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The role of parental control practices in explaining children's diet and BMI.

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Abstract

This paper aimed to investigate which parents use which types of parenting control practices to manage their children's diets and to assess the impact of these practices on children's dietary patterns and their BMI. A cross sectional survey of 518 parents with children aged 4-7 yrs was carried out in 18 primary schools across the South of England. Measures included aspects of parental control practices and the child's diet. Results showed that older parents with a lower BMI and who were stay at home parents used more "snack overt control", "snack covert control" and "meal covert control" and those with more education used more covert control strategies. In contrast, male, non-white parents with younger children used more "pressure to eat". In terms of the children's diet, the results showed links between parental and child demographics and aspects of unhealthy and healthy food intake. In addition, links were also found for parental control practices. For example, eating more unhealthy snacks was related to less covert control and more pressure to eat, eating fruit and vegetables was related to higher levels of both overt and covert control over meals and less pressure to eat and being neophobic was related to less covert control over meals and more pressure to eat. The children's BMIs were unrelated to any variables measured in the study.

Key words: parental control, children's diets, BMI

Introduction

As a means to understand the increase in childhood obesity (Chinn and Rona, 2001; Ogden et al 1997; National Institute of Health, 1998) researchers have turned their attention to the child's home environment and have highlighted the role of parental feeding practices (Birch & Fisher, 1998; Birch & Fisher, 1995; Hecker, Martin & Martin, 1996). Central to this research has been the issue of control and the effectiveness of different approaches at controlling or managing a child's diet which is pertinent given the current availability of fast foods and unhealthy snacks. Some research has addressed the impact of control although studies have produced contradictory results. For example, Birch and colleagues have carried out a number of studies exploring the impact of control and have developed the Child Feeding Questionnaire which operationalises control in terms of monitoring, restriction and pressure to eat (CFQ; Birch et al, 2001). Birch (1999) reviewed the evidence for the impact of imposing parental control and concluded from her review that "child feeding strategies that restrict children's access to snack foods actually make the restricted foods more attractive" (Birch 1999: 11). For example, when food is made freely available children will choose more of the restricted than the unrestricted foods particularly when the mother is not present (Fisher and Birch 1999; Fisher et al. 2000). In contrast, however, some studies suggest that parental control may actually reduce weight and improve eating behaviour. For example Wardle and colleagues developed the Parental Feeding Style Questionnaire (PFSQ, Wardle et al, 2002) which operationalises control in terms of restriction and items such as "I control how many snacks my child should have". Using this measure, Wardle et al (2002) suggested that "lack of control of food intake [rather than higher control] might contribute to the emergence of differences in weight" (p. 453). Similarly, Brown and Ogden (2004) reported that greater parental control was associated with higher intakes of healthy snack foods. Furthermore, other studies indicate that parental control may have no impact in some populations (Constanzo & Woody, 1985). There are several possible explanations for these conflicting results including the use of different measures and different populations. Ogden et al (2006) argued that these

contradictory results may reflect the contradictory nature of parental control with some forms of control having beneficial effects whilst others may be detrimental. To explore this possibility, Ogden et al (2006) examined the effect of differentiating between “overt control” which can be detected by the child (eg. Being firm about how much your child should eat) and “covert control” which cannot be detected by the child (eg. Not buying unhealthy foods and bringing them into the house). This study developed a new measure of covert and overt control and showed that these different forms of control did differently predict snack food intake and that whilst higher covert control was related to decreased intake of unhealthy snacks, higher overt control predicted an increased intake of healthy snacks. This study also explored which kinds of parents tended to use either covert or overt forms of control and reported that parents with a lower BMI and those with children perceived as heavier were more likely to use covert control and those from a higher social class were more likely to use overt control (Ogden et al, 2006). This study however, focused on snack food intake only and used a fairly small sample.

The present study is therefore an extension of Ogden et al (2006) as a means to further explore the impact of parental control on children’s diets. In line with this the present study aimed to identify the demographic parental and child characteristics associated with specific parental practices with a focus on overt and covert control and pressure to eat as these have previously been linked with diet. In addition, whilst Ogden et al (2006) explored overt and covert control over snacking only, the present study included meal time control as recent research has emphasised the importance of meal times (Orrell-Valente et al, 2007). Further, whilst previous research has tended to focus on limited aspects of a child’s diet such as snacking or meal times or fruit and vegetable intake the study aimed to assess the role of aspects of parental practices on a range of dietary behaviours including snack food consumption, the intake of fruit and vegetables and neophobia (MacNicol, 2003) which can be a barrier to healthy eating. Finally, the study also aimed to explore the impact of parental practices and a child’s diet on the child’s BMI.

