MODELLING POSITIVE CONSEQUENCES: INCREASED VEGETABLE INTAKES FOLLOWING MODELLED ENJOYMENT VERSUS MODELLED INTAKE

Authors**: KM Appleton, E Barrie, TJ Samuel**

Affiliation**: Research Centre for Behaviour Change, Department of Psychology, Faculty of Science and Technology, Bournemouth University, UK.**

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Address for Correspondence: Prof. Katherine Appleton, Research Centre for Behaviour Change, Department of Psychology, Faculty of Science and Technology, Bournemouth University, Poole House, Fern Barrow, Poole, Dorset, UK. Tel: +44 (0)1202 965985; Fax: +44 (0)1202 965314; Email: k.appleton@bournemouth.ac.uk

ABSTRACT

Objective: Modelling has previously been demonstrated to encourage healthy eating, but the importance of modelling the behaviour versus modelling the positive consequences of the behaviour is unknown. This work investigated the impact of modelling carrot intake (the behaviour) and modelling carrot enjoyment (the positive consequences) on subsequent liking and consumption of carrots and sweetcorn.

Methods: 155 children aged 7-10 years were randomized to hear a story where fictional characters consumed a picnic with either: no mention of carrot sticks (control) (N=45); mention of carrot sticks that all characters ate (modelling intake) (N=60); or mention of carrot sticks that the characters like (modelling enjoyment) (N=50). Carrot and sweetcorn liking and intake were measured before and after the story during a 5 minute task.

Results: Carrot liking and intake after a story was higher following the story modelling carrot enjoyment compared to the stories not modelling enjoyment (smallest $\beta=0.16$, $p=0.05$), and in those with higher pre-story carrot liking and intakes (smallest $\beta=0.25$, $p<0.01$). Sweetcorn liking and intake after a story was associated with pre-story sweetcorn liking and intake (smallest $\beta=0.28$, $p<0.01$), and sweetcorn intake was lower following the story modelling carrot enjoyment compared to the stories not modelling enjoyment ($\beta=-0.17$, $p=0.04$).

Conclusions: These findings demonstrate a role for modelling enjoyment to encourage vegetable liking and intake, although effects sizes were small. These findings also suggest a benefit from modelling the positive consequences of a behaviour for encouraging healthy food intake in children, while limited effects were found for modelling the behaviour itself.

Key words: modelling, vegetables, enjoyment, liking, intake

INTRODUCTION

Modelling has been demonstrated as a successful strategy for increasing healthy food consumption, such as fruit and vegetable consumption, in children, either alone (Birch, 1980; Blissett, Bennett, Fogel, Harris & Higgs, 2016; Harris & Baudin, 1972; Hendy, 2002; Staiano, Marker, Frelier, Hsia & Martin, 2016) or alongside other strategies, such as the use of praise and rewards (Blissett et al., 2016; de Droog, Buijzen & Valkenburg, 2014; Hendy, Williams & Camise, 2005; Holley, Haycraft & Farrow, 2015; Horne et al., 2011; Lowe, Horne, Tapper, Bowdery & Egerton, 2004; Perry et al., 1998; Vandeweghe, Verbeken, Moens, Vervoort & Braet, 2016; Wardle, Herrera, Cooke & Gibson, 2003). Improved intakes of modelled foods have been found following modelling by parents (Blissett et al., 2016), other adults (Vandeweghe et al., 2016; Wardle et al., 2003) and peers (Birch, 1980; Hendy, 2002; Hendy et al., 2005; Staiano et al., 2016), and also following modelling by fictional cartoon and storybook characters (de Droog et al., 2014; Harris & Baudin, 1972; Horne et al., 2011; Lowe et al., 2004; Perry et al., 1988). In many instances, models both eat and enjoy a healthy food item (Horne et al., 2011; Lowe et al., 2004), but it is currently unclear whether modelling the eating or modelling the enjoyment is more important.

