

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years)

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD RECORDS (FR) or DIET HISTORY (DH)						
Livingston et al., 2003 (199)	7 yrs = 11 (7 M; 5 F) 9 yrs = 9 (5 M; 4 F) 12 yrs = 10 (5 M; 5 F) 15 yrs = 6 (3 M; 3 F) Total = 36 UK	7d Weighed FR DH	DLW Method for TEE (EE _{DLW}) Heart Rate Monitoring for EE (EE _{HR}) BMR by indirect calorimetry	Retrospective analysis of 1990 dataset (138) to identify underreporters (UR). Students recruited from schools with mixed SES. Parents of children 7-9 yrs completed 7d weighed FR; older children were assisted by parents. Subjects visited at home least 4 times during the weighing period. DH conducted with the child and/or parent either 2-4 wks before or after 7d FR. TEE was measured over 10 days with daily spot urine collection after dosing. HR monitoring for 4 days. BMR measured in early morning in fasting state. <u>School Intake:</u> For weighed FR, pocket notebook carried for recording food and beverages consumed away from home. For DH, school menu obtained and child asked about which foods and amounts eaten.		<p>Weighed FR vs. TEE Acceptable reporters (AR) = 83.3% Overreporters (OR) = 5.6% Underreporters (UR) = 11.1%</p> <p>Diet History vs. TEE AR = 80.6% OR = 16.7% UR = 2.8%</p> <p>The sensitivity of energy intake measured by heart rate monitoring was 0.50 and specificity was 1.00.</p> <p>Only 25% of children who underreported energy intake on weighed FR were identified by cut offs based on a blanket PAL of 1.55; none of the underreporting by DH was identified.</p>

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD RECORDS (FR) or DIET HISTORY (DH), CONTINUED						
Larsson and Johansson, 2002 and Larsson et al., 2002 (253;254)	16-20 yrs = 60 Mean age 17.5; 30 vegans and 30 omnivores; 50% male in each group; recruited through newspaper ad. Sweden	2 DH 2 separate 1-2 hour interviews 2 wks apart 3-dimensional food models, household measures, standard weights, and food photographs	DLW Method for TEE 4 24h urine collections for urine nitrogen, sodium and potassium. 3 fasting blood samples for serum vitamin B12 and folate.	Each respondent was asked about customary intake during 2 separate DH interviews (2 wks apart). After DH, 3 fasting blood samples 1 wk apart were taken. TEE by DLW method on 32 subjects (16 vegans and 16 matched omnivores) was measured during 14 days. Four 24h urines were collected per subject.		No significant difference in validity of reported intake of energy, nitrogen, and potassium between vegans and omnivores. DH vs. DLW TEE 12-14% energy underestimation by vegans and omnivores -1.93 MJ/d (95% CI:-2.89, -0.97) 4-10% underestimation of K intake by vegans and omnivores. Good agreement between methods for nitrogen and sodium
Green et al., 1998 (255)	16-19 yrs = 105 100% female Ontario, Canada	3-d weighed FR	Serum folate, red blood cell (RBC) folate, and serum Vitamin B12	Compared adolescents' report of folate and B12 intake on weighed record against serum micronutrient levels collected 1 week before FR.	Pearson Correlations FR Folate and Serum Folate = 0.65 FR Folate and RBC Folate = 0.50 FR B12 and Serum B12 = 0.32	

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD RECORDS (FR) or DIET HISTORY (DH), CONTINUED						
Bratterby et al., 1998 (196)	15 yrs = 50 50% male Sweden	7d Weighed FR	TEE by the DLW method	Volunteers recruited by letter and telephone from general population of 15 year olds in two cities. BNR measured on same day as DLW dosing. FR kept for first 7d post dosing. Participants kept log books for food eaten away from home and were debriefed at the end of the recording period.	Significant negative correlations were found both between energy intake as a percentage of TEE and percentage body fat and between energy intake as a percentage of TEE and body mass index.	Weighed FR vs. TEE (MJ/d) Males 18% underestimation 11.40 ± 2.71 vs. 13.82 ± 1.90 Females 22% underestimation 8.28 ± 1.88 vs. 10.70 ± 1.59
Livingston et al., 1992 (138)	15 yrs = 12 50% male 18 yrs = 10 50% male Cambridge, UK	7d Weighed FR Diet History	TEE by the DLW method	Volunteers recruited by letter from schools selected to represent different socioeconomic areas of city. Spot urine samples collected 10 to 14 days post DLW dose. Weighed FR kept for 7 days following DLW dose. DH collected either 2-4 wks prior to DLW test or after Weighed FR. Participants kept log books for food eaten away from home and were visited 4 times during the Weighed FR recording period.		Weighed FR vs. TEE (MJ/d) 15 years 22% underestimation 9.08 ± 2.92 vs. 11.71 ± 2.77 18 years 24% underestimation 9.28 ± 3.00 vs. 13.50 ± 4.11 DH vs. TEE (MJ/d) 15 years No significant difference 11.62 ± 3.04 vs. 11.71 ± 2.77 18 years 2% underestimation 12.83 ± 3.38 vs. 13.50 ± 4.11

