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Original Article

'I know it's wrong, but . . .': a qualitative investigation of low-income parents' feelings of guilt about their child-feeding practices

Melanie Pescud and Simone Pettigrew

School of Sport Science, Exercise and Health, University of Western Australia, Perth, Western Australia, Australia

Abstract

In the developed world, child overweight and obesity rates are highest among the disadvantaged. This has resulted in calls for more research with low socio-economic families to better understand their experiences with disadvantage and how they might lead to poorer weight outcomes. The present study, conducted in Australia, adopted a qualitative approach to investigate the factors affecting low socio-economic parents' child-feeding practices. Methods used to collect data were introspections, interviews and focus groups. In total, 37 parents of overweight or obese children aged between 5 and 9 years took part in the 6-month study. Guilt emerged as an emotion that parents regularly experienced when allowing their children to consume too much food or foods high in fat, salt and/or sugar. Parents attributed their guilt-inducing child-feeding practices to both external and internal factors. Time scarcity and cost were factors that were primarily characterized by an external locus of control. The factors characterized by an internal locus of control were fear of their children experiencing hunger, the perceived need to secure their children's affection through the provision of treat foods, perceptions of their ability to balance their children's diets across eating situations and perceived laziness. Recommendations are provided for addressing guilt-inducing child-feeding practices.

Keywords: guilt, parenting, children, nutrition, child-feeding practices.

Correspondence: Ms Melanie Pescud, School of Sport Science, Exercise and Health, University of Western Australia, 35 Stirling Highway, Crawley, Perth, WA 6009, Australia. E-mail: melanie.pescud@uwa.edu.au

Introduction

In Australia, 25% of children are considered to be overweight or obese (Australian Bureau of Statistics 2009). Prevalence rates are highest among the most disadvantaged children, with 20% of low socio-economic status (SES) children being overweight and a further 12% obese, compared with 14% and 5%, respectively, among high SES children (2009). This disparity has resulted in calls for more research with low SES families to better understand their experiences with disadvantage and how these may lead to poorer weight outcomes (Turrell & Mathers 2000; Adler & Newman 2002). There is a lack of data to inform interventions targeting this group, necessitating greater efforts to include low SES families in research projects to broaden knowledge relating to their health beliefs and behaviours (Sonne-Holm *et al*. 1989; Salmon *et al*. 2006). There is also a need for effective interventions that utilize parents as agents of change (Golan 2006) given the strong influence they have on children's weights via several mechanisms including food supply, feeding practices, modelling and genetics (Whitaker & Dietz 1998; Fisher *et al*. 2002; Faith & Kerns 2005).

It is important to understand the food choices parents make for their children, as these choices influence children's eating behaviours (Birch & Fisher

1998). Several factors affecting parents' food choice for their children have been identified. These include children's preferences, parents' preferences and the importance of disease prevention (Gibson *et al*. 1998). Other studies, not specific to parents, have found that adults' food choices are largely influenced by taste, price, nutrition, convenience and weight management (American Dietetic Association 1997; Glanz *et al*. 1998).

The present study was a longitudinal exploratory investigation of the factors affecting low SES parents' child-feeding practices. Numerous individual, socio-cultural and environmental factors emerged, most of which are well recognized in the literature. An exception was parental guilt, which was evident in the data but does not appear to have been identified previously as an important aspect of parenting overweight children. Illustrating its importance, guilt clearly emerged as a significant aspect of the parents' child-feeding practices, despite it not being raised by the researchers as a discussion topic. Prior work has investigated how emotions including depression, loneliness, boredom and anger affect adults' food choices (Ganley 1989; Gibson 2006). While guilt has been shown to act as an important motivator to behaviour change in food choices adults make for themselves (Wansink & Chandon 2006), the way guilt influences parents' food choices for their children appears to have been largely unexplored. Three exceptions are Noble *et al*.'s (2005) study of motivational factors in the food buying behaviour of parents, Jackson *et al*.'s (2007) study of women's experiences of mothering overweight children and Hughes *et al*.'s (2010) study of mothers' perceptions of their overweight children's weight status. The results of these three studies are described below.

In response to a projective technique involving a scenario where a mother was seen at the supermarket after school with her two children buying them either healthy snacks or unhealthy snacks, respondents in Noble *et al*.'s study were required to provide explanations relating to the motivations behind the mother's choices. The results showed that parents viewed the mother's food decisions as being motivated by either good parenting (in the case of healthy snacks) or expediency (in the case of unhealthy snacks). Elements of good parenting included having a sense of duty, parental affection for children, quality time and education. Elements of expediency included keeping the peace, being in control, having multiple chores to complete in a timely fashion and feeling guilty.

Jackson and colleagues found that mothers of overweight and obese children felt guilty that their children were not within a healthy weight range, but although they wanted to help their children and felt partly responsible for their children's weight, they lacked knowledge of how to deal with the situation. As the study focused on experiences of parenting overweight or obese children, all the mothers were aware of their children's weight status so their discussions of guilt occurred in this context. However, it is often the case that parents of overweight children do not recognize their children's weight status (Eckstein *et al*. 2006; Hackie & Bowles 2007), so it is unclear from these results whether guilt would also be an aspect of the experiences of parents who are unaware that their children are overweight.

Hughes and colleagues found that some of the mothers in their study reported feeling guilty for passing on a perceived genetic susceptibility to obesity to their children. In addition, those who were working outside of the home felt guilty for not spending enough time with their children, which sometimes led to them overindulging their children, including acquiescing to requests for unhealthy food.

Key messages

- Investigated factors affecting low socio-economic parents' child-feeding practices.
- Guilt emerged as an emotion parents experienced when feeding their children.
- Guilt is associated with children consuming unhealthy types and quantities of food.
- Parents attributed their guilt-inducing behaviours to internal and external factors.
- Recommendations are provided for addressing the guilt-inducing behaviours.

