Parents’ beliefs about appropriate infant growth and feeding: implications for the prevention of childhood obesity

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Abstract

Background

A number of modifiable risk factors are associated with the development of childhood obesity, in particular early feeding behaviour. However, there is little guidance as to how health professionals should assess infants and children “at risk” or what the support or intervention should be. Parental beliefs and understanding are crucial determinants of infant feeding behaviour; therefore any intervention would need to take account of this. This study aimed to explore parents’ beliefs concerning their infant's size and growth and their receptiveness to early intervention aimed at reducing the risk of childhood obesity.

Method

Focus group methodology, thematic analysis.

Results

Six focus groups were undertaken in a range of different demographic areas, in the UK, with a total of 38 participants who had an infant less than one year old. Five main themes emerged. These were a) overweight or obese women’s rationalisation for their infant’s larger size, b) parents’ understanding of breastfed infants’ growth, particularly in relation to the growth centile charts, and age-related behaviour, c) parents’ understanding of infant growth, developmental norms and feeding practices, especially in relation to weaning, d) belief that nothing can be done about overweight/obese infants and e) intentions and behaviour in relation to a healthy diet.
Conclusions

There are a number of potentially modifiable barriers to early intervention with parents of infants at risk of developing obesity. Parents are receptive to prevention prior to weaning and need better support with best practice in infant feeding. In particular, this should focus on helping them understand the physiology of breastfeeding, the rationale around weaning at 6 months and how to recognise that hunger is only one explanation for infant distress and behaviour change. However, interventions also need to help parents build upon their understanding of their own emotional capacities in relation to parenting.
Parents’ beliefs about appropriate infant growth and feeding: implications for the prevention of childhood obesity

Background

In the UK the prevalence of childhood obesity has increased significantly since 1995, [1] although there is an indication that rates have peaked and that the incidence is levelling off. The most recent rates of childhood overweight and obesity amongst 2-15 year olds are 31% for boys and 30% for girls. [1], The causes and consequences of childhood overweight and obesity have been investigated with consistent findings from large epidemiological studies indicating that risk factors can be identified in infancy or even earlier. [2-4]. The main non modifiable risk factors are birth weight (high and low), black ethnicity, parental overweight and pre-pregnant overweight or obesity, lone motherhood, smoking during pregnancy, maternal employment. [5] There is evidence that infants from more advantaged groups have a lower risk of obesity. [5] Persistent obesity from childhood through adolescence to adulthood is associated with social deprivation. [6] An infant’s weight development trajectory can also be influenced by a number of modifiable risk factors. These include parental feeding practices such as formula feeding and early weaning onto solid foods [5] and parental control over feeding practices (both low and high). [7, 8] Breastfeeding for longer than four months compared to none is associated with a decreased risk [5]. There is also a relationship between greater weight gain and infant temperament described as “frustrated” which is characterised by less sleep, excessive crying and fussiness leading parents to use food to soothe. [9]

Maternal obesity and pre-natal programming [10] are the main non-modifiable risk factors for childhood obesity. In the US a retrospective cohort study conducted on data from children (n=8494) from low income families found that maternal obesity (particularly in early pregnancy) doubled the risk of childhood obesity at 2 and 4 years old. [11] A small UK prospective cohort study (n=216) found that children of mothers with higher pre-pregnant BMI, or a larger mid-upper arm
circumference during late pregnancy, have more body fat at 9 year of age. [12] This study found that high antenatal booking weight was related to high infant birth weight. However, this study also found no evidence that excessive weight gain during pregnancy was associated with child fat mass at 9 years. [12]