Social cognitive theory suggests that modelling results in the performance of similar behaviours in others via direct copying of the behaviour (the eating), and via vicarious learning of the perceived positive consequences of the behaviour (the enjoyment) (Bandura, 1977). Modelling the behaviour is suggested to be more important for simple behaviours, while modelling the consequences can be more important for more effortful or unpleasant behaviours (Bandura, 1997). Discriminating between the two types of modelling for healthy eating could provide valuable theoretical insights to aid our understanding of healthy eating, and would have practical implications for the promotion of these health behaviours.

Other researchers have also investigated the mechanistic role of enjoyment in the impacts of modelling on eating behaviour. Hendy and Raudenbush (2000) demonstrate more effective modelling from adults when adults consume and are enthusiastic about a novel food compared with when adults only consume a novel food. Lumeng and colleagues demonstrate effective modelling for food choice when other children show a positive facial expression in association with consumption compared to a negative expression (Frazier, Gelman, Kaciroti, Russell and Lumeng, 2012), when adults show a positive facial expression in association with consumption compared to a negative expression (Frazier, et al., 2012) and when adults are positive about a food item, even if children have already assessed the food less positively (Lumeng, Cardinal, Jankowski, Kaciroti and Gelman, 2008). Findings from these studies suggest a role for modelling the positive consequences of consumption, but in all studies, the act of consuming the food was not also manipulated, thus the relative impact of modelling the behaviour – the act of consuming the food and modelling the positive consequences – the enjoyment, can not be ascertained.

This work aimed to investigate the impact of modelling a behaviour and modelling the positive consequences of that behaviour on subsequent perceptions and performance of the same behaviour, using a healthy eating scenario. Thus, we aimed to investigate the impact of modelling intake and modelling enjoyment on subsequent liking and consumption of a modelled healthy food (carrot sticks). Based on Social Cognitive Theory and on the previous literature, we hypothesized that effects for modelling enjoyment would be found, while effects for modelling intake would be less pronounced. Effects for the modelled healthy food were compared to those for a non-modelled healthy food in the same food category (sweetcorn).

METHODS

Using an independent groups design, 7-10 year old children were randomized to hear one of three stories that included either no modelling, modelling of intake, or modelling of enjoyment, and liking

and consumption of the modelled food and a non-modelled similar food were measured before and after the story in a 5 minute task.

Participants

In total, 155 children aged 7-10 years were recruited from two Primary schools in the south of the UK. All children in eight classes who volunteered and gained parental consent took part, provided the child had no known food allergies. There were no other inclusion or exclusion criteria. All parents provided written informed consent, all children also provided verbal assent prior to taking part. The study was approved by Bournemouth University Research Ethics Committee, and was run in accordance with the Ethical Guidelines of the British Psychological Society.

Modelling

Both intake and enjoyment were modelled by fictional characters using a storybook. Three conditions were studied:

Intake reference – carrot sticks were handed out as part of a picnic in the story and everyone was reported to eat them: *'Velma opened the picnic basket and handed everyone a sandwich and carrot sticks. Everyone ate both their sandwich and carrot sticks'*. The story included no reference to enjoyment;

Enjoyment reference – carrot sticks were handed out as part of a picnic in the story and enjoyment was expressed: *'Velma opened the picnic basket and handed everyone a sandwich and carrot sticks. "Yummy, I love carrot sticks', said Daphne and Fred together*'. The story included no reference to consumption;

No reference (control) – no reference to carrot sticks was included as part of the picnic description.

