

# Examining constructs of parental reflective motivation towards reducing unhealthy food provision to young children

Brittany J Johnson <sup>1,2\*</sup>, Gilly A Hendrie <sup>3</sup>, Dorota Zarnowiecki <sup>1,4</sup>, Elisabeth K Huynh <sup>5</sup>, Rebecca K Golley <sup>1,4</sup>

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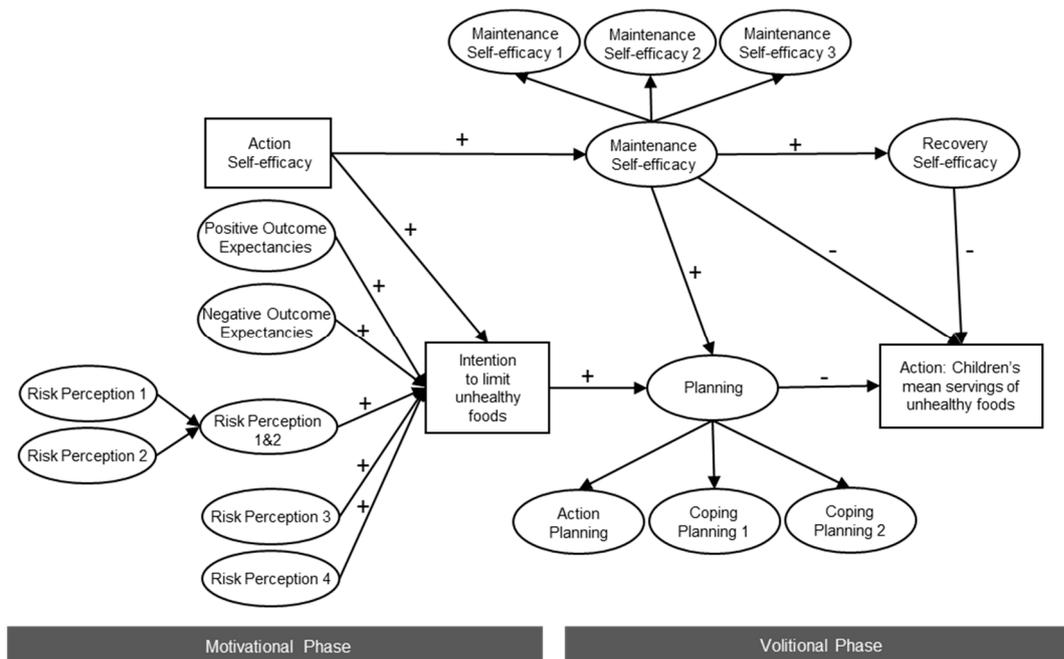
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## Supplementary Materials



**Figure S1.** Theorized Health Action Process Approach model to examine using structural equation modelling. Adapted from Schwarzer [9]. Rectangles represent measured constructs; ellipses represent latent constructs; + represents hypothesized positive relationship and - represents a hypothesized negative relationship between variables.