Modifiable risk factors, such as less breast feeding and early weaning are often present in individuals who have non-modifiable risk factors. A prospective observational study conducted on mother-infant dyads (n=3768) in Denmark found that high maternal pre-pregnant BMI is associated with lower gestational weight gain, increased infant weight gain, less breastfeeding and earlier weaning. [13] When compared to normal weight women, overweight and obese women breast fed for shorter time periods and weaned their infants earlier. [13] This finding is endorsed by a UK study which found differences in weaning practices between breast fed and formula fed infants. Infants fed with formula milk were introduced to solid foods earlier than breast fed infants and were less likely to have consumed fruit and vegetables. [14]

Maternal feeding practices and perceptions about appropriate size and growth play an important role in the development of childhood obesity. In the US, Baughcum and colleagues [15] assessed maternal feeding practices and beliefs using feeding questionnaires for infants (n=453) and pre-school children (n=634). This research found that feeding behaviours differed between high and low income mothers. Low income mothers reported greater concern about their child’s hunger; less of a tendency to use food to calm had greater difficulty feeding their children, and admitted pushing their child to eat more and engaging in more age-inappropriate feeding. A qualitative study of 14 low income mothers with young children by the same authors reported strong beliefs that it was better to have a heavy infant because weight was the best marker of health and successful parenting. This study found that mothers used food to shape their children’s behaviours (e.g. to reward good behaviour or to calm fussiness). Obese mothers feared their infants were not getting
enough to eat which led them to start weaning earlier than recommended and used food to shape
themselves [8].

In the UK, the National Institute of Clinical Excellence [16] recommends that families of children
and young people identified as being at high risk of obesity, should be offered ongoing support from
an appropriately trained health professional. However, some UK health professionals are unaware of
this guidance and do not think primary care is an appropriate place to manage childhood obesity.
[17] Furthermore the guidance contains little reference as to how health professionals should assess
infants and children “at risk” or what the support or intervention should be. Parental beliefs and
understanding are crucial determinants of infant feeding behaviour, [8] therefore any intervention
will need to take account of this. This study aimed to explore parents’ beliefs concerning their
infant’s size and growth and their receptiveness to early intervention aimed at reducing the risk of
childhood obesity.

The objectives were:

• To explore perceptions of a ‘good and/or appropriate’ size for an infant and to identify
  possible cultural influences.

• To explore parents’ views about infants being identified as ‘at risk’ of childhood obesity by a
  health professional and to highlight potential barriers to implementation of early
  identification and prevention of obesity.

• To determine parents’ approach to weaning their infants, including food choices, food
  restrictions, and beliefs about infant feeding practices and energy balance.

Method

Sampling and recruitment
The population for this study were parents of infants under one year of age during 2008/2009. Six areas (study sites) located in two counties in the East Midlands, UK, were selected in terms of the risk of children living in those areas becoming overweight or obese, rural/urban locale, high/low ethnic groups and deprivation. Risk of overweight and obesity was determined using data for Nottingham City showing the number of children who were found to be overweight/obese in Reception and Year 6 [18] and the Index of Multiple Deprivation (IMD) (2007). [19] This was on the basis that the main risk factor for childhood overweight and obesity is social class. [11] Five study sites had high rates of childhood overweight/obesity and one study site had low rates (Table 1). Permission to undertake the multi-centre study was obtained from Nottingham Research Ethics Committee 1 and Nottinghamshire and Lincolnshire Primary Care Trusts (PCTs).

One focus group took place at each study site in the local health or children’s centre. Health visitors provided prospective participants attending child health (baby) clinic with an information pack about the study. The researcher (PA) was available during the clinic sessions leading up to the focus group session to answer questions. Parents were advised to look at the information pack at home and to contact the researcher if they had any further questions about the study.

Volunteer parents with an infant less than one year of age were recruited to the focus groups. Each group was composed of 4-9 participants; the first half of the session was facilitated by SR and the second half by PA. Notes were taken by SR/PA respectively during their observation time.

