

ACAORN repository of tools to measure dietary intake in children and adolescents – September 2012

Table 1 - **Diet assessment tools with published validation studies in Australasian samples**

Tool	Outcome of Interest	Diet assessment method	Relevant for	Validation (see footer)	Citation	PubMed link	Contact details
Australian Child and Adolescent Eating Survey (ACAES)	Daily intakes of energy and/or macro and micro nutrients	1) Comprehensive, semi-quantitative 120-item. Self-administered Food Frequency Questionnaire completed by parents (for child <10y) and/ or child (9-16yr)	Age range: 5.5 - 9 years. Weight status: Overweight or obese	1) Face/content validity 2) Criterion/concurrent/predictive validity 3) Construct validity 4) Reliability	Watson JF, Collins CE, Garg ML, Dibley MJ, Sibbritt DW. Reproducibility and comparative validity of a food frequency questionnaire for children and adolescents. , <i>Int J Behav Nutr Phys Act</i> , 2009, 6:62 ; doi:10.1186/1479-5868-6-62. Watson JF, Collins CE, Dibley MJ, Garg ML, and Sibbritt D. Design considerations in the development of a Food-frequency questionnaire for school-aged children. <i>Asia Pacific Journal of Clinical Nutrition</i> , 12(S1-70), S24, 2003	http://www.ijnpa.org/content/6/1/62 http://www.ncbi.nlm.nih.gov/pubmed/15023623	Clare Collins Clare.Collins@newcastle.edu.au University of Newcastle, NSW
A child nutrition questionnaire	1) Intakes of fruit and vegetables and noncore foods and beverages 2) Behaviours, attitudes, knowledge and environments associated with these foods	1) Diet checklist or brief questionnaire 2) Child Nutrition Questionnaire Completed by child	Age range: 9 - 13 years. Weight status: Non-overweight, overweight or obese	1) Face/content validity 2) Criterion/concurrent/predictive validity 3) Reliability	Wilson A, Magarey A & Mastersson N (2008). Reliability and relative validity of a child nutrition questionnaire to simultaneously assess dietary patterns associated with positive energy balance and food behaviours, attitudes, knowledge and environments associated with healthy eating, <i>Int J Behav Nutr Phys Act</i> , 5:5	http://www.ncbi.nlm.nih.gov/pubmed/18226268?orcidinalpos=112&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum	Annabelle Wilson annabelle.wilson@flinders.edu.au Flinders University, SA

Face/content validity - To what extent does the proposed measurement of dietary intake measure what it was intended to measure

Criterion/concurrent/predictive validity - The correlation of a dietary scale with some other measure of the dietary trait under study, ideally a 'gold standard'

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Sensitivity to change - How well does the tool measure what the true dietary intake is and hence able to detect real changes over time)

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A vegetable and fruit identification survey and attitudes questionnaire	Targeted food component (vegetables and fruit)	Questionnaires (38-item 3-point Likert scale attitude questionnaire and 31-item single word survey. Self (child)-completed)	Age range: 10 - 13 years. Weight status: Non-overweight	1) Construct validity 2) Reliability	S Somerset and K Markwell. Impact of a school-based food garden on attitudes and identification skills regarding vegetables and fruit: a 12-month intervention trial. <i>Public Health Nutrition</i> , 12(2), 214–221	http://www.ncbi.nlm.nih.gov/pubmed/18647431?oridinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_DefaultReportPanel.Pubmed_RVDocSum	Shawn Somerset_ s.somerset@griffith.edu.au Griffith University, Qld
Children's Dietary Questionnaire (CDQ)	Targeted food component (positive and negative indicators of food intake against dietary guidelines)	Food Frequency Questionnaire (28-item, semi-quantitative, pencil & paper, parent or caregiver completed)	Age range: 4 - 16 years. Weight status: overweight and non-overweight	1) Face validity 2) Construct validity 3) Concurrent validity 4) Sensitivity to change (partial) 5) Reliability	Magarey A, Golley R, Spurrier N, Goodwin E, Ong F (2009) Reliability and validity of the Children's Dietary Questionnaire; A new tool to measure children's dietary patterns, <i>Int J Pediatr Obes.</i> Apr 8:1-9	http://www.ncbi.nlm.nih.gov/pubmed/19922040	Anthea Magarey anthea.magarey@flinders.edu.au Flinders University, SA
Food record, Food Frequency Questionnaire	Targeted food component	1) At 7 years of age a food record was completed by the child/parent. 2) At 13 and 15 years a FFQ was completed. Validation differed.	Age range: 7, 13 and 15 years. Weight status: Non-overweight, overweight or obese	1) Face/content validity 2) Construct validity 3) Reliability	KJ Campbell, DA Crawford, J Salmon, A Carver, SP Garnett, LA Baur (2007), Associations between the home food environment and obesity-promoting eating behaviours in adolescence. <i>Obesity</i> , 5:719-730	http://www.ncbi.nlm.nih.gov/pubmed/17372323?oridinalpos=129&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_DefaultReportPanel.Pubmed_RVDocSum	Sarah Garnett, sarahg@chw.edu.au The Children's Hospital at Westmead, Sydney, NSW
Fruits and vegies in lunchboxes	Targeted food Component (fruit and vegetables)	1) Weighed or household measured food records 2) prospective 24 hour food record completed by parent or parent and child (if child was in year 6)	Age range: Primary school children. Weight status: Non-overweight, overweight or obese	1) Face/content validity	Huddy AD, Adams JK, Holden L, Newell S, van Beurden E & Dietrich UC 2003, Fruits & vegies in lunchboxes - accuracy of a prospective 24 hour food record for primary school children, <i>Health Promotion Journal of Australia</i> , 14: 141-143.	Not available. Tooty Fruity tools website: http://www.ncahs.nsw.gov.au/tooty-fruity/index.php?pageid=1233&siteid=204	Jillian Adams jillian.adams@ncahs.health.nsw.gov.au Northern Rivers Area Health Service, NSW

