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**“Compared to what his friends eat, I think it would be perfect”: A qualitative study using the Theory of Planned Behaviour to explore parents’ perceptions of child feeding.**

## **ABSTRACT**

*Objective:* The aim of this qualitative study was to investigate the child feeding behaviours and attitudes of parents of children aged two to five years, within the Theory of Planned Behaviour (TPB) framework.

*Methods:* Semi-structured telephone interviews were conducted in October 2011. The interviewer conducted and recorded the interviews from a community health centre, to interviewees who were in their own home environment. Verbatim transcription of interviews preceded manual coding of data. Emergent themes were mapped into a matrix against a priori coded TPB constructs (attitudes, beliefs, subjective norms, perceived behavioural control and behavioural intention).

*Results:* Twenty-one from 60 consenting parents participated in interviews. Participants were predominantly tertiary educated (65%) mothers (85%) who were older than 30 years (76%). Parents believe that optimal child nutrition is important but difficult to achieve. Behavioral intention to change feeding practices is limited by a belief that child’s dietary intake is above average compared to their peer group. Perceived control over child dietary intake was influenced by food advertising, extended family and peer influences. Parents supported targeting nutrition education

directly at children and a policy approach to offset the costs of fresh foods by taxing “junk” foods.

*Conclusions and implications:* The application of TPB to child feeding may explain the disparity between parents’ child feeding intentions and behaviours. Parents’ feeding behaviors are more influenced by peers than by dietary guidelines. Future interventions need to target parents’ perceived child feeding responsibility, influence subjective norms and increase parents’ perceived control over child feeding. Peer nutrition education is proposed as an intervention model.

Key words, qualitative, theory of planned behaviour, child feeding, parent, dietary intake

## INTRODUCTION

Parents desire the best health outcomes for their children [1], and consider good nutrition to be paramount in childhood health [2]. At the same time, parents have consistently reported that feeding children a healthy, balanced diet is one of the most challenging and frustrating aspects of parenting [3].

Existing literature related to childhood nutrition is dominated by childhood obesity prevention and child obesity treatment research [4, 5]. Considerably less attention is focused on childhood diet quality for life-long health and wellbeing, or prevention of chronic diseases [5-7]. Parents use child weight status as a health barometer, so if a child is not obviously overweight, dietary change is considered unnecessary [7]. The increasing social acceptability of childhood obesity [8] and the perceived difficulty of changing child dietary intake further compound this complacency towards improved nutrition [3].

Parents are the “gate keepers” of young children’s food environment until at least the age of six years [9], after which external factors such as peer pressure start to exert more influence [10]. The extensively researched and reported barriers to optimal child feeding include poor maternal nutrition knowledge [11, 12], low maternal self-efficacy [13], authoritarian or permissive parenting styles [14, 15] and role modelling of non-core food consumption [16, 17]. The impact of food marketing [18], poor food availability [10] and a perceived lack of appropriate nutrition resources [19] compound the challenges of child feeding. Mothers and fathers have differing roles

and influences on child dietary intake [20] and different child feeding practices [21, 22].

Inadequate vegetable consumption and displacement of core foods by energy-dense nutrient poor foods are the most frequently cited dietary inadequacies of pre-school aged children [23-26]. Vegetable and “junk food” intake are also the dominant child feeding concerns of parents and are regarded as the most difficult dietary factors to change [27, 28].

Parent-focused nutrition interventions that positively impact on the child feeding practices of parents or the dietary intake of their young children are scarce [29]. Nutrition education programs that have had the most encouraging outcomes are targeted at parents of overweight children [30], are resource intensive and not transferable to whole populations [16, 29]. At a population level, reported enablers of optimal child feeding include the use of a theoretical framework for programs [19, 31], targeting parenting skills [14, 31], balancing regulation and educational components of interventions [32] and the use of a “parents as teachers” model [33].

The disparity between the desires and actual behaviours of parents relating to child feeding deserve further exploration. It is important to find out how parents benchmark child dietary intake and their own feeding practices. and to understand what prevents parents from changing their child feeding practices [10, 11, 34], despite their desire for the best health outcomes for their children.

Given that child feeding practices are difficult to change, it is possible that parents benchmark their own feeding practices and their children's dietary intake against their peers, rather than the National Dietary Guidelines for Children and Adolescents [35]. The discrepancies between intention and behaviour could be attributed to parent's beliefs that their child feeding practices are above average amongst their peer group. This may reduce their intention or motivation to change child feeding behaviour.