Method

Design

The study involved a cross sectional survey of parents of children aged 4-7 years.

Sample

A total of 18 primary and infant schools in the South of England were recruited to distribute questionnaires (n=1976) to parents of 4-7 year old children. Of these, 546 questionnaires were returned (response rate = 28%). However, 28 participants were excluded from subsequent analysis because they fell outside the targeted 4-7 year old range (n=9), or were extreme outliers on the Child BMI Standard Deviation Scores outcome measure (Cole et al, 2000), which most likely reflected reporting error (>4 (+/-) SDS; n=19). The final sample consisted of 518 participants.

Procedure

Questionnaires and explanatory covering letters were provided. Parents were instructed to complete the questionnaire specifically for the child that had given it to them and to return them either to a designated collection box in the school reception area or directly to the University. Ethical approval was obtained via the University ethics committee.

Measures

Parents were asked to complete questions relating to parent and child demographics, parental control practices and the child's diet. Data were also collected relating to the parent's own diet and both the child's and parent's physical activity levels. This data has been analysed separately and is being published elsewhere (Brown et al, submitted).

Parent and child demographics. Parents reported their own and their child's age, gender, height and weight. In addition, parents described the following: whether they were single parents (No / Yes), their ethnicity (16 item 2001 Census format used and collapsed into 2 groups 1= White British/Irish/Other & 2=All Other); highest certified educational qualification (6 item 2001 UK Census format used 1=No qualifications - 6=Degree level or above) and whether they were stay at home parents (4 items collapsed into 1=Full Time /Part Time work or Full Time education & 2=Stay at Home parent).

Parental control practices. Aspects of parental control were assessed using pre-existing scales (Ogden et al, 2006; Birch et al, 2001). Items were selected based on the highest factor loadings and those which were relevant to both snack and meal intake. Scales were created when reliability analysed by Cronbach's alpha was >0.6 . All control items were measured using 5 point Likert scales ranging from "Never" (1) to "Always"(5) or "Disagree" (1) to "Agree" (5). A higher score on each scale reflected greater use of / agreement with the control practice.

Overt control: Parental overt control is defined as forms of food control that can be detected by the child (Ogden et al, 2006). For the present study an existing measure of overt control was adjusted to reflect snack overt control and meal overt control each involving 3 items: (3 items; eg."How often are you firm about what your child should eat as a snack?" $\alpha=0.76$); (3 items; eg."How often are you firm about what your child should eat at mealtimes?" $\alpha=0.68$).

Covert control: Parental covert control is defined as forms of food control that cannot be detected by the child (Ogden et al, 2006). For the present study an existing measure of overt control was adjusted to reflect snack covert control and meal covert control) each involving 3 items: (3 items; eg."Do you avoid having snack foods such as sweets and crisps in the house?" $\alpha=.77$); (3 items; eg."Do you avoid having unhealthy foods in the house?" $\alpha=.80$).

Pressure to eat: Three items from the Child Feeding Questionnaire (CFQ, Birch et al 2001)

“pressure to eat” factor were included to measure the degree parents pressure their child to eat: (eg.”If my child says “I’m not hungry” I try to get her/him to eat anyway”; $\alpha=0.79$).

Higher scores for the control scales reflected greater overt control, greater covert control and greater pressure to eat.

Child’s diet. The child’s diet was measured in the following ways:

Unhealthy and healthy snack food intake: A food frequency questionnaire relevant to children focusing on unhealthy and healthy snacks was developed from the World Health Organisation 2001/02 protocol (Currie et al, 2001), the Inchley et al (2001) food frequency questionnaires, the seven day food diary (Gregory et al, 2000) and consumer market research report data (Intel, 2003). All selected items for unhealthy snacks were considered energy dense foods with little relative nutritional value. All healthy snacks were considered to have some nutritional value. All snack foods could be eaten in-between three daily meals and were likely to be eaten by children in the UK. Parents were asked: “On average how often does your child have a serving of the following snacks in-between their breakfast, lunchtime and evening meals? (Serving = normal portion for a child)”. The snacks were: *Unhealthy snacks foods (n=12)*: sugared squash/still soft drinks (not including fruit juice); sugared fizzy drinks; sausages, pies or burgers; chips; potato crisps; savoury snacks; ice cream; cakes/other sweet pastries; sweet biscuits; chocolate confectionery; sugared confectionery. *Healthy snacks (n=10)*: fresh fruit; dried fruit; raw vegetables and salad; fruit juice; bread sticks; rice cakes; toast; yoghurt; cereal bars; savoury biscuits. Eight point Likert scale response options were used (1=Never/<once a month; 2=<once a week; 3=once a week; 4=2-4 days a week; 5=5-6 days a week; 6=once a day, everyday; 7=2-3

