

Supplementary Information

Supplementary 1: Search process including search terms and exclusion criteria

Stage 1: Searching major science databases (search terms used)

1) Web of Science

Topic=((child* OR infant* OR toddler* OR preschool*))

AND Topic=((diet* OR food* OR nutrition OR dietary pattern OR eating pattern OR dietary intake OR food intake OR diet quality OR infant food OR infant nutrition OR child nutrition))

AND Topic=((assess* OR tool OR assessment tool OR dietary assessment OR questionnaire* OR evaluat* OR instrument OR checklist OR validit* OR correlat* OR compar* OR reproducibility OR accuracy))

Refined by: Topic=(assess) AND Research Areas=(NUTRITION & DIETETICS) AND Research Areas=(NUTRITION & DIETETICS OR PEDIATRICS) AND Research Areas=(NUTRITION & DIETETICS OR PEDIATRICS)

Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, CCR-EXPANDED, IC.

2) Pubmed

((((((("child"[All Fields]) OR "infant"[All Fields]) OR "toddler"[All Fields]) OR "preschool"[All Fields])))

AND (((((((("diet"[All Fields]) OR "nutrition"[All Fields]) OR "food"[All Fields]) OR "dietary pattern"[All Fields]) OR "eating pattern"[All Fields]) OR "dietary intake"[All Fields]) OR "food intake"[All Fields]) OR "diet quality"[All Fields]) OR "infant food"[All Fields]) OR infant nutrition) OR "child nutrition"[All Fields]))

AND (((((((("assess"[All Fields]) OR "tool"[All Fields]) OR "assessment tool"[All Fields]) OR "dietary assessment"[All Fields])) OR "checklist"[All Fields]) OR "reproducibility"[All Fields]) OR "valid"[All Fields]) OR "correlate"[All Fields]) OR "evaluate"[All Fields]) OR "food frequency questionnaire"[All Fields])

AND (Humans[Mesh]

AND English[lang]

AND (infant[MeSH] OR infant, newborn[MeSH] OR infant[MeSH:noexp] OR child, preschool[MeSH] OR child[MeSH:noexp])))

AND ("assess"[All Fields])

3) Scopus

(TITLE-ABS-KEY((child* OR infant* OR toddler* OR preschool*))

AND TITLE-ABS-KEY((diet* OR food* OR nutrition OR dietary pattern OR eating pattern OR dietary intake OR food intake OR diet quality OR infant food OR infant nutrition OR child nutrition)) AND

TITLE-ABS-KEY((assess* OR tool OR assessment tool OR dietary assessment OR questionnaire* OR evaluat* OR instrument OR checklist OR validit* OR correlat* OR compar* OR reproducibility OR accuracy)))

AND ORIG-LOAD-DATE AFT 1365250549

AND (LIMIT-TO(LANGUAGE, "English"))

Stage 2: Cleaning in Endnote

- 1) Duplicates were removed
- 2) Words were searched in TITLE and KEYWORDS to eliminate irrelevant articles

Abuse	Esophagitis	Pesticide
Advert	Epilepsy	Phenylketonuria
Agriculture	Excretion	PKU
AIDS	Exposure	Pig
Alcohol	Fertility	Poison
Anaemia / Anemia	Fibrosis	Practice Guidelines
Allergic/allergy	Gastro	Premature
Anaphylaxis	Genetic	Preterm infant / preterm
Asthma	Guideline	Primate
Atresia	Heavy metal	Rabbit
Bacteria	HIV	Rats
burns	Hormone	Renal
Case report	Hypertension	Retarded
Case Study	Illness	Review
Celiac disease / coeliac disease	Immun (i.e. Immunology, Immunization, Immunisation)	Rickets
Cerebral palsy	In vitro	Smoke
Colitis	Infection	Soil
Contamin (i.e. contamination)	Injury	Steroid
Depress (i.e. depression)	Intensive care	Spina Bifida
Diabetes	Intravenous	Surgery
Diarrhoea (diarrhea)	Leukemia	Syndrome
Dietary sup	Malaria	Therapy
Disabilit (I.e. disabilities, disability) / disabled	Mental health	Toxic
Disease	Meta-Analysis	Transplant
Disorder	Microb	Tube (i.e. neural tube defects, tube feeding)
Drug	Mice	Urinary
Drug effects	Monkey	Urine
Drug therapy	Otitis Media	Vaccin (i.e. vaccinate, vaccine, vaccination)
Down syndrome	Outbreak	Violen (i.e. Violence, Violent)
Eating Disorders	Parenteral nutrition	Virus
	Patient	

- 3) 'Cochrane' was searched in JOURNAL to eliminate review articles

Stage 3 and Stage 4: Inclusion and exclusion of articles

- 1) The resulting articles were screened firstly according to *title and abstract* (stage 3) and if uncertain, the *full text* (stage 4) was retrieved, using the screening process detailed in the table below.

Stage 5: Searching reference lists

- 1) Reference lists of all included articles and relevant reviews were searched for additional studies.

Stage 6: Updating search results

- 1) Stages 1-5 were re-run using articles published between 01.06.13 and 01.04.13 to identify any recently published short dietary assessment tools for 0-5 years that assess whole diet.