The Theory of Planned Behaviour (TPB) was originally developed to predict and explain human social behaviour, and to serve as a framework for behaviour change interventions [36]. In the context of the current study, the key components of the TPB were used to predict the child feeding practices or behaviours of parents. The aim of this study was to use the Theory of Planned Behaviour [36] to conduct a qualitative exploration of parents' perceptions of their child feeding practices and the dietary intake of their children.

## **METHODS**

### **Methodology and Theoretical Framework**

A qualitative methodology was chosen to analyse concepts and themes derived from an exploration of parent's perceptions about their child feeding practices. The COREQ checklist [37] was used to ensure accurate and appropriate reporting of important aspects of the research team, study methods, context of the study, findings, analysis and interpretations.

Interview questions were grouped into sets, with each relating to an element of the TPB, including:

- (1) Attitudes towards child feeding - a result of personal beliefs about feeding children and personal evaluation of children's dietary intake
- (2) Subjective norms - derived from parent's perception of what significant others think about the parents' child feeding (normative beliefs) and their motivation to comply with norms
- (3) Perceived behaviour control – parent's beliefs about the degree of control they have over child feeding
- (4) Behavioural intention – the culmination of the attitude, subjective norm, and the perceived control. Intention is assumed to be the immediate antecedent of behaviour.

The interview protocol and sequencing of questions was developed by reviewing relevant literature in the context of the TPB, and pilot testing the interview with two parents who were not part of the study. Probing and prompting suggestions were included in the interview guide to enable expansion and clarification of responses.

<Insert> Table 1 – The relationship between interview questions and elements of the Theory of Planned Behaviour

## **Participants**

Participants were recruited using purposive sampling from the Feeding Healthy Food to Kids (FHFK) preschool nutrition randomized controlled trial (RCT) cohort. The FHFK RCT was a low intensity nutrition education intervention that involved dissemination of computer-based nutrition and parenting resources to parents of children aged two to five years, the details of which have been previously described [38]. Parents who provided written consent to be re-contacted about future research studies received a written invitation to participate in the current study. Snowball sampling was used to recruit partners of consenting FHFK participants into the study, with the aim of increasing the participation rate for fathers. All consenting parents completed participant information and consent forms. Demographic information had been collected previously. Inclusion criteria were:

- Parents who had participated in the FHFK study and/or their partners
- Partners of parents who had participated in the FHFK study
- Parents raising at least one child aged between two to five years (at the commencement of the FHFK RCT)



Exclusion criteria: Child suffering from a nutrition-related health condition

Ethics approval: Approval for the study was received from the Hunter New England

Human Research Ethics Committee Reference No: 08/12/17/4.02

## **Procedure**

Semi-structured telephone interviews were conducted in September 2011 at a pre-arranged mutually suitable time for the interviewer and interviewee. All interviews were conducted by one of the research team (KD), a Community Nutritionist with extensive experience in early childhood sector, and trained by experienced researchers to conduct qualitative interviews as part of the **New South Wales Rural Research Capacity Building Program**. Interview telephone calls were initiated from a Community Health Centre, with interviewees answering the call from the naturalistic setting of their own home.

Interviewees were asked to respond to questions with particular reference to the study child, and to focus on their experiences of child feeding when their child/ren were aged two to five years. All 21 interviews were digitally recorded and sent electronically to a transcription service in a de-identified format. The transcription service transcribed each interview verbatim and returned it electronically to the researcher in a word document format. Participants were invited to review transcripts for accuracy prior to analysis, but all declined this invitation. Interview transcripts were checked for accuracy against recordings prior to analysis.

## **Data Analysis**

Cross sectional coding of transcripts was conducted by two researchers (KD, BH) to increase inter-rater reliability. A combination of inductive and deductive coding was used to populate a matrix model, with a priori codes for TPB constructs, mapped against dominant emergent theme codes that were developed as analysis progressed.

A descriptive summary of each resulting theme was then collated into a table, with supporting quotes added to provide context and evidence for the theme. Axial coding was used to further analyse sub-themes. The themes and sub-themes were cross checked with components of the Theory of Planned Behaviour, to determine the potential for application to child feeding practices of parents.

## **RESULTS**

Sixty parents provided written consent to be contacted following the FHFK RCT. Of these sixty, 25 parents consented to participate in interviews. Eighteen parents (all mothers) who had participated in FHFK completed interviews, and three fathers from these families were then recruited, resulting in a total of 21 interviews being completed. The remaining seven potential participants were unable to be interviewed in the study timeframe. There were no statistically significant differences in age or educational attainment of participants in this study compared with FHFK (Table 2).