times a day everyday and 8=>3 times a day everyday). Data from the items were summed and a mean score was calculated to provide an average unhealthy and healthy snack frequency score.

Fruit and vegetable intake: In addition, a single fruit and vegetable frequency item was measured: “How many portions of fruit or vegetables does your child have on an average day?”

(8 point response option ranging from None to 7+).

Neophobia: This is defined as an unwillingness to try new or novel foods and was measured using the four highest factor loading items from the MacNicol et al scale (2003) (e.g. “My child enjoys trying unusual foods”(4 items $\alpha=.88$).

Higher scores on the behaviour measures reflected greater unhealthy and healthy snack intake, greater fruit and vegetable intake and higher neophobia.

Data reduction

The data was reduced in the following ways:

1. A child BMI standard deviation score (BMI SDS, Cole et al, 2000) was created by entering parental reported child height, weight, age and gender raw data into Child Growth Foundation software (1990).
2. Parent and child BMI cut-off groups were also created (Cole et al , 2000) which are adjusted for age and gender adjusted using <2nd UK percentile to represent risk of underweight.

Data analysis

The data were analysed to describe parent and child demographics, parental control practices and the children’s diets. The role of parental and child demographics in predicting parental control practices was then assessed using Multiple linear regression analysis. Multiple block entry linear regression was then used to predict children’s diets (healthy snacks, unhealthy snacks, neophobia, fruit and vegetable intake) using parent/child demographics (block 1) and parent control practices

(block 2) as independent variables. Finally, multiple block entry linear regression was used to predict child BMI using parent characteristics (block 1), parent control practices (block 2) and child's diet (block 3) as independent variables.

Results

Parent and child demographics

Parent and child demographics are shown in Table 1.

-insert Table 1 about here -

The majority of parents were female, white and had a University or college degree. The mean age of the parent sample was 38yrs and 16% described themselves as single parents. Twenty-five percent of parents would be classified as overweight or obese. In terms of the children, the sample consisted of a similar number of boys and girls who had a mean age of 6 years. The majority of children fell into the "normal" BMI cut off group (age and gender adjusted), but 21% were overweight.

Parental control practices

The frequency that parents used each parental control practice is shown in Table 2.

-insert Table 2 about here-

According to parents, the most commonly used parental practice was overt control over both meals and snacks and covert control over meals. Just under a half of the sample reported using covert control over snacks and only a minority used pressure to eat.

Children's diet

The children's diet is shown in table 3.

-insert table 3 about here-

The results showed that over a third of the children had a high degree of neophobia, that two thirds of the children had unhealthy snacks infrequently (on average <1 week), that three quarters had healthy snacks occasionally per week, and a third had 5 or more portions of fruit and vegetables on an average day.

Predicting parental control practices

The role of child and parental demographics (parent gender, parent age, parent BMI, single parent status, parent ethnicity, parent highest certified educational qualification, stay at home parent status, child gender and child age) in predicting parental control practices was assessed using a series of multiple regression analyses. The results are shown in Table 4.

-insert Table 4 about here -

Overt control over snacks. The results showed that parent and child demographics significantly predicted snack overt control ($F(9, 423) = 2.51, R^2_{adj}=3\%$). In particular, parents were more likely to use overt control over snacks if they were older, had a lower BMI, were white and were a stay at home parent.

Overt control over meals. Parent and child demographics did not significantly predict overt control over meals. . However, this measure was particularly commonly endorsed, with 86% of the sample reporting high use of meal overt control. This resulted in a poor distribution on which to test predictive variables.

Covert control over snacks. Parents were more likely to use covert control over snacks if they were older, had a lower BMI, were more educated and were stay at home parents ($F(9, 423) = 4.06, p<0.01, R^2_{adj}=6\%$).

Covert control over meals. Parents were more likely to use covert control over meals if they were older, had a lower BMI, had a higher level of education and were stay at home parents ($F(9, 423) = 5.62, p < 0.01, R^2_{adj} = 9\%$).

