Research report

Managing young children’s snack food intake. The role of parenting style and feeding strategies

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Abstract

One major contributor to the problem of childhood overweight and obesity is the over-consumption of foods high in fat, salt and sugar, such as snack foods. The current study aimed to examine young children’s snack intake and the influence of feeding strategies used by parents in the context of general parenting style. Participants were 611 mothers of children aged 2–7 years who completed an online questionnaire containing measures of general parenting domains and two particular feeding strategies, restriction and covert control. It was found that greater unhealthy snack intake was associated with higher restriction and lower covert control, while greater healthy snack intake was associated with lower restriction and higher covert control. Further, the feeding strategies mediated the association between parental demandingness and responsiveness and child snack intake. These findings provide evidence for the differential impact of controlling and positive parental feeding strategies on young children’s snack intake in the context of general parenting.

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Introduction

Childhood overweight and obesity is an important public health issue. In Australia, 20–25% of 2–8 year olds are currently overweight or obese (ABS, 2012). Adverse outcomes associated with childhood overweight and obesity include poorer health (Must & Strauss, 1999), slower cognitive and social development (Hesketh, Wake, & Waters, 2004; Tremblay, Inman, & Willms, 2000) and social isolation and discrimination (Stunkard & Wadden, 1992). Importantly, obesity in childhood tends to persist into adolescence and adulthood, with 67% of obese children growing up to be obese adolescents (Deshmukh-Taskar et al., 2006), and 70% of obese adolescents in turn growing up to become obese adults (Nicklas, Baranowski, Cullen, & Berenson, 2001).

While the causes of childhood obesity are complex, one of the contributing factors is the over-consumption of energy dense foods, that is, foods high in fat, salt and sugar, such as snack foods (Pearson, Salmon, Campbell, Crawford, & Timperio, 2011). Over the past three years, Australian children’s daily consumption of snack foods has increased markedly and now these foods make up about one third of their daily energy intake. As reported in the National Health Survey: Summary of results (2011–2012) on the day of the survey, cakes, biscuits, potato chips and sweetened drinks made up 30.2% of daily energy intake for children aged 2–3 years old and 37.5% of daily energy intake for children aged 4–8 years old (ABS, 2012).

Parents are mainly responsible for determining the foods that children of this age eat. In young children, parents determine which foods are offered, the portion sizes and the frequency of eating occasions (Ventura & Birch, 2008). In particular, parents are largely responsible for young children’s snack food consumption. For example, 61% of young children’s snack intake occurs within the family home, with an additional 11% consumed in the family car (CSIRO, 2012). Identifying and understanding the way in which parents manage children’s consumption of snack foods is therefore one important element in combating childhood obesity.

Parent feeding strategies

Parents are influential in shaping children’s eating behaviours, including food preferences, food consumption, general diet quality and ultimately weight status (Golan & Crow, 2004; Kral & Rauh, 2010; Pinard et al., 2012). Parental influence can be through modelling of food consumed (Brown & Ogden, 2004) and the availability and accessibility of food in the home (Cullen et al., 2003). Parents can also influence children’s eating behaviours by using deliberate feeding strategies, such as encouraging their children to eat more of some foods, keeping track of what their child eats and controlling the consumption of certain foods by restricting access to these foods (Birch & Fisher, 1998).

Previous reviews have demonstrated a relationship between particular parent feeding strategies and child eating (Faith, Scanlon,
Birch, Francis, & Sherry, 2004; Ventura & Birch, 2008). Most commonly, parental feeding has been measured by the Child Feeding Questionnaire (CFQ) developed by Fisher and Birch (2002). The CFQ produces measures of restrictive feeding, monitoring child food intake and pressuring the child to eat more of some foods. The studies reviewed consistently showed that higher restrictive feeding practices were associated with poorer child eating outcomes (e.g., the consumption of more unhealthy foods) than the other parent feeding strategies (Fisher & Birch, 1999a, 1999b, 2002; Johnson & Birch, 1994; Spruijt-Metz, Lindquist, Birch, Fisher, & Goran, 2002). As a whole, the reviews provide evidence of a negative effect of parent-restrictive feeding practices on child eating. However, one limitation to generalisation is that most samples consisted of Caucasian children living in middle-to-high socioeconomic areas in the United States.

Another different kind of limitation lies in the use of the CFQ. This measures highly controlling feeding strategies such as restricting the type and amount of certain food, using food as a reward and monitoring the intake of certain foods. Thus it neglects to examine a wider range of potential strategies that parents may use to control their child's food intake (Clark, Goyer, Bissell, Blank, & Peters, 2007). As such, it has been recommended that an expanded focus, which includes more positive practices such as modelling healthy eating and providing healthy food in the home, be used when examining the relationship between parent feeding strategies and child food intake (Hennessey, Hughes, Goldberg, Hyatt, & Economos, 2010). This is particularly necessary when examining snack intake, as snack-related parent–child interactions are likely to involve a wider range of parental behaviours across a range of situations than do meals (Brown & Ogden, 2004).