<Insert> Table 2: Demographic profile of participants in Feeding Healthy Food to Kids qualitative interviews with a sample of participants from Feeding Healthy Food to Kids

Interview duration ranged from 24 to 45 minutes, with an average of 35 minutes.

Themes that were identified are displayed in Table 3. Four dominant themes were identified, each with several distinct sub themes.

<Insert> Table 3: Themes and sub-themes matched with Theory of Planned Behaviour components

## **Feeding Competence**

Participating parents consistently identified that the nutritional health of their children was paramount in their parenting role, regardless of whether they believed that they did a good job or struggled to feed their children a nutritious diet.

Nutrition is the main priority for me, number one (Mother of three children, three year old girl study child)

Parents were relatively confident regarding their nutrition knowledge, and believed that their sources of nutrition information were reputable. The more confident parents felt in their nutrition knowledge, the less likely to believe that they required further nutritional education.

I'm sure there's a broad spectrum of people in our community that would not have been exposed to the things that I have and therefore that (nutrition education) would be beneficial (Mother of two, two year old girl study child)

Despite believing that their nutrition knowledge was adequate, the parents appeared to have considerable difficulty in recalling or verbalising the current dietary guidelines.

Okay, oh gosh, I can't even remember to tell you the truth. (Mother of one, five year old girl study child)

Even simple nutrition messages, like the "two fruit and five veg" were not always recalled correctly by mothers or fathers.

I can recall, I mean two, one to two pieces of fruit a day, I think it's three to four serves of vegetables a day; I couldn't tell you the amount of meat, I honestly don't know. (Mother of one, five year old boy study child)

Substantial differences were noticed in parent's perceptions about suitable frequency of energy-dense, nutrient-poor food. Some parents believe that one high sugar or high fat item each week is excessive, some think it is appropriate, while other include these foods more than once a day.

I'll often slip and I'll give a sandwich and .....I might put a muesli bar in, but for the snack attack I might have a little packet of tiny teddies, and I think they're too high sugary dudes.(Mother of one, four year old boy study child)

Parents readily admitted that their own child feeding practices were not ideal, and could easily identify areas for dietary improvement. However, they consistently justified their own child feeding inadequacies by referencing these against practices of their peers, family and friends, rather than to the dietary guidelines. In doing so,

they rated their personal practices and children's dietary intake as superior to those of their peers.

I think (he eats) fairly well. I think the junk food would probably be more than what he should have, compared to that (dietary guidelines). Comparing it to what his friends eat I think it would be perfect. (Mother of three, four year old boy study child)

Participants strongly expressed opinions about the child feeding attitudes, beliefs and behaviours of other parents. These included role modelling of poor eating habits, unwillingness to change feeding habits and lack of prioritising of nutrition within family life.

If the parents have bad eating habits, they're going to struggle teaching their children anything better (Father of two, four year old girl study child)

Although parents expressed concerns about child feeding practices of other parents and dietary intake of other children, they reported feeling awkward or uncomfortable about broaching this delicate subject, especially when advice was not sought by their peers.

I have a friend whose four year old daughter doesn't eat well at all, and is quite obese, and my friend can't see it..... and I just haven't really come up with a way that I can suggest something to my friend. (Mother of two, two year old boy study child)

## **Responsibility for feeding**

All interviewed parents accepted responsibility for providing a healthy food and beverages to their children. They strongly indicated that it is a parent's role to provide a balanced diet for their children, although their child feeding and childhood nutrition priorities varied, with some parents focusing more on food and others on eating habits.

My responsibility is to expose them to foods from all of the food groups and make sure that they're all in good balance. (Mother of three, three year old girl study child)

Home-made food is a big one. I also think the opportunity to sit down and eat together as a family is a really big important thing in our household. (Mother of two, three year old girl study child)

Parents felt responsible for giving children the opportunity to try new foods, to give children a degree of choice around what they eat, to repeatedly expose children to unfamiliar foods, to role model healthy eating behaviours and to monitor child food intake.

Just encouraging them to try new things, and be consistent with it. You get on a winner eventually. (Mother of two, three year old boy study child)

A common concern of parents was that disciplined and principled child feeding practices were bordering on being too restrictive, or perceived by others as being too strict. They described their feeding practices as "freakish" or "being the food police", implying that their behaviours were abnormal in their peer group.