Impacts on consumption have previously been found following modelling by fictional cartoon and storybook characters (de Droog et al., 2014; Harris & Baudin, 1972; Horne et al., 2011; Lowe et al.,

2004; Perry et al., 1988). The use of a storybook allowed the two types of modelling to be completely controlled and kept independent. The storybook models were also likely to be familiar to children in the UK. The specific story was taken from the Scooby Doo series – a popular cartoon series in the UK where mysteries are solved by a dog and four friends - two male, two female, all aged approx. 12-15 years. The series was chosen because same sex and older peer models have previously been demonstrated as particularly effective for modelling in children (Frazier et al, 2012; Hendy, 2002; Horne et al., 2011; Lowe et al., 2004). The particular story used already included a picnic. Pictures were included as part of the storybook, but these were not manipulated for the study – on the page detailing the picnic, the picture was of the picnic and the handing round of food items. The same picture was present in all three storybook conditions. There were no differences between the storybooks excepting in the single sentence given above. No reference to sweetcorn was included in the stories.

Foods

Before and after hearing the story, liking and intake for carrot sticks (modelled food) and sweetcorn (non-modelled food in the same food category) were measured. Vegetables were chosen considering the current public health need and interest for increasing vegetable intakes (Appleton et al., 2016). Carrots and sweetcorn were chosen as two vegetables that are likely to be familiar and well-liked by UK children of 7-10 years, that are typically eaten in the same manner and could be served cold with minimal preparation.

Liking for each food was assessed using a 5-point smiley face scale (scored -2 - +2) ranging from a very sad face denoting strong dislike (score -2) through a neutral face denoting a neutral opinion (score 0) to a very happy face denoting strong liking (score +2) (Wardle et al., 2003). Understanding of the scale was checked after explanation to the children by asking them where they would place

their favourite and their least favourite foods. Children were asked to rate the carrots and sweetcorn by pointing or placing the foods independently on the scale.

Intake was assessed following liking measures by providing all children individually with 30g of each vegetable simultaneously for consumption during completion of a 5 minute colouring task or puzzle. This amount of vegetable equates to one medium carrot or one heaped tablespoon of sweetcorn, and was chosen as an appropriate size for a snack for children. The provision of 60g vegetables in total was intended to provide children with more vegetable than they would likely wish to eat, guarding against ceiling effects. Fresh carrot cut into approx. 3-5g carrot sticks and tinned sweetcorn (*Green Giant UK Ltd., Middlesex, UK*) were presented cold in separate individual plastic containers. Liking and intake measures were identical both before and after the story, using new 30g containers of vegetables. Amount consumed was calculated by weighing initial and returned carrot and sweetcorn containers (portable Salter Disc Electronic Kitchen Scale, model 1036, accuracy to 1g).

Procedure

All children were read one story as part of a group of 3-5 children, and tested on liking and intake for both vegetables individually and separately from other children immediately before and immediately after the story. Children were all tested in the same room, facing the wall and with their backs to other children, each with their own colouring task or puzzle and pots of vegetables. Liking measures were first undertaken then intake measures at both time points to avoid confounding between the measures. Groups of children were randomized to hear one story version by drawing lots, and stories were read in approximately 10 minutes thus there was approximately a 15 minute time interval between pre-story and post-story measures. The study was conducted each day during morning break or during some morning classes surrounding morning break between 10 - 11.30 am dependent on the teacher's preferences, and between one and three groups were tested in any one day. The children involved are used to consuming foods at this time if they wish. Stories were read

across the whole study, thus there were no systematic differences between the days or times at which different stories were read.

Analyses

Data were analysed using linear multiple regression analyses. Carrot and sweetcorn liking after a story were predicted using gender, age, modelling type and carrot and sweetcorn liking before the story. Carrot and sweetcorn intake after a story were predicted using gender, age, modelling type, carrot and sweetcorn liking before the story and carrot and sweetcorn intake before the story. Regression analyses were used to allow maximal use of all of the data, the consideration of multiple potential confounding variables in each analysis, and to accommodate baseline differences between the story conditions (Howell, 1997). To ensure use of all of the available data, modelling type was analysed using two dummy variables, based on story intake versus no intake (two conditions) and story enjoyment versus no enjoyment (two conditions). Group based analyses such as ANCOVA would not allow good consideration of all of the data available or of the number of potential confounding variables included. All participants provided complete data sets. Raw data were positively skewed, but change data for liking and intake were normally distributed and confirmed the use of parametric analyses. Significance was set at $p<0.05$, assuming null hypothesis testing. Data were analysed using IBM SPSS Statistics version 23.

