Appetite 73 (2014) 40–44

Contents lists available at ScienceDirect

Appetite

journal homepage: www.elsevier.com/locate/appet

Research report

Dads at the dinner table. A cross-sectional study of Australian fathers' child feeding perceptions and practices ☆

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ARTICLE INFO

Article history:
Received 8 July 2013
Received in revised form 3 October 2013
Accepted 8 October 2013
Available online 25 October 2013

Keywords:
Fathers
Child feeding practices
Controlling feeding
Childhood obesity

ABSTRACT

Maternal perceptions and practices regarding child feeding have been extensively studied in the context of childhood overweight and obesity. To date, there is scant evidence on the role of fathers in child feeding. This cross-sectional study aimed to identify whether characteristics of fathers and their concerns about their children's risk of overweight were associated with child feeding perceptions and practices. Questionnaires were used to collect data from 436 Australian fathers (mean age = 37 years, *SD* = 6) of a child (53% boys) aged between 2 and 5 years (*M* = 3.5 years, *SD* = 0.9). These data included a range of demographic variables and selected subscales from the Child Feeding Questionnaire on concern about child weight, perceived responsibility for child feeding and controlling practices (pressure to eat and restriction). Multivariable linear regression was used to examine associations between demographic variables and fathers' feeding perceptions and practices. Results indicated that fathers' who were more concerned about their child becoming overweight reported higher perceived responsibility for child feeding and were more controlling of what and how much their child eats. Greater time commitment to paid work, possessing a health care card (indicative of socioeconomic disadvantage) and younger child age were associated with fathers' perceiving less responsibility for feeding. Factors such as paternal BMI and education level, as well as child gender were not associated with feeding perceptions or practices. This study contributes to the extant literature on fathers' role in child feeding, revealing several implications for research and interventions in the child feeding field.

Introduction

The aetiology of childhood obesity is complex; genetics and prenatal factors may 'set the scene' for obesity risk (Lillycrop & Burdge, 2011), however the rapid rise in childhood obesity over the past three decades is unlikely to be explained by these factors alone. The capacity to regulate food (energy) intake to maintain energy balance is key to preventing excess weight gain. The capacity to self-regulate energy intake develops during infancy, however feeding practices that prevent the child from using hunger and satiety signals to initiate and stop eating may undermine this capacity and lead to excess energy intake and a higher child weight status (DiSantis, Hodges, Johnson, & Fisher, 2011). In particular, 'controlling' child feeding practices such as pressure and restriction (Birch & Fisher, 1998; Johnson & Birch, 1994), as well as the emotional use of food as a reward or to calm/comfort (Chan, Magarey, & Daniels, 2010), may undermine children's capacity to self-regulate their intake.

Extant research has primarily focussed on feeding practices of mothers and supports the presence of a relationship between maternal feeding practices and child eating behaviour and weight status (Birch et al., 2001; Faith et al., 2004; Webber, Cooke, Hill, & Wardle, 2010a, 2010b). Our understanding of feeding practices of fathers is acutely limited, and recent evidence suggests that this

☆ *Acknowledgements:* Funding for this study was provided in-part through a Grant from IBHI, QUT. KMM occupies the Heinz Postdoctoral Fellowship funded by HJ Heinz. Some participants included in this study were accessed from the Griffith Study of Population Health: Environments for Healthy Living (EFHL) (Australian and New Zealand Clinical Trials Registry: ACTRN12610000931077). Core funding to support EFHL is provided by Griffith University. We are thankful for the crucial contributions of the EFHL Project Manager, Ms Rani Scott, who provided significant input into the procedures which facilitated data collection of EFHL participants.

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http://dx.doi.org/10.1016/j.appet.2013.10.006

is a significant gap in current knowledge that should be addressed. A review paper on paternal influences on preschool children's weight gain, overweight and obesity suggested that fathers' parenting skills, feeding practices, weight status, and food behaviours may each impact on children's eating behaviour and weight status, independently of maternal factors (Fraser et al., 2011). For example, in a study by Johannsen, Johannsen, and Specker (2006), fathers' (n = 68), but not mothers' (n = 143) use of controlling feeding practices with children aged 3–5 years of age (mean age = 4 - years) was positively related to daughters' (but not sons') percentage body fat. Moreover, data from the Longitudinal Study of Australian Children (LSAC), a large (N = 4983) nationally representative Australian study, showed that the parenting behaviour of fathers rather than mothers was associated with the weight status of preschoolers (Wake, Nicholson, Hardy, & Smith, 2007). Paternal behavioural control (assessed as a general dimension of parenting, not specific to feeding) was inversely related to lower BMI status and permissive and disengaged parenting styles of fathers were associated with higher BMI status. The parenting styles of the mother had no association with weight status (Wake et al., 2007). The results were somewhat unexpected, yet are similar to the findings of a parenting intervention for paediatric obesity that showed fathers' but not mothers' parenting was associated with better weight loss maintenance (Stein, Epstein, Raynor, Kilanowksi, & Paluch, 2005).