In response to the above concern, Ogden, Reynolds, and Smith (2006) categorised the different potential forms of parental control into what they termed ‘overt’ and ‘covert’ control strategies. Overt strategies include monitoring and restricting the child's food intake and are explicitly communicated between the parent and child, e.g., forbidding the child to eat sweets. As such, overt strategies are strategies that the child can easily detect. Thus, the strategies measured by the CFQ, particularly restriction, fall into this category. On the other hand, covert control consists of managing diet quality and food intake in a way that is not detected by the child. In particular, covert control taps the ways in which parents restrict the consumption of unhealthy foods and promote the consumption of healthy food by managing their child's environment, rather than directly targeting the child. For example, parents may avoid buying or having sweets or crisps in the home and avoid visiting restaurants and cafes that serve unhealthy foods.

When Ogden and colleagues investigated the association between this form of control and the snack food intake of British children (mean age = 7.4 years), they found that covert control was associated with lower intake of unhealthy snack foods. This finding has been replicated by Brown, Ogden, Vogele, and Gibson (2008) in a larger British sample. More recently, Rodenburg, Kremers, Onema, and van de Mheen (2011), in a somewhat older sample of 9-year-old Dutch children using a modified and shorter measure of covert control, found that the children of parents who used more covert strategies ate more fruit snacks and fewer unhealthy snacks. Thus, covert control may be a positive practice whereby parents take control over the kinds and quantities of foods available to their children which results in healthier food choices (Ogden et al., 2006; Wardle, Carnell, & Cooke, 2005). In addition, covert control may have a beneficial influence on children's diets and eating habits because children develop good habits, specifically around food, without any sense of deprivation or the emotional angst associated with more overt parental feeding strategies (Brown et al., 2008).

In sum, a sizable body of research documents the negative influence of overtly controlling parental feeding strategies, in particular restrictive feeding, in shaping children's eating habits. More recently research has turned to a broader conceptualisation of parent feeding strategies and this smaller body of research indicates that covert control may be a positive feeding strategy that helps to shape healthier eating habits in older children. However, the impact of this type of parental control has not yet been investigated with younger children aged 2–7 years. Yet this is the time in children's lives when parents have the most control over what they consume and when early habits that carry on into later life are likely to be formed (Skinner, Carruth, Bounds, Ziegler, & Reddy, 2002).

**General parenting style**

Like other parental behaviours, feeding strategies take place in the context of general parenting practices. As such, another body of research has emerged examining the role of general parenting styles and child health outcomes. General parenting style refers to the approach parents use to raise their child and is a function of a parent's attitudes and beliefs, creating a family emotional climate (Darling & Steinberg, 1993). The most common description of parenting style, originally described by Baumrind (1971) and later modified by Maccoby and Martin (1983), conceptualises types of parenting based on two dimensions of parental behaviour: demandingness and responsiveness to the child. Demandingness refers to setting and enforcing clear standards of behaviour, actively monitoring and supervising child activities, maintaining structure and regimen in the child’s daily life, and making demands consistent with the child's level of development. Responsiveness is characterised by the parent's acceptance and affection, providing comfort and support to the child and by their involvement in the child's academic and social development, as well as recognising the child's achievements (Jackson, Henriksen, & Foshee, 1998). Historically, general parenting style research has focused on broad child outcomes including school achievement, social adjustment, and alcohol and drug use in adolescents (Jackson et al., 1998). It is suggested that the combination of high demandingness and high responsiveness, referred to as authoritative parenting (Maccoby & Martin, 1983), is associated with better child outcomes (Cullen et al., 2003; Gable & Lutz, 2000; Steinberg, Brown, & Dornbusch, 1997).

More recently, general parenting style research has begun to investigate eating behaviours in older children and adolescents with mixed results. On the one hand, it has been found that adolescents whose parents were highly responsive ate more fruit (Kremers, Brug, de Vries, & Engels, 2003), and adolescents whose parents were both highly responsive and highly demanding ate more healthy food (Kremers et al., 2003; Pearson, Atkin, Biddle, Gorely, & Edwards, 2010). On the other hand, other studies have found no such association (De Bourdeaudhuij et al., 2009; Taylor, Wilson, Slater, & Mohr, 2011; Vereecken, Roever, & Maes, 2010). These latter studies concluded that parenting style is not sufficient to determine the dietary behaviour of school aged children and adolescents.

**General parenting, parent feeding strategies and child snack intake**

To our knowledge, only one previous study has investigated the relationships between general parenting style, parent feeding strategies and young children's snack intake. In a survey of 269 parents of Australian children aged 2–5 years old, Peters, Dollman, Petkov, and Parletta (2013) found parental restrictive feeding strategies predicted lower consumption of fruit and vegetables among children. In addition, parental demandingness and responsiveness predicted healthy snack consumption. Neither general parenting nor parent feeding strategy predicted unhealthy snack intake. However, the study did not investigate the relationship between general parenting and feeding strategies. More importantly, they included only overt controlling strategies (restriction); they did not include any
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