RESULTS

Of 155 children, 45 were randomized to hear the story with no carrot reference, 60 children were randomized to hear the story which referenced carrot intake, and 50 children were randomized to hear the story which referenced carrot enjoyment. The proportion of males and females and the proportion of children aged 7, 8, 9 and 10 years were similar across each version of the story (most statistically significant difference between groups: $X^2=2.83$, df=2, p=0.25), see Table 1. Mean liking scores for sweetcorn and intakes of carrots were similar across groups prior to the story (largest

198 F(2,154)=0.83, p=0.44), but mean liking scores for carrots were higher and intakes of sweetcorn
199 were lower in the group exposed to the story with the intake reference compared to the other
200 groups (smallest t(108)=2.05, p=0.04). Descriptive statistics for all variables prior to the story are
201 given in Table 1.
202
203 Table 1 about here
204
205 **Carrot liking and intake**
206 Carrot liking and intake after each story are given in Table 2, and the results of the regression
207 analyses are given in Table 3. Higher carrot liking after a story was significantly associated with
208 hearing the story that referenced carrot enjoyment compared to hearing a story that did not (β =
209 0.22, p = 0.01), and was significantly associated with higher carrot liking before a story (β = 0.55, p <
210 0.01). Higher carrot intake after a story was significantly associated with hearing the story that
211 referenced enjoyment compared to hearing a story that did not (β = 0.16, p = 0.05), with higher
212 carrot liking before a story (β = 0.25, p < 0.01), and was significantly associated with higher carrot
213 intake before a story (β = 0.45, p < 0.01).
214
215 Tables 2 and 3 about here
216
217 **Sweetcorn liking and intake**
218 Sweetcorn liking and intake after each story are given in Table 2, and the results of the regression
219 analyses are given in Table 4. Higher sweetcorn liking after a story was significantly associated with
220 higher sweetcorn liking before a story (β = 0.81, p < 0.01). Higher sweetcorn intake after a story was
221 significantly associated with hearing a story that did not reference carrot enjoyment compared to
222 hearing a story that did not (β = -0.17, p = 0.04), with higher sweetcorn liking before a story (β =

223 0.28, $p < 0.01$) and was significantly associated with higher sweetcorn intake before a story ($\beta = 0.38$,
224 $p < 0.01$).
225
226 Table 4 about here
227
228 **DISCUSSION**
229 This study investigated the impact of modelling carrot intake and modelling carrot enjoyment on
230 subsequent liking for and consumption of both carrots and sweetcorn. The study was undertaken as
231 an investigation of two different aspects of Social Cognitive Theory, where modelling is suggested to
232 result in the performance of similar behaviours via direct copying of a behaviour, and via vicarious
233 learning of the perceived positive consequences of a behaviour (Bandura, 1977). Carrot intake was
234 modelled to demonstrate the impacts of modelling a behaviour, and carrot enjoyment was modelled
235 to demonstrate the impacts of modelling the positive consequences of that behaviour.
236
237 A positive effect of modelling carrot enjoyment on subsequent carrot liking and intake was found,
238 while there was no (significant) effect of modelling carrot intake on either outcome. From a
239 theoretical perspective, these findings suggest that modelling the positive consequences of the
240 behaviour are more important than modelling the behaviour, for vegetable consumption. Various
241 other work also demonstrates an important role for modelling the positive consequences of healthy
242 eating for healthy eating behaviour (Frazier et al, 2012; Hendy & Raudenbush, 2000; Lumeng et al,
243 2008).
244
245 From a theoretical perspective, our findings also suggest that vegetable consumption is a behaviour
246 that is learnt and requires motivating. Social Cognitive Theory suggests that modelling the positive
247 consequences of a behaviour are important for learning effortful or unpleasant behaviours both by
248 encouraging learning and increasing motivation (Bandura, 1977). Other work also demonstrates an