Pressure to eat. Parental and child demographics significantly predicted pressure to eat ($F(9, 423) = 5.39, p < 0.01, R^2_{adj} = 8\%$). Parents were more likely to use pressure to eat to control their child's diet if they were male, non-white and their child was younger.

Predicting children's diet

Parental and child demographics (block 1) and parental control practices (block 2) were used to predict children's diets using multiple regression analysis. The results are shown in Table 5.

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Healthy snack food intake: Children ate more healthy snacks if their parents were younger, white and less educated ($F[14,418] = 3.36, p < 0.001; R^2_{adj} = 0.1$). Intake of healthy snacks was unrelated to parental control practices.

Unhealthy snack food intake: Children ate more unhealthy snacks if their parents were white, less educated, reported lower levels of snack covert control and higher levels of pressure to eat ($F[14,418] = 5.3; p < 0.001; R^2_{adj} = 0.28$).

Neophobia: Children were more likely to be neophobic if they were boys, had white parents who were more educated and if their parents used less covert control over meals and more pressure to eat ($F[14, 418] = 4.71, p < 0.01, R^2_{adj} = 11\%$).

Fruit and vegetable consumption: Children ate more portions of fruit and vegetables on an average day if their parents were white and if their parents used more overt control over meals, more covert control over meals and less pressure to eat ($F[14, 418] = 7.11, p < 0.01, R^2_{adj} = 17\%$).

Predicting child's BMI

Child BMI was used as the dependent variable. Parental demographics (block 1), parent control practices (block 2) and child's diet (block 3) were entered as the independent variables. The results are shown below in Table 6.

-insert Table 6 about here -

No significant predictive models were found at any level of the regression (Model 3 $F(15, 305) = 1.08, p = 0.37, R^2_{adj} = 0\%$).

Discussion

The present study aimed to explore parental control practices and their impact on children's diet and BMI. In terms of the frequency of parental control practices the results showed that the most commonly used approaches were overt control over both meals and snacks and covert control over meals. Previous research indicated that parents believe restricting a child's diet can improve and change food preferences (eg. Casey and Rozin, 1989). The results from the current study support this and illustrates that such control practices are wide spread and central to how parents manage their children's diets. The results also illustrate how the different types of parental control strategies described in the literature (eg. Birch et al, 2001; Wardle et al, 2002; Ogden et al, 2006) are used by different types of parents.

In terms of which parents use which parental control strategies, the results showed that a similar profile of parent tended to use either overt or covert control. In particular, those who were older, had a lower BMI and were stay at home parents were more likely to use overt control over snacks

and covert control over both snacks and meals. Those who were white were more likely to use overt control over snacks and those with more education were more likely to use any form of covert control. These results provide some support for previous research which has described the different uses of both covert and overt control by parents (Ogden et al, 2006). The results also illustrate that although there is much consistency across the different types of control, parents with more education tend to use covert rather than overt control practices. In contrast, however, those who use “pressure to eat” as a strategy tend to be male, non white and have a younger child. This suggests that whilst parental control practices are wide spread the choice of practices depends upon aspects of both the parent and the child. Furthermore, the impact of factors such as parental age, education and whether or not they are a stay at home parent suggests that the choice of strategy may relate not only to parenting style and beliefs about food management, but also to more structural factors such as time and support.

The present study also aimed to examine the impact of these different parental control practices on children’s diet and BMI. The results showed no relationship between any of the control practices and aspects of the child’s BMI. This may be due to the methodological issues such as the use of self report measures, the cross sectional nature of the study or perhaps the lack of variability in child BMI. Alternatively, it may reflect that parental control practices do not influence BMI, or that if it does, a longer term prospective design is needed to investigate this fully. Associations between parental control practices and aspects of the child’s diet, however, were found. In particular, eating more unhealthy snacks was related to less covert control and more pressure to eat; eating fruit and vegetables was related to higher levels of both overt and covert control over meals and less pressure to eat; being neophobic was related to less covert control over meals and more pressure to eat. Some previous research has indicated that parental control practices can have a detrimental impact upon a child’s diet (eg. Birch, 1999; Fisher et al, 2000). In contrast other studies suggest that control may have beneficial effects (eg. Wardle et al,