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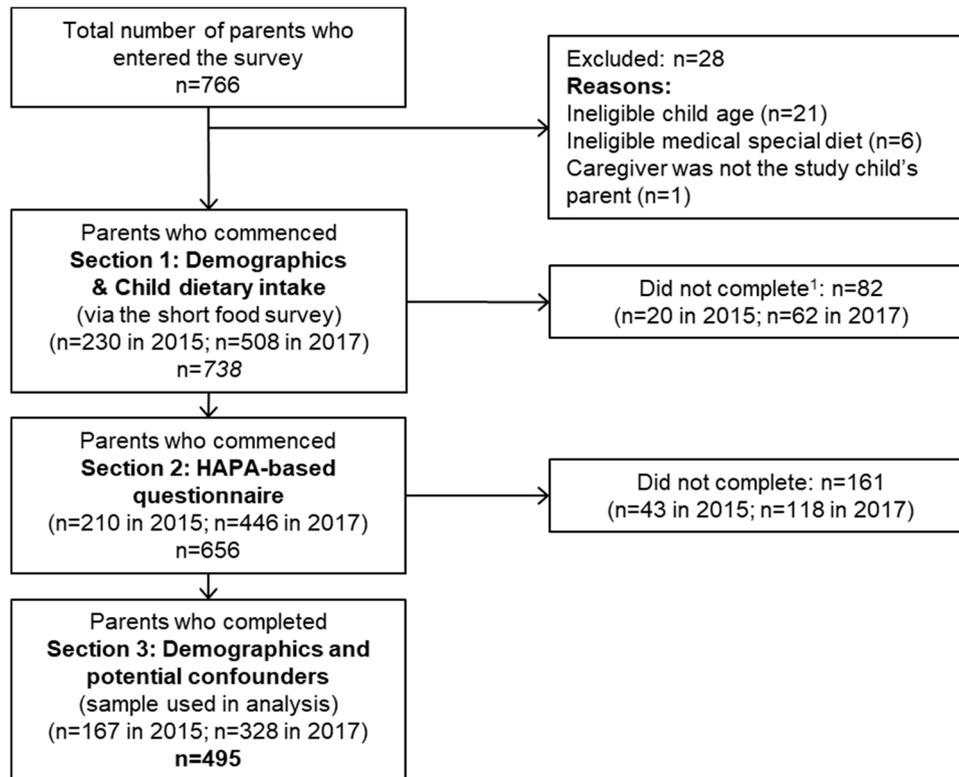
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**Figure S2.** Flow of parent completion of the online survey

<sup>1</sup>Non-completers were excluded from all analyses.

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**Table S1:** Parental Food Attitude Questionnaire<sup>1</sup> motivational phase

Motivation construct	Final question	Scoring criteria	Scoring range
Risk perception 1 – absolute risk	1. Considering the extras you provide to your child from within the home, choose if you think this is lower to higher than the following statements. <i>'Extras from within the home' refers to all home made or brought extras provided within the home, as well as those packed from the home e.g. lunchboxes and picnics.</i> a) Compared with how active my child is the amount of extras I provide to my child is... b) Compared with how healthy my child's overall diet is the amount of extras I provide to my child is...	5 = Lower 4 = Slightly lower 3 = Same 2 = Slightly higher 1 = Higher	2 - 10
Risk perception 2 – absolute risk	c) Compared with that of other children the same age as my child the amount of extras I provide to my child is... d) Compared with that of other children the same size (weight and height) as my child the amount of extras I provide to my child is...		2 - 10
Risk perception 3 - severity assessment	2. For 4-7 year old children (i.e. similar age and size to your child), in general, how serious a concern do you think the following are: a) being overweight b) tooth decay c) behavioural issues d) too much energy (calories), saturated fat, added sugar and salt	1 = Not serious at all (can be ignored) 2 = Somewhat serious 3 = Moderately serious 4 = Serious 5 = Very serious (life threatening)	4 - 20
Risk perception 4 – risk for child	3. How much do you agree or disagree with the following statements. If I limit the extras I provide to my child, I think that I can reduce their chances of... a) becoming overweight in the next 2-3 years b) developing tooth decay	5 = Strongly agree 4 = Agree 3 = Neither agree nor disagree 2 = Disagree 1 = Strongly disagree	2 - 10

<sup>1</sup> The term 'extras' is used to describe unhealthy foods.

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**Table S1:** Parental Food Attitude Questionnaire motivational phase (continued)

Motivation construct	Final question	Scoring criteria	Scoring range
Positive outcome expectancies	4. How true are the following statements for you? If I limit my provision of extras from within the home... a) ...my child will be healthy (i.e. weight, teeth) c) ...my child will continue healthy eating habits into adulthood e) ...my child will eat more fruit and vegetables g) ...I'll be seen to be environmentally-friendly	1 = Not at all true 2 = Somewhat true 3 = Mostly true 4 = Exactly true	4 - 16
Negative outcome expectancies	b) ...my child will throw a tantrum or pester me for extras d) ...my child will miss out on having treats f) ...it will affect what we do in family time (i.e. movie nights, baking, celebrations etc) h) ...my child will overeat extras when they are available i) ...my child will miss out on eating what their friends eat	4 = Not at all true 3 = Somewhat true 2 = Mostly true 1 = Exactly true	5 - 20
Action self-efficacy	5. How confident are you that you can limit the extras you provide to your child from within the home over the next month? I am...	1 = Not at all confident 2 = Somewhat confident 3 = Moderately confident 4 = Extremely confident	1 - 4
Intentions	6. In the next month, I intend to start or continue to limit the extras I provide to my child from within the home. I...	1 = Don't intend at all 2 = Somewhat intend 3 = Moderately intend 4 = Strongly intend	1 - 4