**Data collection**

The focus group sessions followed the guidelines set out by Krueger et al (1994). [20] Participants were provided with a resume of the study’s aims and objectives and given an opportunity to ask further questions prior to providing written informed consent. Participants were informed they could withdraw from the focus group at any time but, as their views would be audio-
recorded along with other participants; their data could not be erased until transcription. Participants were asked to complete a short, anonymous questionnaire detailing demographic details (by postcode) and ethnicity, information about family size, infant feeding history and maternal weight. The facilitators (SR, PA) offered parents help to complete the questionnaire, when appropriate. Each parent was provided with a set of ground rules prior to the session. The focus group facilitators were aided by a semi-structured topic guide (see Box 1). The guide was revised following each focus group as issues important to the participants emerged. Participants were encouraged to express their own views and to lead the discussion in other directions within the remit of the research topic.

INSERT BOX 1

The focus groups were audio recorded and transcribed verbatim by PA. Transcription was performed by PA immediately after each focus group to enable identification of participants. Participants were provided with an identification number on the transcribed interviews.

**Data analysis**

Two researchers (SR and PA) independently coded three of the focus group transcripts each and using an inductive approach identified key themes. The themes were compared between the two researchers and a coding framework developed. All of the transcribed focus groups were entered into NVIVO 8.0 using this coding frame which was revised as new concepts emerged. The coding frame was then explored for linked and explanatory themes (DN, NS, SR). A coding book was developed following the guidelines set out by Boyatzis (1998) [21] which comprised codes, definitions and examples. To ensure reliability of each code an independent coder matched a separate set of quotes to the codes as set out in the coding book (CG). There was 88% agreement between SR and CG. The coding frame was further revised between two coders (SR, CG). The data were then re-applied to the agreed coding frame.
Results and Discussion

Description of sample

38 participants (n=36 female, n=2 male) took part in the focus groups. Participants’ ages ranged from 19-45 years (mean 30.1 years, SD 6.28). Over half the sample were overweight (n=12) or obese (n=8). The characteristics of the parent participants are set out in Table 2.

INSERT TABLE 2

Participants all had at least one infant who was less than 12 months old (mean age 5.51 months, SD 2.73). 27 (71.1%) infants were breast fed for at least a month (mean 4.48 months, SD 2.58, range 1-10 months). A description of the family and infant characteristics is set out in Table 3.

INSERT TABLE 3

Themes

Five main themes emerged from the focus groups. These were a) rationalisation for infant’s larger size, b) parents’ understanding of breastfed infants’ growth and age-related behaviour; c) parents’ understanding of infant growth, developmental norms and feeding practices, d) belief that nothing can be done about overweight/obese infants and e) intentions and behaviour in relation to a healthy diet.

Rationalisation for infant’s larger size

Overweight and obese participants were present in the focus groups conducted in the deprived and affluent areas. This theme was exclusive to these mothers. A few of these parents believed that having a bigger infant was healthier, a finding which has been reported previously in a small US study. [8]

Running around big fatty things, they look gorgeous. Participant number 601
Although only a few parents would openly admit a preference for fatter infants, many more reported that fatter infants were preferred by older family members.

*My parents and my mother in law all think babies should be fat. Participant number 506*

There was a suggestion of shame and stigma around having an overweight or obese infant. It is possible that younger parents are more susceptible to media reports about childhood obesity and articulating a preference for a bigger infant is becoming less acceptable.

*And sometimes my friends have like you know something’s been said surreptitiously about her being a bit bigger on her tummy and I’m thinking I don’t know what you’re supposed to do. You do get hurt, you do take it personally. Participant number 601*

Parents most favoured attribution for infant overweight or obesity was family history and for those affected there was a sense of learned helplessness in relation to prevention. There is some evidence that breastfeeding protects children against the risk of obesity [22] but women who are obese themselves are less likely to breastfeed. [23]

*[Baby’s name] was nine pounds two when he was born so he was a big boy and I was told that you know when I had my twenty week scan they were like oh erm yes he’s quite a large baby and I mean my husband’s like six foot four and I’m five foot nine. Participant number 103*

**Parents’ understanding of breastfed infants’ growth and age-related behaviour**

Some mothers struggled to establish and maintain breastfeeding. Parents living in the more affluent area reported good support for breastfeeding in the form of a weekly group, but no such support was available in some of the more deprived areas.