I've got to be the mean and nasty mum. I am probably a bit freakish over you know, what will get brought into the house and what won't be brought into the house. (Mother of two, five year old girl study child)

## **Barriers and Challenges**

The gap between child feeding ideals of parents and the actual dietary intake of their children is compounded by the barriers and challenges that parents believe to impact on child feeding behaviours. Parents reported difficulties maintaining positive parenting principles and consistently applying them in a child feeding context. It was equally challenging for parents to change their child feeding practices. Parents admitted to lacking consistency in their child feeding practices, particularly when feeling exasperated, tired or time pressured.

Sometimes it's like, "Oh, XXXX, why do I try?" I mean, I'm cooking a meal and I'm the only one sitting there eating it. It does get frustrating and it does sort of ... I'm just like, whatever. (Mother of two, four year old boy)

The most commonly reported frustration for parents was fussy eating, particularly food refusal. Participants felt there was a chasm between their responsibility as a parent to feed children well, and their capacity to translate this into actual dietary intake of children.

You feel like you're banging your head against a brick wall sometimes. ....my main experience has been frustration and not knowing how to tackle the refusal. Like I've got an idea as to what to do but when that doesn't work out

it's like well what's the next step? (Mother of two, three year old girl study child)

However, parents also reported some strategies that had worked well to improve child feeding. Positive reinforcement, consistency and role modelling to encourage healthy eating behaviours were consistently reported as pro-active and effective strategies.

I'd be chopping stuff and she'd be like "What's that" and I'd be like "Here try it, it's nice, it's capsicum". (Mother of two, five year old girl study child)

People say to me "how do you do it", and I say just be consistent with whatever it is you've got to be consistent with in your house. (Mother of six, four year old boy study child)

Covert restriction was also perceived by parents to be effective in reducing exposure to foods that parents did not want children to be eating routinely. The most common means minimising availability of energy-dense, nutrient-poor foods to children was not purchasing these foods when grocery shopping. Other reported strategies included preparing these foods only for celebrations, keeping 'sometimes' foods out of children's sight or parents consuming those foods when away from home.

If I don't want to go down the lolly aisle or the biscuit aisle then I won't go down there and I do keep those foods sort of high up in the cupboards in a non-see through lunchbox so they can't actually see what's in there (Mother of one, three year old boy study child)



In contrast with the perceived effectiveness of covert restriction, overt restriction of food was reported as being counterproductive. Participants reported that restrictive feeding often resulted in rebound overeating, especially outside the home environment.

I find that (other environments) really, really hard. Whilst I may not be happy about my children eating that, I also know that they'll stockpile because they don't get it at home. (Mother of two, four year old boy study child)

Participating parents identified children's dislike of vegetables as a major barrier to optimal child nutrition and an area that they could improve on, but struggled to change. In particular, parents reported that their motivation to change vegetable feeding practices is influenced by children's reactions to vegetables. Reasons cited for not increasing vegetables included resistance from children, the high cost of fresh foods and parent's own dislike of vegetables.

I probably cook a meal with vegetables one to two times a week. (Mother of one, four year old boy study child)

Parents also inadvertently reinforce negative messages when trying to encourage and support healthy eating habits.

So we say...have it with a bit of meat or something like that to try to mask that horrible flavour of the particular vegetable (Father of two, two year old girl study child)

The reported difficulties in encouraging vegetable consumption were balanced by the number and wide range of strategies used to increase vegetable intake. In particular,

involving children in gardening and cooking was seen as a positive strategy to broaden food variety.

I've heard other parents say that they have had trouble with vegetables but from an early age I've always tried to involve her in food preparation, and we've always had a vegie patch and always encouraged just eating straight from the vegetable patch so before you rang we were all eating parsley.

(Mother of two, three year old boy study child)

For some participants, the frustration and anxiety of child feeding was offset by the joy and pleasure participants experienced when children ate nutritious meals or tried new foods. This encouraged them to continue to try new recipes and ideas, and to pursue healthier family eating.

There's not a better feeling than knowing that you've sent your kids off with a healthy lunchbox or they've gone to bed with a really good dinner. (Mother of two, four year old girl study child)

Mainly just knowing that they've got goodness in their little tummies and the right start. (Mother of two, three year old girl study child)

Parent's level of motivation to change their feeding practices was heavily influenced by their perception of the child's health status, and by parents own health, family history and health risk.

I guess you'd have to be motivated to change the way she ate if she were to have any illness.....or if it was to be found that she was lacking in some sort of nutrient. (Mother of one, five year old girl study child)

Particularly noticeable was the high degree of awareness and concern amongst parents with a strong family history of lifestyle related diseases.

