

The Influence on Childhood Eating Habits of Primary Caregivers: An Exploratory Study

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Abstract

The focus of this research project was to examine the ways that the primary caregiver influences childhood eating habits. Carers and children aged 8-11 years were the focus of the research. Qualitative research preceded the development of a self-completion questionnaire which was piloted before distribution through local primary schools. Stratified sampling was used to determine which local primary schools were going to be participants, and data analysis was conducted using a variety of statistical tests. Several major significant findings provide a foundation for future research. The findings show that children model their carer's snacking behaviour and the serving of meals can influence body weight. The implications from this research are that there is a need for more help and advice for carers on healthy feeding behaviours in the home.

Keywords: obesity carers 8-11 year olds social marketing

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Background

Rates of childhood obesity in developed economies have received much attention in recent years (World Health Organisation (WHO) 2006). Around 25% of Australian children are currently overweight or obese; showing that childhood obesity and its consequences is a major public health concern. Due to constant public pressure, and the threat of Government intervention, food and drink manufacturers are starting to examine fast food composition and self regulate fast foods and drinks advertising targeted at children (The Age 2008). Cumulative changes in children's food environments over the past few decades have increased the availability, appeal, affordability and consumption of low nutrient, energy-dense foods and beverages resulting in fewer children eating 'healthy alternatives'. Due to this rising epidemic and the fact that children learn eating habits from parents and peers, there is an urgent need to establish strategies regarding the way parents influence childhood eating habits (WHO 2006). With the increase in body sizes highlighted by Health Departments, the key purpose of this study is to examine the ways that the primary care giver (carer) influences childhood eating habits. Carers with children aged 8-11 were the focus of the study and were obtained through cooperation with five local primary schools on the Sunshine Coast. The influence of the carer on the eating behaviour of children is paramount in the chosen cohort and it is clear that many carers struggle to understand the behaviours which lead to childhood obesity.

Literature Review

Childhood obesity and overweight in most societies is a growing problem, and is '... one of the most serious public health challenges of the 21st century' (WHO 2006). Excess weight impacts health by contributing to respiratory difficulties, chronic musculoskeletal problems, skin problems and infertility, type 2 diabetes, types of cancers and gallbladder disease. A study conducted by WHO found approximately 58% of diabetes and 21% of heart disease globally were attributable to a BMI above 21 kg/m² (WHO 2006). In addition to the effects on society and the individual's physical health, the first consequence of overweight, perceived by children themselves, is social rejection which is linked to depression and low self esteem (Harker and Harker 2006). Overweight children progress with some certainty into overweight adults. A study by Hodges (2003) that found 77% of children (N=2617) with a body mass index greater than 95% remained obese as adults. Researchers into childhood obesity generally agree that factors relating to childhood obesity are complex, numerous, interact with each other and are susceptible to change (Livingstone 2006; Beasley, Hackett and Maxwell 2004; Hastings 2005). Obesity appears to be due to an imbalance of energy in (consumption) verses energy out (exercise), genetics, family issues and technological changes, labour saving devices that lead to a more sedentary life style (Beasley et al. 2004).

The literature posits that consumption habits are determined by sensory perception and taste (nature) and parental influence (nurture). It has been claimed that parents are the strongest influence in childhood as parents act as providers, enforcers and role models, however children's diets may also be influenced by friends, school, the media and their own tastes and preferences (Clark et al. 2007). Parents have been found to be the principle regulators of children's eating and food supply and the home environment is most influential

on children's consumption behaviours (Campbell, Crawford and Hesketh 2006). Home environmental factors include: parent's beliefs/attitudes, mother's nutrition knowledge, TV viewing/advertising, feeding styles, peer pressure and parent modelling. Much literature surrounding the bottle vs. breast debate suggests parental influence starts at birth. Work by Kries et al. (1999) shows that the occurrence of obesity in children who had never been breastfed was 2.2% higher than those who had. Further they found the protective effect of breastfeeding was not attributable to differences in social class or lifestyle and that prolonged breast feeding may help decrease the occurrence of obesity in childhood.