The nature of guilt

Guilt is a type of emotional distress that occurs when individuals are aware that behaviours they have enacted are classed as transgressions by society (Amodio *et al*. 2007). Guilt can motivate actions that are reparative, such as confession and apology (Sheikh & Janoff-Bulman 2010). Guilt and cognitive dissonance are analogous concepts (Stice 1992). Cognitive dissonance occurs when an individual perceives an inconsistency between what they think and what they do, which leads to a negative intrapersonal state (e.g. guilt, embarrassment or anger) (Festinger 1957). This in turn can provide motivation to alleviate the dissonance (Elliot & Devine 1994).

Nutrition knowledge, food choices and guilt

Nutrition knowledge acts as an antecedent to healthy eating behaviours in both parents and children (Yung *et al*. 2010; Worsley 2002), and a lower prevalence of overweight in children has been found to be associated with greater parental nutrition knowledge (Variyam 2001). Among adults, nutrition knowledge has been linked with guilt, with feelings of guilt typically increasing as the healthiness of foods consumed decreases (Wansink & Chandon 2006). These feelings reflect the competing goals individuals face when making food choices where long-term health goals conflict with short-term pleasure (Kivetz & Keinan 2006; Chandon & Wansink 2007). This suggests that parents focusing on their children's short-term pleasure when selecting foods will experience more guilt than parents providing more health-enhancing foods, although data relating to this phenomenon are lacking. Given the role of guilt as a behavioural motivator, it was important to investigate the emergent role of guilt in the present study to better understand the implications for the design and implementation of child obesity interventions.

Materials and methods

Methodological approach

The study received ethics clearance from the University of Western Australia Human Research Ethics Committee. A qualitative approach was employed to investigate the factors affecting low SES children's diets and weights over a 6-month period. This approach was appropriate for a number of reasons. Qualitative methods facilitate an in-depth investigation of the subject matter (Onwuegbuzie & Leech 2005), which was important because of complex nature of the phenomena under study. Also, as the study focused on low SES families, the qualitative techniques employed were able to overcome potential literacy issues by allowing participants to provide verbal responses (Turrell & Najman 1995). In addition, personal interaction allowed relationships to develop between the researchers and participants, encouraging continued participation throughout the study (Altman 1995).

Sample

The study participants were recruited with the assistance of a social research agency. Random digit dialling from the Perth telephone directory was used to contact potential participants. The study commenced with 37 participants, reducing to 27 by the end of the 6 months. The commencing participants were 35 mothers and two fathers from different families with at least one overweight or obese child between the ages of 5 and 9 years. This age range was chosen as it is a critical period for the development of weight problems in children (American Dietetic Association 2004). Potential participants reported their children's height and weight measurements to allow body mass index (BMI) calculations to be made based on Cole *et al*.'s (2000) classifications. Once they had enrolled in the study, it was explained to participants that they were included because their children were in the BMI category corresponding to overweight or obese, although it became apparent during the study that there were varying levels of parents' understanding and acceptance of this classification. Given the need to recruit those of lower SES, potential participants were screened to ensure they had an annual household income of less than $AU60 000 [the national mean gross household income at the time was $73 300 per annum (Australian Bureau of Statistics 2008)] and did not hold a partial or completed tertiary

Table 1. Sample characteristics

Category	Description	Quantity
Gender	Women	35
	Men	2
Family structure	Dual parent families	14
	Single parent families	23
Employment status	Working full-time	6
	Working part-time	7
	Parenting full-time	24
Child gender*	Female	25
	Male	14
Child weight status*	Overweight	20
	Obese	19

*Total adds to more than 37 because some parents had more than one child in the specified age range and overweight category.

qualification. Participants were informed at the time of recruitment that they could receive up to $AU75 per month for their participation, depending on their level of involvement in the study. All study participants provided informed written consent. Table 1 provides the sample characteristics.

Data collection

Data were gathered through the use of self-introspections (Ellis 1991), individual interviews (Patton 2002) and focus groups (Fontana & Frey 1994). At the commencement of the study, the participants were asked to commit to provide fortnightly self-introspections and attend two individual interviews. They were also given the option of attending one or more focus groups over the 6 months.

Self-introspection is a reflective process that involves individuals making observations about their own thoughts, feelings and reactions to particular situations (Ellis 1991). A benefit of self-introspection is that it involves participants monitoring their own behaviours and mental processes and progressively interpreting them, thus generating more insightful data than could otherwise be obtained (Gould 1995). The participants were advised that their self-introspections could be on any topic related to child health of their choice, and could be submitted via a range of delivery mechanisms including email, a free-call telephone number, an Internet blog or hand-written notes using reply-paid envelopes. Although they originally committed to submit one introspection report every fortnight, some parents found it difficult to meet this schedule for a range of reasons (e.g. illness in the family, work commitments), and as a result submitted less frequently.

Interviews were included in the study design because they are useful for providing access to conscious, subconscious and unconscious motivations (Dichter 1964), and they allow the effects of sociocultural forces on individuals' thoughts and behaviours to be explored (Goodenough 1980; Patton 2002). In the present study, interviews were conducted with the use of semi-structured discussion guides which covered various topics relating to children's diets and weights. The study participants were able to nominate the location of the individual interviews, which were typically conducted in their homes or occasionally at their workplaces. On average, participants lived 28 km from the central business district, with a distance range of 9–56 km. Conducting the interviews at participants' homes enabled them to overcome transport limitations associated with either a lack of a private vehicle or the financial and/or time costs of using public transport.

Focus groups are valuable in generating fresh perspectives, demonstrating how groups achieve consensus, and providing a source of triangulation (Fontana & Frey 1994). In particular, the data that are accessible as a result of group dynamics are not easily obtainable through other research approaches (Morgan 1996). Small focus groups were conducted on a monthly basis with three participants who did not wish to make fortnightly introspections and instead preferred face-to-face interactions. Although these sessions had a small number of attendees, they were not considered group interviews/discussions because of the substantial interaction that occurred between the participants. In addition, two focus groups were conducted in the final weeks of the study at the university campus to explore participants' satisfaction and engagement with the study and to allow them to share their thoughts in a group context. Semi-structured discussion guides were used in the focus groups. Although all participants were invited to attend these focus groups, 12 of the final 27 parents attended.