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**Table S2:** Parental Food Attitude Questionnaire volitional phase

Motivation construct	Final question	Scoring criteria	Scoring range
Maintenance self-efficacy 1	7. Some situations can make it hard to maintain certain behaviours. How confident are you, that you could limit providing extras to your child from within the home, even if... e) ...your partner is undermining you f) ...you have other financial pressures g) ...it is school/child care holidays h) ...it takes you a long time to make it habit i) ...your child sees food marketing on television j) ...you are having family time (i.e. movie night, baking, celebrations etc)	1 = Not at all confident 2 = Somewhat confident 3 = Moderately confident 4 = Extremely confident	6 - 24
Maintenance self-efficacy 2	a) ...your child is requesting/ demanding/ fussing/ pestering you for extras b) ...your child is resistant to limiting extras		2 - 8
Maintenance self-efficacy 3	c) ...you are tired d) ...you are having a very busy day		2 - 8
Action planning	8. Some parents would like to limit the extras they provide. How true are the following statements for you? I already have strategies for how to limit extras... a) ...at home on weekdays b) ...at home on weekend days c) ...when packing lunch for childcare / kindergarten / school d) ...when buying takeaway meals and snacks for eating at home	1 = Not at all true 2 = Somewhat true 3 = Mostly true 4 = Exactly true	4 - 16
Coping planning 1	9. Some parents would like to limit the extras they provide. How true are the following statements for you? I already have strategies for... b) ...how to manage when friends undermine my plans to limit extras c) ...how to manage when relatives (e.g. grandparents) undermine my plans to limit extras	1 = Not at all true 2 = Somewhat true 3 = Mostly true 4 = Exactly true	2 - 8
Coping planning 2	a) ...how to deal with certain situations in order to stick to my intentions (e.g. where I know only extras may be available, when I'm in a hurry, school holidays) d) ...how to deal with set-backs when I provide extras outside of my intentions		2 - 8

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**Table S2:** Parental Food Attitude Questionnaire volitional phase (continued)

Motivation construct	Final question	Scoring criteria	Scoring range
Recovery self-efficacy	10. Sometimes we don't always stick to our intentions. Imagine you have increased the extras you provide to your child for some time. How confident are you about re-limiting the extras you provide to your child after... a) ...2 days (e.g. after a special occasion) b) ...2 to 6 weeks (e.g. after school holidays, Christmas period etc) c) ...weeks to months (e.g. after a period of change in family routine)	1 = Not at all confident 2 = Somewhat confident 3 = Moderately confident 4 = Extremely confident	3 - 12

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### Supplementary File S1: Results from structural equation modelling sensitivity analysis

Sensitivity analysis of the HAPA-based structural equation model was performed on a sub-sample (n=339) excluding all respondents with any missing data (n=156). Model fit statistics ( $X^2=160.233$ ,  $df=83$ ,  $p<0.001$ ; CFI=0.962; TLI=0.945; RMSEA=0.052, PCLOSE=0.355; SRMR=0.0606) supported appropriateness of the HAPA model. The model accounted for 11.0% of the variance in children's servings of unhealthy foods, with primarily similar regression coefficients. The largest paths were as per the primary analysis structural equation model, specifically *Maintenance self-efficacy to Planning* ( $\beta=.858$ ,  $b=.723$ ,  $p<0.001$ ), and between constructs of self-efficacy (action self-efficacy to maintenance self-efficacy  $\beta=.719$ ,  $b=.669$ ,  $p<0.001$ ; maintenance self-efficacy to recovery self-efficacy  $\beta=.728$ ,  $b=.803$ ,  $p<0.001$ ).