*They’re [health professionals] pushing for breastfeeding but they’re not really giving any advice on how a baby should be breast fed. Participant number 406*
Some parents who breastfed suggested their infant’s weight did not always follow their birth line on the growth charts leading to concerns about insufficient growth.

[Child’s name] was 8lbs 3 and a half when she was born. I stopped breastfeeding cos she wasn’t putting on a bit of weight and then she just dropped and now she’s following the line which she was on. Participant number 502

Some parents believed that their breast milk supply was inadequate leading them to supplement feeding with formula milk. They suggested this decision was supported by health professionals. Other parents provided accounts of unwanted advice from health professionals to “top up” breast fed infants with formula milk, when growth was perceived to be faltering according to the charts.

I wasn’t going to give up but I was panicking every time they came expecting them to say you’re going to have to put him on formula, until the weight gained. Participant number 310

Many parents convinced themselves or were persuaded by others, including health professionals, that their infant could not be satiated by breast milk alone. This belief was apparent even in more affluent areas.

I was breastfeeding him but then I just could never produce enough milk so at fourteen weeks I had to give him a bottle because come six o’clock every night for two weeks on the trot I completely ran out of milk. Participant number 105.

Growth chart weight reference points have previously been based on norms for a mixture of breast and formula fed infants. [24, 25] The problem of a mismatch between the reference points and breast fed infants’ growth has been previously identified and new charts introduced which set breastfeeding as the norm. [26] Parents’ accounts suggest that health professionals are not always aware of the difficulties monitoring the growth of breast fed infants using the old charts. [24, 25] The Royal College of Paediatrics and Child Health have recently introduced training for health
professionals on how to use the new charts [26] but this may not yet have had an impact on parents’ experiences.

Some parents, who had ceased breastfeeding believed their infants were easier to manage on formula milk because knowledge about the amount and timing of infant feeds made them feel less anxious about unexplained infant crying.

*Sleeps from eight to eight, and I can’t complain, but I do think that the feeding we started to feed him and going from breastfeeding, you never know what they get, and as soon as I put him on formula I felt more comfortable as a parent that okay, yeah you’re having a good amount of milk I know how much you have had so I know you are not hungry when you are crying so when I started putting him to bed and he cried I thought well I know you are not hungry.* Participant number 202

**Parents’ understanding of infant growth, developmental norms and feeding practices**

Parents of premature infants had a strong desire for them to catch up to perceived norms, which was endorsed by their peers.

*He was only 2lbs 2oz when he was born so he was tiny, tiny, there was nothing to him really. He’s now seven months so he’s caught up really quickly.* Participant number 602

*He’s done really well then.* Participant number 601

*Yes he has, he’s now seven months so he’s caught up pretty, he’s caught up really quickly.* Participant number 602

There is evidence that “rapid catch up growth” can be detrimental in terms of long term health outcome for low birth weight infants. Ibanez et al (2006) [27] report that small for gestational age children, with rapid weight gain between birth and two years, experience greater central adiposity
and insulin resistance between ages 2-4 years, predisposing them to childhood overweight and obesity.

Parents preferred explanation for any changes in infant behaviour, such as “new” night waking, that occurred between 3 and 6 months was that they were unsatisfied with a milk only diet, resulting in the need to wean. Waking at night may also be due to pre-conceptual stress [28] or minor illness.

*I started to wean her because she started to wake up at night. Participant number 509*

Most parents reported weaning their infant earlier than the Department of Health’s minimum age of six months. Parents from all the study groups found the six month target difficult to achieve. Some reported that they had been advised to wean their older children at 3 or 4 months and having done so with no adverse consequences they saw no reason to treat their current infant differently.