2002). Ogden et al (2006) suggested that such contradictory findings may reflect the complex nature of parental control with some controlling strategies promoting healthier behaviours than other strategies. The results from the present study support this analysis. In particular, the results highlight that whereas “pressure to eat” is associated with neophobia, eating more unhealthy snacks and reduced intake of fruit and vegetables, covert control is associated with less neophobia, a lower intake of unhealthy snacks and a greater intake of fruit and vegetables. “Pressure to eat” involves a very direct version of control such as trying to encourage a child to eat even when they say they are not hungry. The results from the present study suggest that such an approach may be associated with less healthy behaviour and may even have a detrimental impact upon food choice. This is in line with research illustrating how control may have the opposite effect to that desired by the parents (eg. Birch, 1999). In contrast, covert control is a much more subtle and less direct approach to managing a child’s diet and involves avoiding unhealthy restaurants or not bringing unhealthy foods into the house. This study suggests that such an approach may be associated with more healthy eating which is in line with research indicating that some forms of parental control can be beneficial (Wardle, et al, 2002; Ogden et al, 2006). Research exploring other forms of control indicate that trying not to do something or trying not to think about something can paradoxically make that behaviour or thought more likely to occur (eg. Polivy and Herman, 1984; Wegner, 1994). The results from the present study suggest that whereas direct forms of control such as pressure to eat may result in this paradoxical effect, more subtle forms of control such as covert control may not.

There are, however, some problems with the current study that need to be addressed. The study was based upon self reported behaviours and BMI which may have had implications for the accuracy of the data. However, this approach facilitated the collection of a large sample size and enabled the inclusion of a rich variety of variables for analysis. It also avoided the ethical and sensitive issues associated with collecting child height and weight data on school premises. The

study was also cross sectional in design, which has implications for understanding causality and the relationship between variables. Therefore, although the study aimed to explore the impact of parental control practices on diet and BMI, it is possible that diet and BMI in turn influence these practices. Longitudinal studies are needed to address this possibility. Finally, the study relied upon parental reports of their children's diet rather than the children's own reports, which again, facilitated collection of data from a larger sample. Given these methodological caveats however, the present study has provided useful insights into parental control practices and their impact upon their children.

To conclude, the results show that parental control practices are widespread and that parents use several different strategies to manage their children's diets, which vary according to aspects of both the child and the parent. Furthermore, although parental practices were not related to BMI, a healthier diet seemed to be associated with covert control and "pressure to eat" was related to less healthy behaviour. Parents may believe that controlling their child's diet is necessary given the current availability of fast food and unhealthy snacks. The results from this study indicate that some of these controlling practices may be more beneficial than others. Future research exploring parental control therefore needs to identify and differentiate between different control strategies if consistent results and useful conclusions are to be found.

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Table 1: Parent and child demographics (n=518)

		%	N	Mean	SD	Range
Child gender	Boy	46	236			
	Girl	54	279			
Child age (yrs)				6.0	0.88	4-7.9
Child BMI cut off groups	Risk of underweight	9	32			
	Normal	70	258			
	Risk of overweight	13	47			
	Risk of obese	8	29			
Parent gender	Male	5	26			
	Female	95	491			
Parent age (yrs)				37.9	5.0	24-67
Parent height (m)				1.7	0.1	1-1.9
Parent weight (kg)				64.5	11.7	32-120.7
Parent BMI (kg/m ²)				23.6	4.2	15.4-62.3
Parent BMI cut off groups	Underweight	2	8			
	Normal	73	350			
	Overweight	19	90			
	Obese	5	25			
	Very Obese	1	3			
Single parent status	No	84	429			
	Yes	16	79			
Stay at home parent	No	310	61			
	Stay at home parent	198	39			
Parent ethnicity	White	86	436			
	Other	14	72			
Parent highest certified educational qualification	None	3	14			
	<GCSE C or equiv	3	17			
	>GCSE grade A-C or equiv	14	71			
	A level or equiv	13	65			
	Higher BTEC or equiv	8	43			
	University / college degree	51	254			

Table 2: Describing parental control practices (n / %)

		%	N
Pressure to eat	Low	43.0	224.0
	Med	24.0	122.0
	High	33.0	168.0
Meal overt control	Low	1.0	6.0
	Med	13.0	66.0
	High	86.0	441.0
Snack overt control	Low	3.0	16.0
	Med	24.0	126.0
	High	73.0	374.0
Meal covert control	Low	9.0	45.0
	Med	25.0	130.0
	High	66.0	342.0
Snack covert control	Low	21.0	110.0
	Med	33.0	169.0
	High	46.0	238.0