249 important role for learning in the development of vegetable liking and intakes (Appleton et al, 2016;
250 Appleton, Hemingway, Rajska & Hartwell, 2018b; Nicklaus, 2016; Wadhera, Capaldi-Philips & Wilkie,
251 2015), and in fact the majority of healthy food consumption is considered to be largely learnt
252 (Capaldi, 1996; Rozin, 1990). An important role for motivation in encouraging healthy food intake is
253 also recognised. Intrinsic motivators such as liking and enjoyment are often used to encourage
254 healthy food intakes. A role for enjoyment or pleasure in food consumption is well known (Lowe &
255 Butryn, 2007; Marty, Chambaron, Nicklaus & Monnery-Patris, 2018; Pinel, Assanand & Lehman,
256 2000), and liking is a well-reported determinant of both everyday intake (Appleton, 2006; Gibson,
257 Wardle & Watts, 1998) and specifically of healthy food intake (Appleton et al., 2018a; Brug, Tak, te
258 Velde, Bere & de Bourdeaudhuij, 2008; Gibson et al., 1998; Poelman, Delahunty & de Graaf, 2015).
259 Efforts to increase enjoyment or pleasure can also increase healthy food consumption (Bouhlal,
260 Chabanet, Issanchou & Nicklaus, 2013; Nickalus, 2016; Savage, Peterson, Marini, Bordi & Birch, 2013;
261 Wadhera, et al., 2015). Other intrinsic motivators, such as health benefits or improvements in
262 appearance or preformance (Appleton, 2016; Michie, Abraham, Whittington, McAteer & Gupta,
263 2009), and other extrinsic motivators (Appleton, et al., 2018b; Cooke et al., 2007; Hendy et al., 2005;
264 Remington, Anez, Croker, Wardle & Cooke, 2012; Wardle et al., 2003), can also be of value.
265
266 Based on Social Cognitive Theory, it may be unsurprising that modelling the behaviour is less
267 important than modelling the enjoyment – eating is a simple behaviour, that children aged 7-10
268 years would not need demonstrating (Bandura, 1977). Based on this explanation, modelling the
269 behaviour may be important for younger and less developed children, where copying behaviour may
270 be more likely and complex components of learned behaviour such as motivation may be less well
271 developed (Bandura, 1977). Frazier et al (2012) find lesser impacts of positive facial expressions in
272 children younger than 3.5 years and suggest some sensitivity to the information provided in a
273 positive facial expression, while Hendy & Raudenbush (2000) find impacts of modelling positive

consequences in addition to modelling eating in children aged 3-5 years. Effects of age on the relative importance of modelling a behaviour and modelling the consequences would be of interest.

The specific liking and consumption results are also of interest, as liking increased more in response to the enjoyment story than did intake. Effect sizes were small. Standardized regression co-efficients (Beta values) suggest increases in liking and intake of approximately 20% and 12% baseline values respectively for a story including enjoyment versus one that does not, the equivalent of 0.3 points on a 5 point scale for liking and 3g intake respectively, but the greater impact of modelled enjoyment on reported enjoyment is interesting. Further investigation of lasting effects and the implications of these effects would clearly be of value. A higher baseline liking for carrots may also have contributed to the reduced impact of modelling intake in our study on carrot liking, but measures were not at ceiling for carrot liking pre- or post- any story.