Savage et al. (2007) found that children's consumption choices are learnt through observing the eating behaviour of others. Children were found to imitate teachers until they were seated with peers, and then they were more influenced by peers. Some authors have suggested that parents' feeding styles are considered to impact obesity (Hastings and Henry 2007). The US study (Hastings and Henry 2007) found that consuming two meals per week in a fast food restaurant has been associated with an increase in obesity. Similarly, Harker & Harker (2006) found that foods prepared outside the home have detrimental impacts on energy and nutrient intakes. Conversely, a study by Rice, McAllister and Dhurandhar (2007) found that although there is a significant link between eating fast food and overweight, the small weight gain appears inadequate to account for the obesity epidemic.

Several studies found parents use food as rewards to encourage intake due to anxiety that children were not eating enough, or attempt to increase children's intake of healthy foods (Campbell et al. 2006; Savage et al. 2007). Research by Savage et al. (2007) found that the use of rewards had negative effects on self regulation of intake and food preference. One study found parents adopted prenatal pressure feeding (finishing all food on your plate) when they believed the child was not eating enough. Work by Sherry et al. (2004) shows that this technique threatens the child's capacity to regulate consumption and may result in overweight. Whilst Clarke et al. found pressure to eat was associated with negative response and avoidance of the food (2007), research by Savage et al. (2007) found that placing controls on foods encouraged 'junk food' consumption as children asking for permission for 'forbidden foods' consumed more when allowed, or binged. However, they also found that parental monitoring influenced child food selection and when children were allowed to choose freely, foods high in fat, salt and sugar were chosen but when told mothers would be monitoring choices, selection was healthier. The literature on controls and rewards highlights some interesting links and a gap in the research on how use of rewards and controls impact children weight.

There is much inconsistency in the literature on the relationships between childhood obesity and the factors that are related to the phenomenon, but a common indisputable fact that appears to shine through the complexity is the impact of the home environment and it is that environment and the carers who control it which is the focus of this study. The basic question guiding this study was: how do primary caregivers influence childhood eating habits? And the following propositions were developed and investigated: 1. there is a relationship between meals not eaten in the home and child Body Mass Index (BMI); 2. there is a relationship between a child's eating habits in terms of frequency of snacking, their carer's eating habits and the impacts on the child's BMI; 3. there is a relationship between a carer's eating habits and child's eating habits and the effect on BMI; and 4. there is a relationship between the control carers have on their child's eating habits and BMI.

Method

In phase one qualitative information from in-depth interviews with carers was used to guide the development of the questionnaire for phase two. Participants were recruited from mothers with varying carers' experience and different social groups, a total of 16 people were recruited and interviewed. Modelling emerged as an early theme within the interviews. Most participants were highly aware of their role as models – consciously trying to eat “unhealthy” foods away from their child and stating that having a child has resulted in an improvement in their diets. However, there were very differing views on what ‘healthy’ eating actually meant. Overall, there was a generally good understanding of healthy foods. All carers understood the need for fruit and vegetables, although many admitted to not eating enough of them. Many carers also admitted to using food as rewards, although many did not feel this was a bad thing. There was also a strong theme of carers not wanting to deprive their children of food, although they wanted to ensure that their children had experienced a wide variety of tastes. A large proportion of carers were openly cautious of making sure that their children ate enough. Within discussions, the fear of deprivation also incorporated the theme of control. Carers felt they were more able to judge the child's ‘needed’ portion size than the child themselves. Control also included what the child ate, however some carers were less authoritarian with feeding approaches, stating that they did not force their children to eat foods that they did not want to.