Data

Across the various data collection activities, participants were asked to consider a range of topics related to children's diets and body weight. Examples of these included typical family meals/snacks, treat foods, school lunches and clothing sizes. Of note is that the specific issue of guilt was raised spontaneously by the participants, and discussions relating to this topic were not the result of specific prompts from the researchers.

A substantial body of data was generated over the 6-month period, including 214 introspections (97 emails, 75 blog comments, 33 handwritten notes and nine free-call messages), 57 interview transcripts and seven focus group transcripts. Of the 37 participants commencing in the study, all engaged in an initial interview and 15 participated in at least one focus group over the 6 months. At the end of the study, 27 participants remained actively involved. On average over the 6 months, participants provided six introspections. Reflecting the tendency for participants to take part in variable numbers of data collection activities, their remuneration payments ranged from $AU30 to $AU75 per month, averaging $AU71 per person per month across the data collection period.

Coding and analysis

The data were imported into NVivo9 (QSR International Pty Ltd., Melbourne, Australia) for coding and analysis. The coding framework was initially developed deductively using theoretical concepts from the literature, the items listed in the interview guide, the introspection topics and themes that emerged from the data. The coding schema was regularly updated with emergent themes and all previously coded data were recoded to relevant new themes (as per Glaser & Strauss 1967; Strauss & Corbin 1990). Both authors were involved in the design of the coding framework and interpretation of results. Interpretation was facilitated by the interrogation of the 'guilt' node (nodes are the storage points for content specific codes) and using text searches. From the guilt node stemmed the sub-nodes 'external locus of control' and 'internal locus of control' (as per Rotter 1966), to which the various guilt-inducing child-feeding practices were coded and then further separated out into the themes presented below.

Results

Parents participating in the study reported regularly experiencing guilt. Key phrases indicating the presence of guilt included: 'I know it's wrong, but . . .', 'I know it's not right, but . . .' and 'I know that's what I should do, but . . .'. The most common guilt-inducing child-feeding practices were reported to be allowing their children to consume too much food and to consume foods high in fat, salt and/or sugar. These two practices are recognized in the literature as primary nutrition-related problems in weight control (Hill & Peters 1998; Kopelman 2007). Across the sample, similar behavioural attributions were offered to explain why these guilt-inducing child-feeding practices were enacted, although in some instances guilt was expressed without any attempt at justification. Of note was that although there were varying degrees of acceptance of their children being classified as overweight or obese, all parents mentioned experiencing guilt as a result of their child-feeding practices. For those parents who also had children within the normal weight range, expressions of guilt did not appear to be limited to feeding their overweight children.

The study participants attributed their guilt-inducing child-feeding practices to factors that they perceived to be within and beyond their control. Rotter's (1966) concepts of internal and external loci of control were therefore relevant. Time scarcity and cost were factors discussed by the study participants that were primarily characterized by an external locus of control. The factors characterized by an internal locus of control were fear of their children experiencing hunger, the perceived need to secure their children's affection through the provision of treat foods, perceptions of their ability to balance their children's diets across eating situations and perceived laziness.

Table 2 lists the attributions that were most commonly invoked for the two guilt-inducing child-feeding practices, along with their locus of control classifications. A description is provided of each

Table 2. Guilt-inducing behaviours, associated behavioural attributions and locus of control

Guilt-inducing behaviour	Behavioural attribution	Locus of control
Consuming high fat/salt/sugar foods	Time scarcity	External
	Cost	External
	Fear of their children experiencing hunger	Internal
	Securing children's affection	Internal
	Dietary imbalances	Internal
	Laziness	Internal
Consuming too much food	Time scarcity	External
	Fear of their children experiencing hunger	Internal
	Dietary imbalances	Internal

behavioural attribution in the context of its relevance to specific child-feeding practices. All names used are pseudonyms.

External locus of control

Time scarcity

Participants reported that they often lacked time to complete their household duties. This was especially relevant to the tasks required to prepare the evening meal. Time scarcity appeared to be particularly relevant to parents who were employed in the workforce.

With working and trying to fit everything, it feels like I'm struggling with things. I'm beginning to rely on frozen meals a lot lately, but once again feel bad, as I'm not sure how good they are for the kids. (Zelda, single, two children, email)

I'm pretty slack with their meals and that's because working is hectic. (Yvette, single, three children, interview)

As indicated in the quote below, Nina had a basic awareness of the types of foods that are included in a healthy diet. Despite this, in her quest to save on food preparation and cooking time while also serving food that her children liked, Nina reported often serving unhealthy processed foods to her family. She rationalized this practice by generalizing it to society in general.

Zain will eat Coco Pops and Adam likes his Easy Mac pasta, they'll have that for breakfast. I know it's not the best breakfast. I did try not buying chips for them for a while, but that's become their afternoon treat, a packet of chips . . . What foods I think are the healthiest? Well besides fruit and vegetables, I would say meat. And I suppose dairy, but in little amounts. I mean, you've got your food pyramid; ours seems to be turned upside-down. We eat way more from the top end than we should do. See, we've turned into a processed society. Processed and disposable, and everything is quick and easy. (Nina, married, two children, interview)

Serving fast foods or convenience meals was considered by many participants to be an unavoidable response to time pressures. This was especially relevant when changes to routines were necessary, such as when a child was sick or someone in the family needed to attend an appointment.

My little girl has still been sick, and we've had another friend whose baby has got a pretty rare health condition and he ended up in hospital. So we've been doing quite a few trips up to Perth, to Princess Margaret Hospital after school. On the way home it's just like, "I don't want to cook. Let's just grab takeaway again." We've had quite a bit of takeaway and quick, easy meals that you can just throw in the oven, like packet meals. Even down to the packets of pasta or noodles. I know it's not the best thing, but at that point in time, it's the easiest thing. (Brenda, single, two children, free call introspection)

Cost

Although all the participants expressed a desire to provide their children with healthy foods the majority of time, most felt constrained by their finances. They felt particularly strongly about this topic and regularly lamented their frustration at not being able to afford fresh produce for their children to consume.