The findings for sweetcorn are also interesting. Sweetcorn liking after a story was not impacted by either of the carrot modelling stories, but sweetcorn intake was negatively impacted by a story modelling enjoyment for a different vegetable. It is possible that highlighting enjoyment of one vegetable may cause the perceived enjoyment of other vegetables to reduce as a result of a contrast effect (Lawless, 1938), or as a result of a perception that if enjoyment is mentioned for some foods and not others, then only those that are highlighted are enjoyable, implying that the others are not (Bandura, 1977; Eisenberger & Cameron, 1996; Mazur, 2006). In both these scenarios however, negative effects would be expected in both sweetcorn liking and intake, while negative effects were found only in sweetcorn consumption. Levels of neither carrot consumption nor sweetcorn consumption were at ceiling, so it is unlikely that sweetcorn consumption was reduced following the enjoyment story because carrot consumption increased to a degree that precluded consumption of other foods. Levels of sweetcorn consumption however were low before the story referencing intake compared to intakes in the other two conditions, and a return to more usual levels after the story

300 referencing intake could have resulted in an apparent increase across both conditions not
301 referencing enjoyment. It is unclear why sweetcorn intake was low prior to the story referencing
302 intake, but this initial low intake is the most plausible explanation for the apparent findings in
303 sweetcorn intake.
304
305 Interestingly, total vegetable consumption was higher after all stories than before all stories,
306 suggesting an increase in vegetable consumption *per se*, and for both carrot and sweetcorn liking
307 and intake, associations between pre- and post-story measures were found. These findings are
308 unsurprising and suggest associations with and between liking and intake as have previously been
309 reported (Appleton, 2006; Appleton et al., 2018a; Brug et al., 2008; Gibson et al., 1998; Poelman,
310 Delahunty & de Graaf, 2015). Of note however, variation in both carrot and sweetcorn liking and
311 intake were high in the study, demonstrating much individual variation. A high variation both
312 between children and within the same children at different times or in different situations and
313 contexts has previously been recognised (Nicklaus, 2016; Wadhera, et al., 2015).
314
315 Our findings provide a practical message for parents/carers and health professionals – it is important
316 to demonstrate the positive consequences and so the enjoyment of healthy foods items in front of
317 children aged 7-10 years, and this may be more important than actually eating them. Specifically for
318 increasing vegetable consumption also, our findings suggest that reading stories demonstrating
319 modelling before snacks or meals may aid vegetable consumption.
320
321 The strengths of the study include the sample size, the use of the stories to ensure control and
322 distinction between conditions, and the assessments of liking and intake. The study is limited
323 however, in that no measures of awareness or understanding of the story manipulation were
324 undertaken, and individual differences, such as food responsiveness or reward sensitivity, were not
325 taken into account (Blissett et al., 2016; Vandeweghe et al., 2016). Adjustment of the data to

account for individual differences would likely strengthen our results as opposed to reduce them. The study was also limited in that appetite was not measured in the children before or during testing, but as all testing was undertaken at the same time of day and did not differ systematically between conditions, it is unlikely that hunger or impacts as a result of fullness or satiation also differed systematically between conditions. Limited changes in ratings or in consumption due to the small time interval between before and after measures is also unlikely to have differed systematically between conditions and so is also unlikely to account for our findings. Effects were measured following one story for no longer than the immediate future, and investigation of repeated experiences and over the longer term would clearly be of interest. It is also difficult to generalize our findings to the consumption of novel vegetables or foods. Notably both carrots and sweetcorn are likely to be familiar foods to children aged 7-10 years living in the UK, and other researchers have suggested different effects for modelling where the modelled food is novel as opposed to familiar (Hendy & Raudenbush, 2000). There are benefits however to increasing the consumption of all vegetables in children (Appleton et al, 2016), thus our findings remain of value. The distinction between modelling intake and modelling enjoyment may also be less straightforward than we have suggested. There may be an assumption that enjoyment also implies consumption or that consumption would also imply likely enjoyment, but our stories did allow for as a big a distinction as possible while remaining realistic. We also did not test these assumptions as part of our study, and such assumptions may not be made by children aged 7-10 years. We have also assumed that our effects are demonstrations of modelling in general and are not specific to modelling from peers or via story books. We have no reason to believe there would be differences in the impacts of modelling intake and modelling enjoyment dependent on the specific model or the medium for the modelling.