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Food Frequency Questionnaire	Daily intake of energy, macro- and micro-nutrients Daily intake of foods, mixed dishes and beverages	Semi-quantitative 212-item self-administered Food Frequency Questionnaire completed by primary caregiver in consultation with the adolescent.	Age range: 14 year olds Weight status: non-overweight, overweight and obese.	1) Face/content validity 2) Criterion/concurrent/predictive validity 3) Reliability	Ambrosini GL, de Klerk NH, O'Sullivan TA, Beilin LJ, Oddy WH. The reliability of a food frequency questionnaire for use among adolescents, Eur J Clin Nutr, 2009, 63(10); 1251-9	Abstract link http://www.ncbi.nlm.nih.gov/pubmed/19550427 Full Text Link – Login required http://find.galegroup.com.ezproxy.flinders.edu.au/gtx/retrieve.do?contentSet=IAC-Documents&qrySerId=&inPS=true&tabID=T002&prodId=EAIM&searchId=R1&retrieveFormat=PDF&currentPosition=1&userGroupName=flinders&resultListType=RESULT_LIST&sort=DateDescend&docId=A209409208&noOfPages=9	Dr Wendy Oddy wendyo@ichr.uwa.edu.au Telethon Institute for Child Health Research, WA
School Food Checklist	Energy, food and beverage intake at school	20-item single page checklist completed by child	Age range: 5 - 12 years Weight status: non-overweight, overweight and obese	1) Face/content validity 2) Criterion/concurrent/predictive validity 3) Reliability	Kremer PJ, Bell AC, Swinburn BA. Calibration and reliability of a school food checklist: a new tool for assessing school food and beverage consumption, Asia Pac J Clin Nutr, 2006, 15(4); 465-73.	Abstract Link http://www.ncbi.nlm.nih.gov/pubmed/?term=calibration%20and%20reliability%20of%20a%20school%20food%20checklist Full Text Link http://search.proquest.com.ezproxy.flinders.edu.au/docview/213839777/fulltextPDF/13144E29C91551BE7F3/1?accountid=10910	Dr Peter Kremer peter.kremer@deakin.edu.au School of Psychology, Deakin University, Vic

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Short FFQ for rural Australian children	Foods or nutrients of primary interest in a total diet.	Self-administered 62-item Short Food Frequency Questionnaire completed by child – based on QLD DIAT survey	Age range: 10 - 12 years Weight status: non-overweight, overweight and obese	1) Criterion/concurrent/predictive validity 2) Reliability	Gwynn JD, Flood VM, D'Este CA, Attia JR, Turner N, Cochrane J, Wiggers JH. The reliability and validity of a short FFQ among Australian Aboriginal and Torres Strait Islander and non-Indigenous rural children, Public Health Nutr, 2010, 16; 1-14.	Abstract Link http://www.ncbi.nlm.nih.gov/pubmed/20633315 Full Text Link http://journals.cambridge.org.ezproxy.flinders.edu.au/download.php?file=%2FPHN%2FPHN14_03%2FS1368980010001928a.pdf&code=76214e9f962903917ed3eff3d6c22b2f	Josephine Gwynn Josephine.Gwynn@newcastle.edu.au Centre for Clinical Epidemiology and Biostatistics, Faculty of Health, University of Newcastle, NSW
Eating and Physical Activity Questionnaire (EPAQ)	Intake obesity related food and beverages: fruit juice, sugar-sweetened drinks, water, plain/flavoured milk, vegetables, packaged snacks, fruit, confectionary, cake, sweet biscuits.	Self-administered questionnaire completed by parents	Age range: 2 - 5 years Weight status: non-overweight, overweight and obese	1) Relative validity	Bennett CA, de Silva-Sanigorski AM, Nichols M, Bell AC, Swinburn BA. Assessing the intake of obesity-related foods and beverages in young children: comparison of a simple population survey with 24-hr recall, Int J Behav Nutr Phys Act, 2009, 6; 71.	Abstract Link http://www.ncbi.nlm.nih.gov/pubmed?term=assessing%20the%20intake%20of%20obesity-related%20foods%20and%20beverage%20in%20young%20children%3A%20comparison%20of%20a%20simple%20population%20survey Full Text Link http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2772847/pdf/1479-5868-6-71.pdf	Andrea M de Silva-Sanigorski Andrea.sanigorski@deakin.edu.au WHO Collaborating Centre for Obesity Prevention, Deakin University, Vic

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The Dietary Guideline Index for Children and Adolescents (DGI-CA)	Adherence to Dietary Guidelines (diet quality)	Index applied to 24-hour diet recall. Note. Validation study in progress with index applied to short food question data	Age range: 4 - 16 years Weight status: non-overweight, overweight and obese.	1) Construct validity 2) Predictive validity	Golley RK, Hendrie GA, McNaughton SA. Scores on the dietary guideline index for children and adolescents are associated with nutrient intake and socio-economic position but not adiposity, J Nutr, 2011, 141(7); 1340-7	Abstract Link http://www.ncbi.nlm.nih.gov/pubmed?term=Scores%20on%20the%20Dietary%20Guideline%20Index%20for%20Children%20and%20Adolescents%20are%20Associated%20with%20Nutrient%20Intake%20and%20Socio-economic%20Position%20but%20not%20Adiposity Full Text Link http://jn.nutrition.org/content/141/7/1340.long	Rebecca K Golley Rebecca.golley@unisa.edu.au University of South Australia, North Terrace, SA

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