I try to buy good and healthy food, and sometimes I can't afford to. I'm living in a private rental (house), so that and the bills are just too much. I try to make the kids eat their fruit at school, but most of the time they don't. I try to do my best. I worry a lot about the kids' diets. (Peta, single, four children, handwritten introspection)

When you're thinking of barriers with regards to healthy diet, um finances obviously . . . unhealthy food compared to healthy food, the expense between them. (Caleb, de facto, two children, focus group)

The participants explained that in households on strict budgets, any money spent on food had to be used wisely so there was no risk of waste. Unfortunately, this often resulted in the purchase of unhealthy options to suit the food preferences of family members.

So I try to do the meat and veggie thing for Bill (husband), but we might have it with pies and stuff. Yeah, so I'm terrible (in defeated tone). I know I should try. But I would rather give them what they'll eat than waste it, because I don't have the money to buy all these things and waste it if they're not going to eat it. (Nina, married, two children, interview)

Internal locus of control

Fear of children experiencing hunger

Many of the participants in the study expressed the view that their children should not experience hunger. They felt that children should be fed as soon as they mention their desire for something to eat. Preventing hunger was generally considered to be a higher priority than ensuring their children consumed healthy foods, despite any resulting feelings of guilt.

I've been feeling guilty about passing through the drive thru and being seen by the people there and them thinking I'm a bad mother because I've passed through there so often in the last couple of weeks. I don't know what else to do. I don't have time to cook and I don't want my kid to be hungry. I'd rather he be full and happy than starving. I don't want my kid to starve, that's worse. (Brenda, single, two children, interview)

Brenda began to realize over the course of the study how overweight her 8-year-old son had become. She started to assess her own feeding practices that might be contributing to his weight gain, but although she was motivated to change, fear of her son being hungry prevented her from following through.

It's just like, "No, I definitely do need help", because like I said, it's getting to the point where I just feel like he is going to drop dead and have a heart attack at 15 because he's going to be that much overweight. People have said to me, "Just cut him off. Just stop it!" I would feel guilty if I did. I can't let my kid starve. He's hungry. (Brenda, single, two children, interview)

Participants were particularly worried that, as a result of their particular food preferences, their children would not be satiated. Some reported a refusal of their children to eat, even when they were very hungry, unless it was a food they enjoyed eating. This resulted in children being given unhealthy foods to ensure they would eat adequate quantities of food.

Yesterday I gave up and bought Froot Loops, just so they would eat something in the morning. (Katrina, single, two children, interview)

She doesn't want to eat ham. What else is there to put in a sandwich? So she just has Nutella. The poor kid – if she goes to school and I give her ham and cheese, she's going to starve all day. She's going to come home with a headache. But if I give her Nutella, she's going to eat. (Joanne, married, two children, interview)

The antecedents to participants' fears of their children going hungry were not readily apparent. However, there was some mention of participants' experiences with hunger during their childhoods due to their families' financial situations. Such early life experiences may be especially relevant among low SES families.

Crystal: Fear of a child being hungry at school, that's your fear isn't it?

Tara: Yeah, I'm constantly worried. "Are you sure you've got enough?"

Crystal: Like I said, when we were kids, we used to get one sandwich; like two slices of bread, with a bit of cheese in it if we were lucky.

Tara: I would have been lucky to get that. (Crystal, de facto, one child; Tara, single, three children, focus group)

Securing children's affection

Giving and receiving affection were powerful motivations for many participants to provide their children with unhealthy food, despite the resulting feelings of guilt.

I kind of feel guilty when I'm giving kids stuff when I know it's bad and I give it to them as a treat. (Marion, single, two children, interview)

Some of the participants recognized that it was largely their own need to receive affection from their children that resulted in the regular provision of treat foods. The most common contexts for this behaviour were while out shopping with the children or bringing treats home for them from the supermarket. This was considered a tradition in some families and therefore a difficult habit to break.

At the shops, if they come with me, they know they'll get a treat (laughs). It's expected. "Mum, can we get a treat?", "Yep you can", and I think it's my thing. It's my naughty thing, I think, because I love them. So I love to make them happy and I think that's the trap that I fall into, which is bad because I don't have to give them treats for food, you know? If I just got them some stickers, then that would be perfect. I do that so I think I'm making them happy, where it shouldn't be that at all. (Marilyn, married, three children, interview)

Researcher: Would there be anything bad about giving kids healthy food?

Carey: They won't like me.

Researcher: And what would be the worst thing about giving kids unhealthy food?

Carey: The health ramifications and I feel guilty. (Carey, married, two children, interview)

Similar to other parents in the study, both Marilyn and Carey quoted above they did not feel strong enough to deny their children the unhealthy foods they wanted to eat. Marilyn enjoyed giving her children pleasure through the use of food treats and this had now become an expected part of her shopping trips, while Carey felt that her children's affection would be withdrawn if she did not provide unhealthy foods.

Dietary imbalances

When accounting for their unhealthy child-feeding practices, some participants emphasized the healthy foods their children did eat. In their view, their children's consumption of nutritious foods justified the additional provision of unhealthy foods. It seemed that the main perceived issue with giving children treat foods was not that they would gain unwanted weight, but that it was simply unhealthy in general. This can be seen in the quote below where Cheryl felt it was appropriate to give her child liquorice because he had eaten all of his healthy dinner and therefore already consumed sufficient nutrients.

I've realised that my son has had a lot of liquorice. The thought went through my head that he shouldn't be eating so much, but my dad and I were eating liquorice at the same time. About four or five pieces each. And each time we would give Matthew one or two pieces. The reason for this is that I felt it was a bit unfair for us to eat the lollies in front of him, even though I know he had a bit more than what he should. Then I justify it because he had stuffed pork with cabbage and potatoes and ate all of it. (Cheryl, single, one child, free call introspection)

Similarly, Rachael felt guilty about the takeaway food she sometimes gave her children for breakfast. However, she justified her choice based on various nutritional attributes of the purchased meal and her actions to exclude the unhealthiest component.