Because we've got, our family, my dad, my brother, they're all very big people and they are bigger because they eat lots of sometimes food. So I think that's why I'm so stern on what I teach my kids too because yeah, it's hereditary.

(Mother of two, two year old girl study child)

### **Environmental influences on child feeding**

In addition to the reported barriers and challenges faced by parents in feeding children, a parallel theme that emerged related to factors that the parents perceived they had little or no control over. Parents believe that extrinsic factors strongly influence child feeding and children's eating habits. Television or fast food chain advertising and supermarket promotions appeared to be strong influences on children.

I have had comments like, "Oh they look funny, we should get those" so TV does have an influence as well. (Mother of two, three year old boy study child)

In contrast with the negative perception about food advertising that influenced children, parents supported the concept of directing nutrition education and promotion at children. They provided examples of children changing their eating behaviours as a result of a particular nutrition education strategy.

If the kids saw it then it's going to combine with what they are being taught at places like long day care, and obviously it's had an impact. (Father of one, five year old girl study child)

Similarly, parents strongly communicated their support for a government approach to influencing food supply and demand by taxing 'junk foods' to offset the cost of fresh foods.

Tax the junk food and definitely make the healthier ones cheaper. Yeah, I think it's a great idea. There needs to be a government approach. It needs to come from the top down as well as the bottom up. (Mother of one, five year old girl study child)

Health promoting school policies and health education programs were perceived as having a positive influence on children's food preferences.

I think preschools do teach the kids quite a bit (about nutrition) and I think once they get to school it kind of matures them a bit more. (Mother of two, four year old girl study child)

The school eating environment was considered an equally influential factor, with participants citing examples where peers and teachers exerted a positive impact on children's food choices.

She is always asking for cheese sticks because one of her little friends has cheese sticks in her lunchbox. ...so I would say that other children are probably their influence, what they have in their lunchboxes. (Mother of two, two year old girl study child)

The influence of extended family on feeding of children varies considerably depending on the extent and nature of their involvement in caring for young children.

Shared care arrangements between separated parents also influenced children's dietary intake. Parents described both positive and negative influences of grandparents, reporting that it was difficult to dictate preferred child feeding behaviours to significant others when they are in a care giving role.

Their Nan and Pop think it's awesome when the kids come to visit and they can feed them a whole heap of crap but there's no joy in giving them foods that are crap. Well, I don't think so anyway. (Mother of two, two year old girl study child)

The ways in which parents feed their children are strongly influenced by their own parents and upbringings. In some cases, parents perceive their own upbringing, including their parents' child feeding practices as desirable and are keen to replicate them with their own children.

How I've managed that in my children's life is not really much different from how I, it was when I grew up. We didn't have processed or manufactured foods, I think probably the worst thing we had was white bread as kids but it was always lots of whole fresh food, lots of fresh fruit and veggies. (Mother of three, three year old girl study child)

However, other parents did not have pleasant experiences or memories of their own childhood eating and wanted to feed their children differently, in order to improve the dietary and nutritional health of their own children

I wouldn't do to them what my parents did to us which was that you had to eat everything on your plate. ...I think if they said they've had enough and you

know, what you've offered is healthy, I think that's, you know that's fair enough, it's a fair call. (Mother of two, three year old girl study child)

## **DISCUSSION**

Parents require considerable motivation, knowledge and skills to assimilate dietary recommendations into their child feeding practices, which in turn influences the dietary intake of their children. This study contributes to understanding the perceived role of parents in children's dietary intake, through the use of a qualitative methodology to explore parents' attitudes, beliefs and perceived control of child feeding within the TPB theoretical framework.

Although previous studies have examined the impact of intensive nutrition interventions on the dietary intake of children [23, 39] and highlighted the barriers to improving child dietary intake [3, 16], little analytic attention has focused on why parents find it difficult to change child feeding practices. In this study, we found that parents' child feeding practices were strongly influenced by the component parts of the Theory of Planned Behaviour.

### **Attitudes and beliefs**

The attitudes and beliefs of participating parents' regarding child feeding were expressed in the strength of their sense of responsibility regarding child feeding. Parents beliefs that external factors and their own upbringing influence feeding reinforce and highlight results of previous studies [3]. Food advertising directed at

children is the most commonly cited and most criticised factor [40]. However, parents also provided examples of how advertising and nutrition promotion can be used in a pro-active positive way to influence children's own food choices and preferences.