In phase two, the method used to gather carers' views on their eating habits and their child's eating habits was the distribution of surveys to public primary schools on the Sunshine Coast of Queensland, Australia. The survey instruments were given to the children at school to take home for their carer to complete. Stratified sampling was utilised to ensure the sample was representative of the entire population. Stratification was based on geographic areas of the Northern Sunshine Coast region as defined by Education Queensland and, in total, five schools were selected to participate in the project and another school was selected to pilot test the questionnaire. 695 surveys were distributed to these schools and data collection was conducted over a 2-3 week period and resulted in a 29% return rate, with 203 acceptable surveys to be used for analysis. Attitudinal scales were measured on a 7-point Likert-type scale. BMI was calculated for each respondent by using standards provided by the Centres for Disease Control and Prevention, USA (2008). Children were then categorised as either underweight, healthy weight, overweight or obese. Reliability and validity tests were undertaken for composite variables and were found to be within acceptable limits.

Findings

The majority of carers that responded to the survey were female (93%) and 68% of respondents were married and aged between 31-45 years old. Half of the respondents had two children, with a 50/50 split between males and females. 62% of children in this study were in the healthy weight category and almost 15% being overweight or obese according to the Body Mass Index Chart.

Food Not Cooked at Home – A Link to Obesity?

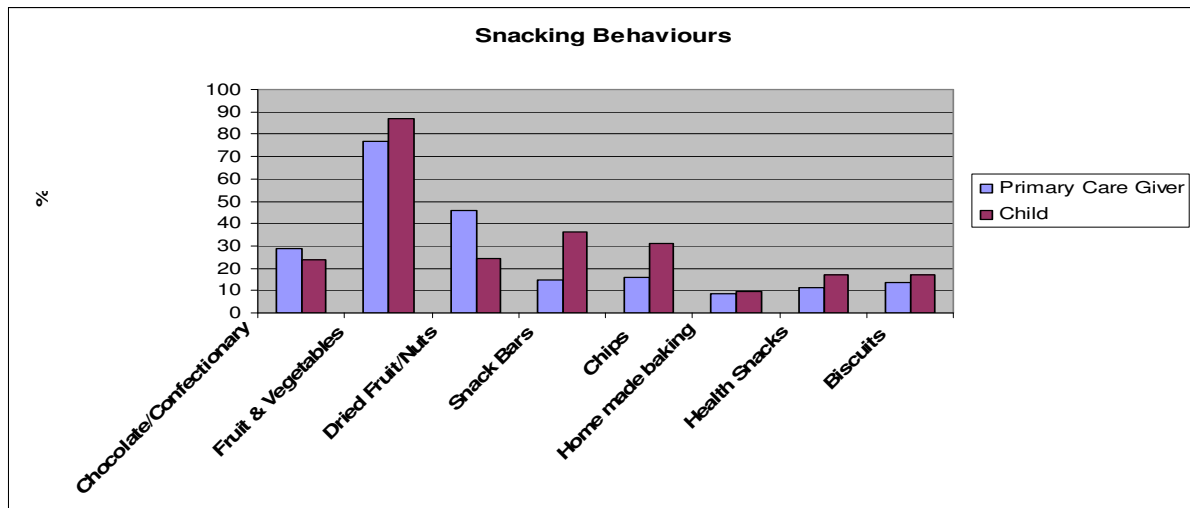
Our **first** proposition was concerned with whether there is a relationship between non home cooked meals and BMI: non home cooked meals were defined as evening meals (dinner) that were not cooked within the home, such as take away, pre-prepared meals and fast food. Results showed that there is no relationship between the numbers of non home cooked meals that children consumed and their BMI weight range $\chi^2(DF8n=203) = 3.589$

$p > .05$ Results from the contingency test showed that the predicted count and the actual count were very similar in all categories tested. Of the 103 respondents that stated that they consumed less than one non home cooked meal per week, 17 respondents or 15.9% of the children were overweight or obese. Findings also showed that 14.8% of children that consumed 2 non home cooked dinners per week, and 12.3% of children that consumed 1 non home cooked meal per week, were overweight or obese. Interestingly, the results also showed that the highest percentage of children in the healthy weight range, consumed 2 non home cooked meals per week (66.7%), closely followed by 1 non home cooked meal per week (65.8%), and 59.2% of healthy weight children consumed less than one non home cooked meal per week. Within the underweight weight range, 11% of respondents consumed 1 non home cooked meal per week, and 10.7% consumed less than 1 per week. Only 3.7% of underweight children consumed 2 non home cooked meals per week. While these findings are interesting it is important to note that they are not statistically significant.