Yesterday I decided because we've got no milk, we're going to go down to McDonald's and get ourselves a Bacon and Egg McMuffin. And at the last minute I felt very guilty and said, "Right, everyone give me your bacon. We're giving it to the dog!" . . . The way I saw it, the egg gave them protein, cheese gave dairy, the bread, well, that's a filler, and I was thinking, "What was the point of the bacon?". And it was just fat, so it went to the dog. (Rachael, married, three children, interview)

This tendency to focus on the perceived overall balance of their children's diets was also a means of diminishing guilt associated with the provision of large quantities of unhealthy foods at special occasions and celebrations. Christmas, Easter and birthday parties were described as especially guilt-inducing events. A way of minimizing this guilt was to restrict unhealthy food in the lead up to such occasions, thus hopefully creating a more balanced outcome overall. However, the overweight status of the children in the study suggested that strategies such as these were not successful.

I have endeavoured to keep the kids on a very strict 'no junk food until Christmas' rule. LOL! So when it comes to Christmas time I won't feel so guilty when I see them eating loads of rubbish food. (Naomi, married, three children, email introspection)

A balanced diet was often seen in terms of relativity, with participants feeling better about foods they gave their children if they perceived them as less unhealthy than other options. In the following quote, Nina explains how her reliance on peanut butter sandwiches instead of proper meals is justifiable in the face of other unhealthier foods that her children would prefer to eat.

I would try to make Zain sit here and eat something and he would gag and gag and gag, and that's why I got sick of it. I couldn't sit here and argue with Zain when he was little, and we just got so frustrated we just thought, "We'll just give you what you eat", because he'd eat it, you know? If they didn't eat what they were given I would just give them a peanut butter sandwich. I mean, at least it's a bit of protein. It's something, better than processed chips and biscuits. (Nina, married, two children, interview)

Laziness

Participants often described themselves as lazy and in search of the easiest option when explaining their children's suboptimal diets.

I've found that it's easier to go and get him a couple of Le Snaks than cut up cheese with biscuits, you know? That's just easier. It's just convenience and laziness. I just can't be bothered. It's easier. (Brenda, single, two children, interview)

I didn't cook any muffins or anything healthy this week. I've just bought the little rolls from Coles with the icing on them. Like a fruit bun (said guiltily). So they've had half of one of those in their lunchbox. But lazy. Lazy. (Carey, married, two children, interview)

Such comments about laziness contradicted their other heartfelt statements about their desire to feed their children well to ensure they were as healthy as possible. Also of note was the tendency for references to laziness to be brief and lacking in justification, while the other behavioural attributions were usually more detailed and encompassing explanations that the participants appeared to feel were adequate to account for their guilt-inducing child-feeding practices.

Discussion

The present study identified guilt as an emotion that parents may experience when allowing their children to consume too much food or foods high in fat, salt and/or sugar. The parents in the study attributed their guilt-inducing child-feeding practices to a range of external and internal factors, namely time scarcity, cost, fear of children experiencing hunger, securing children's affection, perceptions of their ability to balance their children's diets across eating situations and perceived laziness.

In the psychology literature, guilt has been shown to motivate individuals to behave in a socially acceptable manner (Amodio *et al*. 2007). The results of the present study indicate that guilt may be a relevant aspect of parenting overweight children, despite being infrequently mentioned in the child obesity literature. Rather than being motivated by guilt to change their child-feeding practices, the study participants reported continuing to provide their children with substantial quantities of unhealthy foods. This outcome may be explained by attribution theory, which explains how individuals perceive causation and react accordingly to various situations (Kelley & Michela 1980). Invoked behavioural attributions relevant to poor child-feeding practices included the abovementioned time scarcity, cost, fear of children experiencing hunger, a desire

to secure children's affection, perceptions of their ability to balance their children's diets across eating situations and perceived laziness. The latter, laziness, differed from the others as it was perceived purely in terms of self-failure rather than being the result of conflicting goals.

Together, the invoked behavioural attributions indicate that the participants may have been experiencing complex and/or subconscious forces that they were unable to appreciate or articulate, hence attributing their behaviour to laziness. They were not able to recognize that perceived laziness may at times have been the product of self-regulatory failure stemming from resource depletion (Baumeister & Heatherton 1996; Vohs & Heatherton 2000). Supporting this interpretation was the fact that even though the participants were aware that the study was about their children's diets, they sometimes talked at length about their own states of mind and personal situations. Many seemed to be deeply unhappy and often spoke disparagingly about themselves across multiple life contexts. They often described themselves as being in situations where they were exhausted, which reduced their ability to effectively parent their children. Such feelings may have resulted in them attributing their children's suboptimal diets to their own inadequacies rather than recognizing the numerous external factors that impinge on their ability to provide their children with healthy food. Not being able to identify their state of exhaustion as a manifestation or accumulation of the other identified behavioural attributions, they instead perceived themselves as lazy.

A limited number of other studies have described guilt as a cause of unhealthy child-feeding behaviours (Noble *et al*. 2005; Hughes *et al*. 2010). For example, in Noble *et al*.'s (2005) study that used a projective technique, respondents described guilt as an antecedent to the hypothetical mother giving her children unhealthy foods as a way of compensating them for an absence of affection and time due to her work commitments. Similarly, Hughes *et al*. (2010) reported that parents overindulged their children with unhealthy foods to compensate for feelings of guilt associated with not spending sufficient time with their children. While recognizing this as inappropriate parenting, the parents often attributed their suboptimal child-feeding practices to being tired and stressed. The present study similarly found that parents provided unhealthy foods to their children as a result of being tired and stressed, encapsulated in the laziness theme. A lack of time was also mentioned as a limiting factor in carrying out suboptimal child-feeding practices. However, in contrast to Noble *et al*. and Hughes *et al*.'s studies, the present study mainly identified guilt as a reaction to inappropriate child-feeding practices, not as an antecedent leading to suboptimal child-feeding practices.