Nutrition educators already use the school setting to promote nutrition directly to children [41], but could benefit from further exploring other mediums such as appropriately targeted television and internet based nutrition promotion interventions. Both mediums are considered by parents to be suitable and effective means of supporting the nutrition messages that parents are trying to promote to children in the home environment [41-43] .

A cautious approach to television and internet-based nutrition education is warranted, given that parents in the current study believed that the internet, other parents and media are equally credible sources of nutrition information as resources developed by health professionals. These mediums are well-suited to the promotion of simple nutrition messages, which were found to be much easier to recall than dietary guidelines amongst this cohort of motivated, educated parents.

The strong support for policy level intervention relating to offsetting the cost of health foods by taxing "junk food" was unexpected. While it was expected that some parents would agree with subsidies for fresh foods, the strength of this support and willingness of parents to pay more for non-core foods is worth further exploration and consideration by policy makers.

### **Subjective Norm**

While parents believed that childhood nutrition was one of their key responsibilities as a parent, they also believed it to be one of the most challenging parenting roles. We propose that parents' lack of motivation to change their child feeding practices relate to the subjective norm for child feeding. Participants' belief was that their child feeding practices were superior to their peers, so there was no reason to comply or to change, despite their children's dietary intake not meeting the dietary guidelines.

The results of this study support previous findings that indicate an inverse relationship between motivation to change and the perceived difficulty in changing behaviours. While the challenges of child feeding were consistent with previous studies [2, 44], explaining these in the context of the TPB provides more scope to address and overcome the barriers.

### **Perceived behavioural control and Behavioural intention**

The degree of perceived control over child eating exerted by parents reflected the relative balance of positive and negative factors influencing their own child feeding experiences. The feelings of frustration and helplessness associated with fussy eating and the perceived difficulty of changing child feeding are offset to a varying extent by the sense of achievement experienced when parents feel they are providing their child with a balanced diet.

A high degree of perceived control over child feeding combined with high self efficacy amongst parents would represent an ideal formula for increasing



behavioural intention with regards to changing child feeding practices. Self efficacy is being increasingly recognised as a key facilitator of change with regards to a range of parenting behaviours [2, 13] and the link with child feeding is evident in responses from participants in this study

## **Strengths and Limitations**

Although the absolute male participant numbers were small, the male response rate was higher than in similar studies [8, 33], and in the RCT component of FHFK [38]. To further elucidate and compare the respective the child feeding experiences of mothers and fathers, interviews with more fathers of young children is warranted.

Parents who participated in the interview process could place a higher importance on healthy child feeding practices than the general population, and were of fairly high average educational attainment. Therefore study results may not accurately represent the general population. It is also possible that parents were influenced by the “halo effect”, and provided socially desirable responses. However, if the results of this study paint a “best picture” scenario, the need for further research in the field is even more important, as there is considerable room for improvement in the child feeding practices of this study cohort.

## **CONCLUSION**

Although the National Dietary Guidelines for Children and Adolescents [35] are a useful tool for nutrition educators, simply providing dietary guidelines to parents is

not enough to influence child feeding. This qualitative study has drawn attention to the need for interventions with a focus beyond aiming for adherence to the dietary guidelines, because these are not a significant reference point for childhood nutrition information for the majority of parents.

Our findings indicate that the application of the TPB to child feeding may explain the disparity between parents' child feeding intentions and actual behaviours. By identifying that parent attitudes, subjective norms and perceived child feeding control influence parental child feeding practices, this study has strengthened the knowledge base for shaping future childhood nutrition interventions.

Future interventions should capitalise on parents' sense of responsibility around child feeding and focus on influencing the subjective norms associated with child feeding in a constructive way. For example, by identifying potential peer educators from new parents' groups or antenatal classes, nutrition educators could up-skill individuals that could influence the child feeding practices of a large number of their parenting peers. If this approach could positively influence TPB constructs, the result would be increased behavioural intention to improve child feeding practices, which in turn would result in changes to actual child feeding practices of parents.

## **Abbreviations**

FHFK	Feeding Healthy Food to Kids
RCT	Randomised Controlled Trial
TPB	Theory of Planned Behaviour

**Competing interests:** There are no competing interests to declare

**Authors' contributions:** KD developed interview protocol, implemented interviews, completed data extraction and analysis and drafted the manuscript. BH completed data extraction and analysis. TB and CC participated in the design of the study, interview question preparation and helped to draft the manuscript. All authors read and approved the final manuscript.

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