-a-psychologist/>

#### Useful websites and mobile apps include:

<http://www.safefood.eu/Healthy-Eating/Food-Diet/Life-Stages/School-children.aspx>

<http://www.childfeedingguide.co.uk/>

#### Some useful books include:

Happy Food for Happy Children, by Mark Northeast.

The Good Parenting Food Guide by Dr. Jane Ogden

## Child Debriefing Letter

Thank you for taking part in the Family Food Project, you really helped a lot!

# Family Food Project



Researcher: Hazel Wolstenholme

### What happens next?

Now that I have finished talking to lots of children about their ideas about food and eating, I will look at the information I have collected and I will write a report so other people understand more about families and food. Remember, I change everyone's names so no one knows that you took part!

### Would you like to hear more?

Next year, I can tell you about what we learned by doing this project. I will send an email for you to your parents and a letter for you to your school. I will only say things like "Most people thought that..." or "lots of people said..." and will not say anything about you or anyone else.



If you feel sad or worried about anything we talked about you might like to talk to someone you know like a teacher or parent.

You can also talk to someone in Childline, an organisation that supports children. You can call Childline for free on 1800 666 666 or talk to someone on their website [www.childline.ie](http://www.childline.ie)



## **Appendix J: Distressed Participant Protocol**

The following protocol will be used to assist participants who may become distressed during the interviews:

1. Ask the participant if they would like to take a break and if they would like to switch off the recorder.

2. In the case of child interviews, ask if they would like to talk to a familiar teacher (at school) or their parents (out of school) and if they would like to end the interview.

In the case of parent interviews ask if they would like to talk to someone (i.e. partner) or terminate the interview.

3. Ask participants if they would like me (or a teacher in the case of children) to check on them later in the day to make sure they are ok.

4. Before leaving, give the parents a list of useful services and resources as follows [See Appendix I]

**Appendix K****Additional Outputs and Dissemination Activities During the Course of this PhD**

- Wolstenholme, H. (2018). EHPS Conference Report. *The European Health Psychologist Bulletin* 20 (1) 451-453
- Wolstenholme, H. (2018). Why are some children fussy eaters and does it matter? *Nurture-Science Website* (providing independent information on health, education and parenting issues) <https://dev-ridgy-didge.co.uk/nurture-science/toddlers-3mths-18mths/toddlers-fussy-eaters/>
- Wolstenholme, H. (2017, November). “*Just Two More Bites*” *Children and their attitude towards food: Are we reducing health inequity?* Oral presentation at the Psychological Society of Ireland Annual Conference, Limerick, Ireland.
- Wolstenholme, H. (2017, May). “*Just Two More Bites*” *Children and their Attitude towards Food*. Public talk at the Psychology Society of Ireland Psychology Matters Day, Galway, Ireland.
- O’Connor, Mary. (2017, June). *Coping with Fussy Eaters*. Newspaper article covering Psychology Society of Ireland Psychology Matters Day talk in *The Galway Advertiser*