The participants in the present study appeared to be able to maintain their levels of guilt below the activation threshold that would motivate them to change their child-feeding practices. This makes it difficult to motivate behavioural change because each guilt-inducing incident is inadequate on its own to generate the required intensity of cognitive dissonance. This suggests that a successful intervention might include alerting parents to the cumulative effects of specific child-feeding practices over time and how they can be detrimental to children's health (Swinburn *et al*. 2004; Clark *et al*. 2007). To prevent disempowering parents, this information could be coupled with recommendations for appropriate child-feeding practices (Birch & Ventura 2009).

The study participants seemed to have a basic understanding of the need to limit their children's consumption of foods high in fat, salt and sugar, although their definitions of appropriate limits appeared to substantially exceed current dietary recommendations. They did not, however, appear to understand the need to avoid overfeeding their children or appreciate the improvements in their children's weight status that might result from making changes to their child-feeding practices. Both issues suggest a need for more information explaining the health benefits associated with consuming a healthy diet, such as protection against cancer in adulthood (Maynard *et al*. 2003), as well as the possible negative consequences associated with poor diets, such as type 2 diabetes (Swinburn *et al*. 2004). In addressing overfeeding, parents would benefit from information explaining that this child-feeding practice can promote accelerated weight gain (Hill *et al*. 2003),

which is especially problematic for children who are already overweight.

The finding in the present study that parents can experience fear of their overweight children experiencing hunger does not appear to be widely reported in the literature, but has support in a recent study of American low SES mothers' food-related concerns (Hughes *et al*. 2010). Hughes *et al*. found that the mothers' primary concern was the alleviation of the immediate stress they felt at knowing their children were hungry, which resulted in the provision of excessive food despite their understanding that this was not optimal parenting practice. This is an area that appears to be worthy of greater research attention, as it may be especially relevant to low SES families where greater food security issues may result in parents experiencing heightened concerns about hunger.

The participants' desire to frequently give their children treat foods to secure their affection reflects the findings of previous work that has shown that food can be given to children as a sign of affection (e.g. Hill 2002). However, there appears to be a lack of recognition that parents' need to receive affection from their children may trigger the excessive provision of treat foods. There is considerable scope to add to the limited body of literature in this area, especially in terms of the best way to make parents aware of the negative physical and emotional outcomes that can result from using food for purposes other than nutrition and to satisfy hunger. These outcomes include eating in the absence of hunger, overeating and emotional eating (Birch *et al*. 1980; Puhl & Schwartz 2003).

The tendency for the study participants to believe that they are able to balance their children's diets by combining unhealthy foods with healthy foods is of concern given the outcomes in terms of total energy intake. Chernev & Gal (2010) found that when an unhealthy item such as a burger was coupled with a healthy salad, these two items together were perceived to have less energy than the burger alone. Participants in the present study appeared to be making similar judgements in relation to achieving a dietary balance. This suggests that parents may benefit from information about the implications for weight gain of merely providing more food in an effort to offset the negative effects of regularly serving unhealthy foods.

The need to convey information relating to nutrition and appropriate child-feeding practices to parents raises the issue of the best means of disseminating this information. Some health professionals are well placed to deliver this information, especially general practitioners and child health nurses who regularly interact with parents during children's early years. However, these professionals are already heavily burdened and would require additional resources to include this task in their portfolios. Inclusion of more nutrition information in existing programs, such as the successful Triple P Positive Parenting Program (Sanders *et al*. 2002), may also be effective. In addition, there is potential for the development of other relevant programs, perhaps administered through schools, to provide parents with more detailed information about appropriate child-feeding practices.

As has been found in previous research, the external factors of time scarcity and cost were relevant in the present study. Time scarcity can be a contributor to increased purchasing of convenience foods and decreased preparation of meals in the home (Videon & Manning 2003; Noble *et al*. 2007), especially among parents with low job security (Devine *et al*. 2009). Cost is recognized as a barrier to healthy eating among low SES groups due to the less affordable nature of foods recommended in nutrition guidelines (Harrison *et al*. 2007; Kettings *et al*. 2009). Time scarcity and cost are both social inequity issues, and their identification in the present study as important factors impacting child-feeding practices provides further evidence of the need for greater government and community support for low-income families (Friel *et al*. 2007; Slocum *et al*. 2011). Possible assistance strategies could include subsidies for fresh fruits and vegetables and other healthy staple products (Drewnowski & Darmon 2006; Herman *et al*. 2006).

Strengths and limitations

A limitation of the present study is the small sample comprised almost entirely of mothers. As such, the findings cannot be generalized to a wider population.

A corresponding strength, however, is the large body of rich data obtained through the varied data collection methods across a 6-month period. Further research encompassing a larger sample of parents is needed to investigate the extent of the experience of guilt and to explore potential interventions that could educate and empower parents to overcome their guilt-inducing behaviours.

Conclusion

Parents in the present study reported regularly feeling guilty about allowing their children to consume too much food and foods high in fat, salt and/or sugar. They attributed these guilt-inducing child-feeding practices to a range of external and internal factors being time scarcity, cost, fear of children experiencing hunger, a desire to secure children's affection, perceptions of their ability to balance their children's diets across eating situations and perceived laziness. Given the role of guilt as a behavioural motivator, it is valuable to understand why parents, especially those of low SES, feel guilty for engaging in feeding practices that can result in child overweight and obesity.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

Contributions

Both MP and SP took part in the collection, analysis and interpretation of the data presented in this article.

References

Adler N.E. & Newman K. (2002) Socioeconomic disparities in health: pathways and policies. *Health Affairs* **21**, 60–76.

Altman D.G. (1995) Sustaining interventions in community systems: on the relationship between researchers and communities. *Health Psychology* **14**, 526–536.

American Dietetic Association (1997) *Nutrition Trends Survey 1997*. Wirthlin Worldwide. American Dietetic Association: Chicago, IL.