In summary, this study demonstrated increased carrot liking and intake following a story modelling carrot enjoyment, no effects following the modelling of carrot intake, no effects in sweetcorn liking

and reversed effects in sweetcorn intake. Effect sizes are small, but based on this result, it can be suggested that modelling enjoyment or the positive consequences of a behaviour may be beneficial for encouraging healthy food intake in children, while limited effects were found for modelling the behaviour itself.

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496 Table 1: Descriptive statistics for all variables prior to exposure of each version of the story

	No reference (N=45)	Intake reference (N=60)	Enjoyment reference (N=50)
Gender (N) (male: female)	25: 20	32: 28	20: 30
Age (N) (7y: 8y: 9y: 10y)	12: 11: 15: 7	15: 15: 8: 12	25: 12: 13: 10
Carrot liking prior to the story (-2 - +2)	0.6 (1.4)	1.2 (1.1)	0.7 (1.2)
Sweetcorn liking prior to the story (-2 - +2)	0.9 (1.4)	1.0 (1.4)	0.9 (1.5)
Carrot intake prior to the story (grams)	14 (11)	14 (11)	12 (11)
Sweetcorn intake prior to the story (grams)	13 (12)	7 (8)	11 (12)

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499 Table 2: Mean (s.d.) carrot and sweetcorn liking and intake after each story

	No reference (N=45)	Intake reference (N=60)	Enjoyment reference (N=50)
Carrot liking after the story (-2 - +2)	1.0 (1.3)	1.4 (1.0)	1.6 (1.1)
Carrot intake after the story (-2 - +2)	16 (13)	20 (11)	19 (11)
Sweetcorn liking after the story (-2 - +2)	1.0 (1.5)	1.1 (1.4)	0.8 (1.6)
Sweetcorn intake after the story (-2 - +2)	16 (12)	14 (11)	10 (13)

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502 Table 3: Results of the regression analyses on carrot liking and carrot intake (N=155)

	Carrot Liking		Carrot Intake	
Model	R=0.58, R^2=0.34, adj. R^2=0.31, F(6,154)=12.71, p<0.01		R=0.59, R^2=0.35, adj. R^2=0.32, F(8,154)=9.96, p<0.01	
	Beta	Significance	Beta	Significance
Story intake	0.06	0.50	0.13	0.14
Story enjoyment	**0.22**	**0.01**	**0.16**	**0.05**
Gender	0.04	0.54	0.04	0.52
Age	-0.11	0.11	-0.11	0.13
Prior carrot liking	**0.55**	**<0.01**	**0.25**	**<0.01**
Prior sweetcorn liking	0.03	0.62	-0.02	0.80
Prior carrot intake			**0.45**	**<0.01**
Prior sweetcorn intake			0.04	0.63

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505 Table 4: Results of the regression analyses on sweetcorn liking and carrot intake (N=155)

	Sweetcorn Liking		Sweetcorn Intake	
Model	R=0.82, R^2=0.68, adj. R^2=0.66, F(6,154)=51.72, p<0.01		R=0.59, R^2=0.34, adj. R^2=0.31, F(8,154)=9.59, p<0.01	
	Beta	Significance	Beta	Significance
Story intake	-0.02	0.71	0.05	0.56
Story enjoyment	-0.09	0.11	**-0.17**	**0.04**
Gender	0.05	0.27	0.01	0.90
Age	-0.04	0.40	-0.02	0.79
Prior carrot liking	-0.01	0.82	-0.09	0.23
Prior sweetcorn liking	**0.81**	**<0.01**	**0.28**	**<0.01**
Prior carrot intake			-0.01	0.89
Prior sweetcorn intake			**0.38**	**<0.01**

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