*I know there’s more research into like the foods and the allergies and things like that but I also think it is hard when you have had a child already like you’re saying yours at four months it’s in your head isn’t it that all the others were on food at four months. Participant number 402*

Some parents tried to refrain from weaning until later. All of them reported family and peer pressure to start weaning. This was particularly evident amongst those living in the more deprived areas.

*My sister in law (name) her little baby (name) erm little girl she erm she’s been having baby rice from four months and when she said to me ’you’ve only just started her on baby rice’ and I said ’well yeah you know in the books now it doesn’t say to start weaning until six months anyway’, but she looked at me gone out, like ’oh no she’s only been milk, she’s only been fed by milk’ Participant number 201*
The majority of parents reported they believed health professionals working in all the study areas supported weaning earlier than the guidance suggested. They reported being advised by health visitors and nursery nurses that they could start weaning their infants onto baby rice and fruit at around four months but should wait until their infant was six months before feeding them more complex foods.

*My health visitor said to wean between four and six months. Participant number 203*

**Belief that nothing can be done about overweight/obese infants**

The majority of parents were happy to talk about overweight or obese infants they knew in the community but were wary of what they said in the group, possibly through fear of causing offence to other parents present.

*When I was visiting a nursery and I seen a overweight baby, baby couldn’t even move things like that and it’s a bit sad it was obviously overweight, so baby can be overweight. Participant number 204*

*I think it’s a mums own opinion whether they think their own child’s overweight. Participant number 307*

The belief that infants’ weight “levels out” at one year was almost universal and led to a view that health professionals should not be assessing infants as “at risk” and introducing management plans until after they have started physically moving around.

*I think babies can be chunky but I think you never know which way it’s going to go until they get to an age and then it’s just looking at what do you feed your child. Participant number 202*

Parents were not keen on the idea of restricting diet during infancy even for very large infants. However, they focused the quantity of the food provided rather than the possibility of changing the dietary content and quality.
Parents who perceived their infant was overweight or obese were concerned about restricting their diet.

*It should be ‘what are you feeding them’ because then diet is probably a big thing, there’s nothing you can do when they’re under one, if they’re hungry you have to feed them that’s it, I can’t see any other way round it.* Participant number 311.

Mothers who were overweight or obese themselves were quite defensive about any suggestion that their infant might be overweight or growing too quickly

*There are other things they can look at to measure, the health, the good health of the child, not just the weight, as it is these days just because of the weight, weight, weight, it’s really putting a strain on parents really.* Participant number 305

These views are barriers to earlier intervention for infants who have already been identified as “at risk” of overweight or obesity. Baughcum et al 2001 [15] found that mothers of overweight infants were much more concerned about their infants being underweight than overweight.

**Intentions and behaviour in relation to a healthy diet**

Parents believed that good eating habits start from a young age and were receptive to the idea of getting it right from the start.

*I think it should happen before weaning personally, I think that because if you get baby with bad habits, you won’t, it will be difficult to change it later.* Participant number 101

Most parents were able to articulate some of the features of a healthy weaning diet, however, there were gaps between what parents understood to be healthy and what is actually known to be healthy. Parents living in rural areas criticised the limitations of their local shops and said they had to travel some distance to find a supermarket which stocked pre-prepared organic baby foods which they perceived to be better than local fresh foods. The majority of parents gave their infants snacks.
The explanations for doing so ranged from the experience of sharing food with the parent to using snacks as a way of keeping infants going until the next meal. Parents from all areas liked the idea of a snack having its own packaging reducing the need to take cutlery and/or find a container themselves when they were away from home. Emphasis was placed on “organic” convenience food snacks.