American Dietetic Association (2004) Position of the American Dietetic Association: dietary guidance for healthy children ages 2 to 11 years. *Journal of the American Dietetic Association* **104**, 660–677.

Amodio D.M., Devine P.G. & Harmon-Jones E. (2007) A dynamic model of guilt. Implications for motivation and self-regulation in the context of prejudice. *Psychological Science* **18**, 524–530.

Australian Bureau of Statistics (2008) *1301.0 – Year Book Australia*. Catalogue No. 1301.0, Australian Bureau of Statistics, Canberra.

Australian Bureau of Statistics (2009) *Australian Social Trends: 4102.0 – Children Who are Overweight or Obese*. Catalogue No. 4102.0, Australian Bureau of Statistics, Canberra.

Baumeister R.F. & Heatherton T.F. (1996) Self-regulation failure: an overview. *Psychological Enquiry* **7**, 1–15.

Birch L.L. & Fisher J.O. (1998) Development of eating behaviors among children and adolescents. *Pediatrics* **101**, 539–549.

Birch L.L. & Ventura A.K. (2009) Preventing child obesity: what works? *International Journal of Obesity* **33**, S74–S81.

Birch L.L., Zimmerman S.I. & Hind H. (1980) The influence of social-affective context on the formation of children's food preferences. *Child Development* **51**, 856–861.

Chandon P. & Wansink B. (2007) The biasing health halos of fast-food restaurant health claims: lower calorie estimates and higher side-dish consumption intentions. *Journal of Consumer Research* **34**, 301–314.

Chernev A. & Gal D. (2010) Categorization effects in value judgments: averaging bias in evaluating combinations of vices and virtues. *Journal of Marketing Research* **47**, 738–747.

Clark H.R., Goyder E., Bissell P., Blank L. & Peters J. (2007) How do parents' child-feeding behaviours influence child weight? Implications for childhood obesity policy. *Journal of Public Health* **29**, 132–141.

Cole T.J., Bellizzi M.C., Flegal K.M. & Dietz W.H. (2000) Establishing a standard definition for child overweight and obesity worldwide: international survey. *British Medical Journal* **320**, 1240–1243.

Devine C.M., Farrell T.J., Blake C.E., Jastran M., Wethington E. & Bisogni C.A. (2009) Work conditions and the food choice coping strategies of employed parents. *Journal of Nutrition Education and Behavior* **41**, 365–370.

Dichter E. (1964) *Handbook of Consumer Motivations: The Psychology of the World of Objects*. McGraw-Hill Book Company: New York.

Drewnowski A. & Darmon N. (2006) Food choices and diet costs: an economic analysis. *The Journal of Nutrition* **135**, 900–904.

Eckstein K.C., Mikhail L.M., Ariza A.J., Thomson J.S., Millard S.C. & Binns H.J. (2006) Parents' perceptions of their child's weight and health. *Pediatrics* **117**, 681–690.

Elliot A.J. & Devine P.G. (1994) On the motivational nature of cognitive dissonance. Dissonance as psychological discomfort. *Journal of Personality and Social Psychology* **67**, 382–394.

Ellis C. (1991) Sociological introspection and emotional experience. *Symbolic Interaction* **14**, 23–50.

Faith M.S. & Kerns J. (2005) Infant and child feeding practices and childhood overweight: the role of restriction. *Maternal & Child Nutrition* **1**, 164–168.

Festinger L. (1957) *A Theory of Cognitive Dissonance*. Stanford University Press: Stanford, CA.

Fisher J.O., Mitchell D.C., Smiciklas-Wright H. & Birch L.L. (2002) Parental influences on young girls' fruit and vegetable, micronutrient, and fat intakes. *Journal of the American Dietetic Association* **102**, 58–64.

Fontana A. & Frey J.H. (1994) Interviewing. In: *Handbook of Qualitative Research* (eds N. Denzin & Y. Lincoln), pp 361–376. Sage Publications: Thousand Oaks, CA.

Friel S., Chopra M. & Satcher D. (2007) Unequal weight: equity oriented policy responses to the global obesity epidemic. *British Medical Journal* **335**, 1241–1243.

Ganley R.M. (1989) Emotion and eating in obesity: a review of the literature. *International Journal of Eating Disorders* **8**, 343–361.

Gibson E.L. (2006) Emotional influences on food choice: sensory, physiological and psychological pathways. *Physiology & Behavior* **89**, 53–61.

Gibson E.L., Wardle J. & Watts C.J. (1998) Fruit and vegetable consumption, nutrition knowledge and beliefs in mothers and children. *Appetite* **31**, 205–228.

Glanz K., Basil M., Maibach E., Goldberg J. & Snyder D. (1998) Why Americans eat what they do: taste, nutrition, cost, convenience, and weight control concerns as influences on food consumption. *Journal of the American Dietetic Association* **98**, 1118–1126.

Glaser B. & Strauss A. (1967) *The Discovery of Grounded Theory*. Aldine Publishing Co: Chicago, IL.

Golan M. (2006) Parents as agents of change in childhood obesity – from research to practice. *International Journal of Pediatric Obesity* **1**, 66–76.

Goodenough W.H. (1980) Ethnographic field techniques. In: *Handbook of Social Psychology* (eds H.C. Triandis & W.W. Lambert), pp 25–55. Allyn and Bacon, Inc.: Boston, MA.

Gould S.J. (1995) Researcher introspection as a method in consumer research: applications, issues, and implications. *Journal of Consumer Research* **21**, 719–722.

Hackie M. & Bowles C.L. (2007) Maternal perception of their overweight children. *Public Health Nursing* **24**, 538–546.

Harrison M.S., Coyne T., Lee A.J., Leonard D., Lowson S., Groos A. *et al*. (2007) The increasing cost of the basic foods required to promote health in Queensland. *Medical Journal of Australia* **186**, 9–14.

Herman D.R., Harrison G.G. & Jenks E. (2006) Choices made by low-income women provided with an economic supplement for fresh fruit and vegetable purchase. *Journal of the American Dietetic Association* **106**, 740–744.