Carer Eating Behaviour and the Influence on Their Children

Our **second** proposition examined whether there is a relationship between a child's eating habits, their carer's eating habits and the impacts on the child's BMI: children's and carers' snacking habits are related and follow a very similar in pattern when plotted against the child's weight range. The frequency of snacking was found to be higher for children compared to the carers for all weight categories (mean 2.45 children, 2.15 adults). Interestingly, obese children and their carers were found to snack less compared to the other weight categories, whereas underweight children and their carer's snacked the most. Our **third** proposition examined the relationship between carer's eating habits and child's eating habits: carers' snacking items were examined in relation to child's snacking items. All snacking items of children were significantly related to the same snacking item for carers. Thus, if carers are snacking on unhealthy items, so are children, and if carers are snacking on healthy items, so are children. Our **final** proposition was concerned with whether there is a relationship between the control carers have on their child's eating habits and BMI: control was measured by three questions: are family meals self served or pre-portioned? How often do you insist that your child eat their entire meal? What are the consequences if the entire meal is not consumed? All three questions were examined separately in relation to child's BMI. A significant relationship was found between determining serving size and BMI. Children were more likely to be obese/overweight if meals were a mixture of self served and pre-portioned (38.2% of children). 28.6% of children whose meals were self-served were obese (0% overweight) and only 12.2% of children whose meals were pre-portioned overweight/obese.

Figure 1 – Snacking Behaviours of Primary Carer Givers and Children



Discussion and Conclusions

The causes of childhood obesity are many and varied including birth weight, parental adiposity, little exercise, amount and types of food eaten, owning and watching television, the home environment and the habits of key carers (Luik 2006). There has been much worthy discussion in the literature about the influence of television advertising and fast food consumption (Hastings 2005; Hastings and Henry 2007; Livingstone 2006; Harker and Harker 2006). Another group of researchers, however, emphasise the influence of the home and carers in the obesity debate (Bolton 1983; Clark et al. 2007). This study entered the home environment to explore the influence of the primary carer in the eating habits and behaviour and body weight of dependent children. Despite the constant criticism levelled at the quick serve restaurants and their tempting but fattening offerings, this exploratory study indicates that 'eating out' does not necessarily contribute to obesity in children in the region studied. The number of non-home cooked meals did not increase with the children's weight status. In fact the children who had two non-home cooked meals per week were more likely to be in the healthy weight range than those who did not. The academic literature is silent on family consumer behaviour in the fast food and quick serve restaurants, and a research opportunity exists to improve our understanding of the what, when, where, how and why of this eating activity outside the home but still within the family context. Another activity which influences young peoples' eating behaviour is the practice of snacking by carers. As proposed, child modelling of carer's eating behaviour was strong. Both carer's snacking frequency and snacking food choice were significantly related to the child's behaviour equivalent, showing that when carers snack on unhealthy foods so do children, and if primary caregivers consume a large proportion of snacks, the behaviour is also modelled; highlighting the need for carer's food behaviours to be based around healthy lifestyles.

This study has opened the Pandora's Box of snacking behaviour in the home and the powerful influence of carers' behaviour on snacking activities of young people. Statistics show that, as children reach late teenager status the parental influence on eating behaviour declines, but what is not known is whether more healthy eating styles kick in, or whether poor snacking practices continue or are accentuated. A beginning to this discussion was provided by Beasley et al. (2004); more work needs to be done and another research opportunity exists.

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