She's having milk sort of that kind of fills in the gaps between mealtime but she also has erm the organic they're like crisps kind of finger foods that you get from the supermarket. Participant number 203

Parents wanted to do the best for their infants and some, including those on low incomes believed that to do this they should feed them expensive, organic foods. However, a recent review commissioned by the Food Standards Agency found no additional nutritional benefit associated with organic foods when compared with conventional foods. [29]

You know if you put organic one hundred percent this and if it doesn’t say one hundred percent should I not be giving it to her? And you’ve got to pay through the nose for it. Participant number 309

Some parents described how they were unable to produce home cooked foods themselves.

My parents cooked, they cooked really nice home meals but I don’t know how to do them. Participant number 203

**Strength and limitations of study**

Qualitative methods were used to understand parents’ explanations for their infants’ size, growth and diet. The results represent an underlying social reality and generate various hypotheses rather than test a single truth that is generalisable. [30] This study has revealed some of the barriers and facilitators to intervention to identify and modify risk factors for childhood obesity. An attempt was made to include study areas with high and low rates of childhood obesity in order to include parent participants whose infants may be at high and low risk. However, local and national data on
rates of childhood obesity were incomplete at the time the study was set up, therefore we cannot say with certainty that the areas selected were those where infants were at greatest risk, or in the case of one area lowest risk. Participants’ views were more homogenous than we expected which may be due to a group effect. It may also have reflected that, despite the wide sampling, personal commonalities between the participants outweighed the impact of their respective geographic locations. Participants were volunteers and we do not have details of those who were approached but did not participate. Therefore, some of the views expressed may be different from non-participants.

Both the researchers (SR, PA), who undertook the field work for the study, are qualified health visitors. The ‘health-care-professional-as-researcher’ is uniquely placed as they are already immersed in the field and have important insights into patient issues. However, they can add a significant power imbalance and raise difficulties for participants in how free they feel to be open and/or critical. [31] At the time of the study the researcher (SA, PA) were not working practising and this information was shared with the participants. This research was undertaken in areas where the researchers have never practiced and therefore could not have had a professional relationship with the parents.

**Summary and Conclusions**

This study has shown how views of appropriate infant size and growth might influence parental feeding behaviours, particularly in relation to premature and breast fed infants. The study also revealed gaps in knowledge regarding the basis of most of the best infant feeding practices, which has been previously reported. [32] Parents also perceived gaps and inconsistencies in the information they received from health professionals. The knowledge of UK health visitors, general practitioners and practice nurses in relation to infant feeding has not been reported in the recent literature; therefore it is difficult to know for certain if this is the case. Peer and family heavily influenced infant feeding choices particularly where there was parental uncertainty and/or anxiety.
There were gaps in parental understanding of infant behaviour and a common over-attribution that they are hungry may lead them to overfeed. This finding was also reported in the Baughcum study.

This study revealed a number of potentially modifiable barriers to early intervention with parents of infants at risk of developing obesity. Parents were uncertain about the management of overweight or obesity during infancy but were receptive to prevention prior to weaning. Clearly there is scope to improve infant feeding practices. Obesity prevention programmes for parents of infants under 1 year old need to provide better support for parents with best practice in infant feeding. In particular, this should focus on helping parents understand the physiology of breastfeeding, the rational around weaning at 6 months and how to recognise that hunger is only one explanation for infant distress and behaviour change. However, interventions based on knowledge deficit models [33] can only partially tackle obesity prevention. Parents lives are complex and their feeding practices may have evolved as ways of coping with difficult lives and perhaps difficult infant temperament. Interventions also need to help them build upon their understanding of their own emotional capacities in relation to parenting.

**Competing interests**

The author(s) declare they have no competing interests.