Table 3: Describing children's diet (n/ %)

		%	N
Neophobia	Low	39.3	203.0
	Med	25.3	131.0
	High	35.4	183.0
Child mean number of fruit and vegetable portions per day	< one a day	66.3	337.0
	>=5 a day	33.7	171.0
Unhealthy snack frequency	Low	67	347
	Med	32	163
	High	1	3
Healthy snack frequency	Low	20.3	104
	Med	75.8	389
	High	3.9	20

Table 4: The role of child and parent demographics in predicting parental control practices

Variable	Snack overt control	Snack covert control	Meal overt control	Meal covert control	Pressure to eat
Parent gender	0.02	0.014	0.03	-0.02	-0.11*
Parent age	0.15**	0.135*	0.001	0.14**	0.04
Parent BMI	-0.10*	-0.128*	-0.06	-0.19**	-0.06
Single parent?	0.01	0.087	-0.04	0.09	-0.05
Ethnicity	-0.12*	-0.024	-0.06	-0.02	0.26**
Education	-0.01	0.135*	-0.06	0.15**	-0.09
SAHome parent?	0.10*	0.118*	0.001	0.11*	-0.03
Child gender	0.04	0.052	-0.02	0.03	-0.04
Child age	0.001	-0.047	-0.07	-0.06	-0.11*
R²	0.05	0.06	0.001	0.11	0.1

*p<0.05; **p< 0.01

Table 5: The role of demographics and parental control practices in predicting children's diet.

Variables	Healthy snacks		Unhealthy snacks		Neophobia		Fruit and veg	
	Block 1	Block 2	Block 1	Block 2	Block 1	Block 2	Block 1	Block 2
	B	B	B	B	B	B	B	B
Parent gender	-0.04	-0.03	-0.08	-0.06	-0.03	0.001	0.07	0.04
Parent age	-0.11*	-0.11*	-0.06	-0.01	0.04	0.07	0.04	0.02
Parent BMI	-0.03	-0.02	0.08	-0.03	0.06	0.04	-0.12*	-0.09
Single parent	-0.04	-0.05	-0.09	-0.06	0.01	0.04	-0.03	-0.05
Ethnicity	0.17**	0.14**	0.15*	0.09*	-0.03	-0.12*	-0.28**	-0.21**
Education	-0.17**	-0.18*	-0.29*	-0.24*	0.06	0.10*	0.05	0.02
SAHome parent	-0.002	-0.003	-0.08	-0.03	0.001	0.03	0.06	0.04
Child gender	0.008	0.01	-0.03	-0.003	-0.12*	-0.10*	0.001	-0.01
Child age	-0.06	-0.05	0.06	0.05	-0.05	-0.03	0.03	0.02
Snack overt control		-0.06		-0.08		-0.08		0.02
Meal overt control		-0.009		-0.01		0.00		0.11*
Meal covert control		0.03		-0.08		-0.17*		0.16*
Snack covert control		0.04		-0.27**		0.04		0.01
Pressure to eat		0.09		0.11*		0.3**		-0.21**
R²		0.1		0.28		0.14		0.19

*p<0.05; **p<0.01

Table 6: The role of demographics and parental control practices in predicting children's BMI

	block 1		block 2		block 3	
	B	P	B	P	B	P
Parent characteristics						
Parent gender	0.02	0.72	0.02	0.72	0.02	0.72
Parent age	-0.03	0.64	-0.04	0.51	-0.04	0.56
Parent BMI (kg/m)	0.08	0.17	0.07	0.22	0.07	0.21
Single parent	0.03	0.58	0.03	0.55	0.04	0.53
Ethnicity	0.07	0.23	0.07	0.24	0.06	0.33
Education	-0.01	0.83	0.00	0.96	0.01	0.92
SAHome parent	-0.11	0.07	-0.11	0.06	-0.11	0.07
Parent control practices						
Snack overt control			0.15*	0.03	0.14*	0.03
Meal overt control			-0.10	0.14	-0.10	0.15
Meal covert control			0.01	0.89	0.01	0.87
Snack covert control			-0.10	0.25	-0.11	0.21
Pressure to eat			0.03	0.64	0.05	0.46
Child diet						
Healthy snack					0.003	0.97
Unhealthy snack					-0.009	0.91
Child fruit & veg					0.02	0.78
Child neophobia					-0.01	0.89
* $p < 0.05$; $R^2 = 0.05$						