The intention of the present study was to contribute to and extend the current literature on the role of fathers in child feeding. Our aim was to identify child and father demographic characteristics associated with fathers' level of perceived responsibility for child feeding and use of controlling feeding practices; specifically pressure to eat and restriction. Fathers' concern about the child becoming overweight was also considered as this variable has been positively related to the use of controlling feeding practices (Birch et al., 2001).

Method

Participants

Fathers of a child aged 2–5 years were recruited either through contacting families involved in pre-existing projects: (i) NOURISH, Queensland University of Technology (QUT) (Daniels et al., 2009) and (ii) Environments for Healthy Living [EFHL]: Griffith Study of Population Health, Griffith University (Cameron et al., 2012), or through a convenience sampling technique with QUT staff and students. No *a priori* sample size calculation was made given that the study was preliminary and designed to provide data that would suggest avenues for future research. Four hundred and thirty-six fathers returned a valid questionnaire after providing informed consent to participate. Sample characteristics are presented in Table 1. The questionnaire was made available either in hardcopy or online format. At the time of the survey NOURISH children (all of whom were the first-born child) were approximately 2–3 years old, thus in order to ensure older children (4–5 year olds) were included in the study, fathers were asked to report on the oldest child in the age group (2–5 years) if they had more than one. Overall response rate for the study could not be calculated, however the number of valid responses from each recruitment source was as follows: NOURISH, n = 75/362 (mean child age = 2.8 years, SD = 0.5); EFHL, n = 281/1269 (mean child age = 3.6 years, SD = 0.8), and QUT, n = 80 (mean child age = 3.9 years, SD = 1.0). This study was conducted in accordance with ethical approval from QUT Human Research Ethics Committee (Approval Number 1100000054).

Measures

Demographic characteristics

Data were collected via questionnaire on a number of basic demographic characteristics of the father and their oldest (biological or adopted) child aged between 2 and 5 years old (see Table 1). The child's age (years and months) and gender, as well as the number of days during an 'average' fortnight the child lived with the father were reported. Fathers also reported their age (years), relationship status (married/de factor vs single), highest level of education, hours spent in paid employment per week, and possession of a family health care card. Education and possession of a health care card were included to indicate relative socioeconomic position (SEP).

Anthropometric data

Father and child weight and height were self-reported on the questionnaire. Body Mass Index (BMI; kg/m^2) was calculated for fathers who provided both weight and height data. A substantial proportion of child anthropometric data were missing with only 239/436 fathers providing both child weight and height data. Of the data reported, some improbable values were noted (e.g., a 4 year old child: weight = 17 kg, height = 155 cm) and extreme values (>3 SD) were noted for both weight (n = 2) and height (n = 4). Furthermore, a disproportionately large number of children were reported to be exactly 100 cm tall (10.5% of valid cases). The utility and accuracy of these data were considered questionable and as such child anthropometric data are not reported here nor included in the regression analyses.

Child feeding perceptions and practices

Fathers' concern about their child becoming overweight, perceived responsibility for child feeding, and controlling feeding practices (pressure to eat and restriction) were assessed using the widely-used Child Feeding Questionnaire (CFQ; Birch et al., 2001). Concern about child weight (3 items, Cronbach's α = .64; e.g., *How concerned are you about your child becoming over weight?*) was used to assess concerns about their child becoming overweight and for the purpose of this study was treated as an independent variable. Perceived responsibility, (3 items, Cronbach's α = .89; e.g., *When your child is at home, how often are you responsible for feeding her?*) was used to assess fathers' attitudes towards their role in feeding their child. Pressure to eat (4 items, Cronbach's α = .63; e.g., *My child should always eat all of the food on her plate*) and Restriction (8 items, Cronbach's α = .54; e.g., *I have to be sure that my child does not eat too many sweets [candy, icecream, cake or pastries]*) were used to assess controlling feeding practices. These latter three subscales were treated as dependent variables in the present analyses. All items from the CFQ have a five point response scale scored from 1 (lowest) to 5 (highest). The mean score for each subscale was computed and used in the analyses.

Statistical analysis

All analyses were conducted in SPSS Version 19. Prior to analyses data were checked for errors, improbable values and univariate normality. No imputations for missing data were made – in all analyses a conservative method of listwise deletion was used. Three *a priori* defined multivariable linear regression analyses were conducted to examine variance accounted for in three subscales of the CFQ (Birch et al., 2001): (i) perceived responsibility for child feeding; (ii) pressure to eat, and (iii) restriction. In these analyses the independent variables were: child gender, child age, fathers' self-reported BMI, fathers' age, level of education (University degree: yes vs no), possession of a health care card (yes vs no; with 'yes' indicating relative socioeconomic disadvantage), hours spent