	EXCLUSION POINT						
	1	2	3	4	5	6	7
	Study Outcomes	Study Assessment Method	Participants	Other	Dietary intake	Assessment of whole diet	Food items in short tool
Included	Studies on individual dietary intake in infants and children (Outcome data includes nutrition-related measure - e.g. dietary intake, dietary patterns, energy intake, nutrient intake)	Diet assessed using short dietary assessment tool <ul style="list-style-type: none"> - Food Frequency Questionnaires - other dietary questionnaires/ checklists 	Healthy <ul style="list-style-type: none"> - Infants and toddlers (1-23 months) - Pre-schooler's (2-5 years) 	<ul style="list-style-type: none"> - English language - Humans 	<ul style="list-style-type: none"> - Reported by primary caregiver/ parent 	<ul style="list-style-type: none"> - Investigates intake of foods from all 5 food groups (fruit, vegetables, meat/alternatives, dairy, cereals) with/without high-fat/sugar 'extras' foods 	<ul style="list-style-type: none"> - ≤50 items - *Items described as food intake questions. Excludes questions on dietary behaviour
Excluded	<ul style="list-style-type: none"> - Nutrition related outcomes such as nutrition knowledge, efficacy, attitudes, preference, behaviours (e.g. breastfeeding duration, weaning) etc. - Group, school, family intake Other studies, for example those <ul style="list-style-type: none"> - Testing food/menu content e.g. additives, contaminants, nutritional content - Describing supplement prescription and/or intake - Measuring energy expenditure, urinary and blood concentrations of nutrients 	Diet assessed using standard tool: <ul style="list-style-type: none"> - dietary recall - dietary record - food diaries - dietary indices - dietary interviews - large survey's 	<ul style="list-style-type: none"> - Children and adolescents ≥5 years - Diseased or institutionalised subjects (e.g. Coeliac disease, CF, Cancer, FTT, Diabetes) 	<ul style="list-style-type: none"> - Studies without an abstract - NE = Language other than English - NH = Not humans (animals) - EO=excluded for other reason, describe here (e.g. review/report articles, study protocols) 	<ul style="list-style-type: none"> - Reported by child 	<ul style="list-style-type: none"> - Assesses intake of foods form <5 food groups e.g. only fruit and vegetable intake 	<ul style="list-style-type: none"> - >50 items - *Items described as food intake questions. Excludes questions on dietary behaviours.
Code assigned	NDI = Not assessing dietary intake (no dietary intake outcome data)	NST = Not Short Tool	NP = Not Population	NE = Not in English NH = Not humans NA = No Abstract EO = Excluded other	NPR = Not parent reported	NWD = Not whole diet	NST50 = Not short tool ≤50 items

2 **Supplementary Table:** Definitions of review terminology and criteria used

Terminology	Definition	Criteria
Correlation coefficient (r)	A number, ranging from -1.0 to +1.0, used to describe the strength and direction of the linear relationship between two variables. Positive correlation; as one variable increases so too does the other. Negative correlation; as one variable increases the other decreases [1].	
Pearson's correlation coefficient	Correlation coefficient used for parametric data [1].	Low ≤ 0.50 ; Moderate 0.51-0.69; High ≥ 0.70
Spearman's correlation coefficient	Correlation coefficient used for non-parametric data [1].	Low ≤ 0.50 ; Moderate 0.51-0.69; High ≥ 0.70
Intra-Class correlation coefficient (ICC)	A measure of the reliability of measurements or ratings [2]. It is an explicit measure of the dependence of errors because it compares differences between groups to individual differences within groups [3]	Poor < 0.50 Good ≥ 0.50 [4]
Kappa coefficient (k)	A measure of agreement between two different diagnostic tests for categorical data [1]. Kappa is 1.0 when agreement is perfect; it is 0.0 when agreement is no better than would be expected by chance [5].	Poor < 0.20 , Fair 0.21-0.40 Moderate 0.41-0.60 Good 0.61-0.80 very good 0.81-1.00 [6]
Bland Altman analysis	Identifies the mean bias and 95% limits of agreement ($\pm 2SD$ of the difference) between methods, providing an indication of whether a tool is valid for the assessment of intake at the individual and/or population level [7, 8].	-
Bland-Altman plot	A plot of the difference (bias) between two methods against the average of the two methods; used to evaluate strength of agreement [7, 8].	-
Sensitivity	Identifies the extent to which a diagnostic test correctly identifies those who have a particular condition or disease [9].	-
Specificity	Identifies the extent to which a diagnostic test correctly identifies those who <i>do not</i> have a particular condition or disease [9].	-
Cross-classification analysis	Identifies the percentage of subjects correctly or incorrectly classified by the tool into quartiles or tertiles of intake by the reference method.	

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5 2. J. K. Peat, C. Mellis, and K. Williams, "Health Science Research: A handbook of quantitative
6 methods". 2001, Victoria, Australia: Allen&Unwin.
7 3. B. Tabachnick and L. Fidell, "Using multivariate Statistics". 2007, USA: Pearson Education Inc.
8 4. A. M. Wilson, A. M. Magarey, and N. Mastersson, "Reliability and relative validity of a child
9 nutrition questionnaire to simultaneously assess dietary patterns associated with positive
10 energy balance and food behaviours, attitudes, knowledge and environments associated
11 with healthy eating", *International Journal of Behavioral Nutrition and Physical Activity*, vol.
12 5, pp. 5, 2008.

- 13 5. W. P. Vogt, "Dictionary of Statistics & Methodology: A nontechnical guide for the social
14 sciences". 2nd ed. 1999: SAGE Publications Inc.
- 15 6. D. G. Altman, "Practical statistics for medical research". 1991: Chapman & Hall/CRC.
- 16 7. J. M. Bland and D. G. Altman, "Comparing methods of measurement: why plotting difference
17 against standard method is misleading", *Lancet*, vol. 21, no. 346(8982), pp. 1085-7, 1995.
- 18 8. J. M. Bland and D. G. Altman, "Measuring agreement in method comparison studies",
19 *Statistical Methods in Medical Research*, vol. 8, no. 2, pp. 135-60, 1999.
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22 *American Dietetic Association*, vol. 110, no. 3, pp. 409-19, 2010.

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