Hill A.J. (2002) Developmental issues in attitudes to food and diet. *Proceedings of the Nutrition Society* **61**, 259–266.

Hill J.O. & Peters J.C. (1998) Environmental contributions to the obesity epidemic. *Science* **280**, 1371–1374.

Hill J.O., Wyatt H.R., Reed G.W. & Peters J.C. (2003) Obesity and the environment: where do we go from here? *Science* **299**, 853–855.

Hughes C.C., Sherman S.N. & Whitaker R.C. (2010) How low-income mothers with overweight preschool children make sense of obesity. *Qualitative Health Research* **20**, 465–478.

Jackson D., Wilkes L. & McDonald G. (2007) 'If I was in my daughter's body I'd be feeling devastated': women's experiences of mothering an overweight or obese child. *Journal of Child Health Care* **11**, 29–39.

Kelley H.H. & Michela J.L. (1980) Attribution theory and research. *Annual Review Psychology* **31**, 457–501.

Kettings C., Sinclair A.J. & Voevodin M. (2009) A healthy diet consistent with Australian health recommendations is too expensive for welfare-dependent families. *Australian and New Zealand Journal of Public Health* **33**, 566–572.

Kivetz R. & Keinan A. (2006) Repenting hyperopia: an analysis of self-control regrets. *Journal of Consumer Research* **33**, 273–282.

Kopelman P. (2007) Health risks associated with overweight and obesity. *Obesity Reviews* **8** (Suppl. 1), 13–17.

Maynard M., Gunnell D., Emmett P., Frankel S. & Smith G.D. (2003) Fruit, vegetables, and antioxidants in childhood and risk of adult cancer: the Boyd Orr cohort. *Journal of Epidemiology and Community Health* **57**, 218–225.

Morgan D.L. (1996) Focus groups. *Annual Review of Sociology* **22**, 129–152.

Noble G., Jones S.C. & McVie D. (2005) Motivational factors in the food buying behaviour of parents of preschool age children: a projective technique study. In: *Proceedings for the ANZMAC Conference* (ed. S. Purchase), pp 164–170. University of Western Australia: Perth.

Noble G., Stead M., Jones S., McDermott L. & McVie D. (2007) The paradoxical food buying behaviour of parents. Insights from the UK and Australia. *British Food Journal* **109**, 387–398.

Onwuegbuzie A.J. & Leech N.L. (2005) Taking the 'Q' out of research: teaching research methodology courses without the divide between quantitative and qualitative paradigms. *Quality & Quantity* **39**, 267–296.

Patton M. (2002) *Qualitative Evaluation and Research Methods*. Sage Publications: Newbury Park, CA.

Puhl R.M. & Schwartz M.B. (2003) If you are good you can have a cookie: how memories of childhood food rules link to adult eating behaviors. *Eating Behaviors* **4**, 283–293.

Rotter J.B. (1966) Some problems and misconceptions related to the construct of internal versus external control of reinforcement. *Journal of Consulting and Clinical Psychology* **74**, 243–250.

Salmon J., Campbell K.J. & Crawford D.A. (2006) Television viewing habits associated with obesity risk factors: a survey of Melbourne schoolchildren. *Medical Journal of Australia* **184**, 64–67.

Sanders M.R., Turner K.M.T. & Markie-Dadds C. (2002) The development and dissemination of the Triple P – Positive Parenting Program: a multilevel, evidence-based system of parenting and family support. *Prevention Science* **3**, 173–189.

Sheikh S. & Janoff-Bulman R. (2010) The 'shoulds' and 'should nots' of moral emotions: a self-regulatory perspective on shame and guilt. *Personality and Social Psychology Bulletin* **36**, 213–224.

Slocum R., Shannon J., Cadieux K.V. & Beckman M. (2011) Properly, with love, from scratch. *Radical History Review* **110**, 178–191.

Sonne-Holm S., Sorensen T.I.A., Jensen G. & Schnohr P. (1989) Influence of fatness, intelligence, education and sociodemographic factors on response rate in a health survey. *Journal of Epidemiology and Community Health* **43**, 369–374.

Stice E. (1992) The similarities between cognitive dissonance and guilt: confession as a relief of dissonance. *Current Psychology: Research & Reviews* **11**, 69–77.

Strauss A. & Corbin J. (1990) *Basics of Qualitative Research*. Sage Publications: Newbury Park, CA.

Swinburn B.A., Caterson I., Seidell J.C. & James W.P.T. (2004) Diet, nutrition and the prevention of excess weight gain and obesity. *Public Health Nutrition* **7**, 123–146.

Turrell G. & Mathers C.D. (2000) Socioeconomic status and health in Australia. *Medical Journal of Australia* **179**, 434–438.

Turrell G. & Najman J.M. (1995) Collecting food-related data from low socioeconomic groups: how adequate are our current research designs? *Australian Journal of Public Health* **19**, 410–416.

Variyam J.N. (2001) Overweight children: is parental nutrition knowledge a factor? *Food Review* **24**, 18–22.

Videon T.M. & Manning C.K. (2003) Influences on adolescent eating patterns: the importance of family meals. *Journal of Adolescent Health* **32**, 365–373.

Vohs K.D. & Heatherton T.F. (2000) Self-regulatory failure: a resource-depletion approach. *Psychological Science* **11**, 249–254.

Wansink B. & Chandon P. (2006) Can 'low-fat' nutrition labels lead to obesity? *Journal of Marketing Research* **43**, 605–617.

Whitaker R.C. & Dietz W.H. (1998) Role of the prenatal environment in the development of obesity. *The Journal of Pediatrics* **132**, 768–776.

Worsley A. (2002) Nutrition knowledge and food consumption: can nutrition knowledge change food behaviour? *Asia Pacific Journal of Clinical Nutrition* **11**, S579–S585.

Yung T.K.C., Lee A., Ho M.M., Keung V.M.W. & Lee J.C.K. (2010) Maternal influences on fruit and vegetable consumption of schoolchildren: a case study in Hong Kong. *Maternal & Child Nutrition* **6**, 190–198.