**Authors’ contributions**

SR, DN, NS, JS and CG participated in the design of the study and the funding application. SR was the Principal Investigator for this project, leading on the REC application, project management, facilitation of focus groups and data coding and interpretation, PA was the researcher who recruited the participants, co-facilitated the focus groups, transcribed the interview data and helped with the data coding, DN, NS also helped with the data coding. CG formally matched the codes to the participants’ quotes and helped with the data interpretation. All authors have contributed to drafts of this manuscript and have read and approved the final copy.
Acknowledgements

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<td>Area 6 (n=5)</td>
<td>Rural town, low minority ethnic groups/high rates of childhood obesity (1)</td>
<td>23.01 (19.85-23.01)</td>
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(1) Rates determined from IMD (2007) [19]

(2) Rates determined from PCT data [18]
Box 1 Topic Guide for Focus Group Interviews

Topic guide

Objective 1. To explore perceptions of a good and/or appropriate size for an infant and to identify possible cultural influences

Can you describe your baby’s size at birth and your thoughts about this?

How did your baby grow during the first few months of life? What are your thoughts about this?

Has anyone commented on the size of your baby? What did they say and how did you feel about this?

Has anyone’s baby grown rapidly on the growth charts? If you are happy to do so can you describe this to us.

Objective 2. To explore parents’ views about infants being identified as ‘at risk’ of childhood obesity by a health professional and to highlight potential barriers to implementation of early identification and prevention of obesity.

Has anyone’s baby been identified as “at risk” of developing childhood obesity by a health professional? How did you respond at the time? What are your thoughts about it now?

If a baby was putting on too much weight at what point do you think a health professional should talk to the parents?

How do you think parents might feel if a health professional told them their baby was growing
Table 2 Description of parent participants

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<tr>
<td>Single</td>
<td>6 (15.8%)</td>
</tr>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
</tr>
<tr>
<td>Employed full-time</td>
<td>17 (44.7%)</td>
</tr>
<tr>
<td>Employed part-time</td>
<td>12 (31.6%)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>9 (23.7%)</td>
</tr>
<tr>
<td><strong>Occupation [34]</strong></td>
<td></td>
</tr>
<tr>
<td>Managers and Senior Officials</td>
<td>3 (7.9%)</td>
</tr>
<tr>
<td>Professionals</td>
<td>5 (13.2%)</td>
</tr>
<tr>
<td>Associate Professional/Technical</td>
<td>8 (21.1%)</td>
</tr>
<tr>
<td>Admin and Secretarial</td>
<td>11 (28.9%)</td>
</tr>
<tr>
<td>Skilled Trades</td>
<td>7 (18.4%)</td>
</tr>
<tr>
<td>Sales and customer services</td>
<td>2 (5.3%)</td>
</tr>
<tr>
<td>Process, plant machinery operatives</td>
<td>1 (2.6%)</td>
</tr>
<tr>
<td>Missing response</td>
<td>1 (2.6%)</td>
</tr>
<tr>
<td><strong>Body Mass Index (kg/m²)</strong></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>26.61 (4.77)</td>
</tr>
<tr>
<td>Range</td>
<td>19.50-38.40</td>
</tr>
<tr>
<td>Number of parents who were overweight only</td>
<td>12 (31.6%)</td>
</tr>
<tr>
<td>Number of parents who were obese</td>
<td>8 (21.1%)</td>
</tr>
</tbody>
</table>
Table 3 Description of family and infant characteristics

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Number of children in family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1-5</td>
<td></td>
</tr>
<tr>
<td><strong>Age of infant (in months)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>5.51 (2.73)</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1-11</td>
<td></td>
</tr>
<tr>
<td><strong>Gender of infant</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>16 (42.1%)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22 (57.9%)</td>
<td></td>
</tr>
<tr>
<td><strong>Breast fed (at all)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>11 (28.9%)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>27 (71.1%)</td>
<td></td>
</tr>
<tr>
<td><strong>Length of time breast fed in months (n=27)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>4.48 (2.58)</td>
<td></td>
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<tr>
<td>Range</td>
<td>1-10</td>
<td></td>
</tr>
</tbody>
</table>
Additional files provided with this submission:

Additional file 1: 2009IJO01413 Decision Letter.txt, 5K
http://www.biomedcentral.com/imedia/2090197696351924/supp1.txt