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD RECORDS (FR) or DIET HISTORY (DH), CONTINUED						
Bandini, 1990 (195)	12-18 yrs = 55 28 lean; 27 obese Cambridge, UK	14 d Estimated FR	TEE by the DLW method	Daily metabolizable energy intake (ME) and total daily energy expenditure (TEE) were measured in 28 non-obese and 27 obese adolescents over a 2-wk period. Adolescents kept 14d estimated FR starting on the day of DLW dosing.		Estimated FR vs. TEE (kcal/d) Lean 20% underestimation 2,193 ± 618 vs. ± 600 kcal/d Obese 42% underestimation 1,935 ± 722 vs 3,390 ± 612 kcal/d
24 HOUR RECALL (24HR)						
Brady et al., 2000 (200) Longitudinal Study of Childhood Obesity, University of Alabama	7-14 yrs = 110 9.9 yrs. mean age; 20.1 kg/m ² mean BMI; 43% male; 52% white; 48% black Birmingham, AL	24HR 3x Three pass method; 2 in-person and 1 by telephone; 2 dimensional food models	DLW Method	Children admitted to the metabolic unit overnight for DLW dosing and 24HR 1. Two weeks later, children returned to nutrition center for 24HR 2. Third recall by telephone. Energy adjusted 24HR intake compared to recommended servings from food guide pyramid. Parents consulted during 24HR interview.	24HR Energy Intake vs. DLW TEE 0.32 (p = 0.08) Wide individual variability but nearly identical group mean energy intake measured by 24HR and DLW method.	24HR Energy Intake vs. DLW TEE Energy = 0.04MJ/d difference (NS)
Mullenbach et al., 1992 (256) Children and Adolescent Blood Pressure Program (CAPBB)	6th-9th grade = 40 (12-15 yrs) 55% male Minnesota	24 HR Telephone-administered; parent-assisted	3d Estimated FR Parent-assisted	Compared 24 HR with parent-assisted 3d FR completed 2-4 wks before recalls	Pearson's Correlation Energy = 0.42 Protein = 0.33 Total fat = 0.33 Range for 19 nutrients = 0.09 to 0.57	24HR vs. 3d FR 12% energy underestimation 1,835 vs. 2,097 kcal/day

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD FREQUENCY QUESTIONNAIRE (FFQ)						
Speck et al., 2001 (207)	6th – 8th grade = 24 in validation study; 446 in survey 12.7 yrs mean age; 50% male; 50% black North Carolina	Eating Habits Questionnaire (EHQ) Section 1 = 83-item FFQ on foods eaten for past week. Section 2 = 14 questions on general food habits, food preparation, and eating out. Section 3 = specific foods eaten one day in past week.	24HR = 3x on wk before EHQ	EHQ was adapted from the Health Habits Questionnaire used in the Bogalusa Heart study. EHQ administered to groups of 30-40 students by trained research assistants during health classes. A subset of 24 students were randomly selected to completed 3 24HR administered by a dietitian on week before EHQ. A subset of 31 students repeated EHQ in 48 hours and again 2 wks later.		EHQ vs. 24HR Mean % (SD) Food Categories in Perfect Agreement 56.0% (20.3%) Factor analysis found 10 factors explained 81.3% of the variance in eating habits (sweet snacks, meats, vegetables, breads/starch, snack foods, fruits, salad dressing, dairy, butter, and miscellaneous.
Perks et al., 2000 (208)	8.6-16.2 yrs = 50 Mean age 12.6 yrs.; 46% male Charlottesville, VA	Youth-Adolescent Food Frequency Questionnaire (YAQ) 131 item; Semi-quantitative; Self-administered	DLW Method for TEE	Subjects completed YAQ within 1 year of TEE measurement by DLW. Subjects also had the following measurements: BMI, BMR, and body composition by 4-compartment model of Lohman.	YAQ EI vs. DLW TEE r = 0.22 (p = 0.13) The discrepancy in energy intake (YAQ - TEE) was related to body weight (r = -0.25, p = 0.077) and percentage body fat (r = -0.24, p = 0.09) but not to age (r = -0.07, p = 0.63) or the time between measures.	YAQ EI vs. DLW TEE 2% overestimation 10.03 ± 3.12 vs. 9.84 ± 1.79 (p = 0.91) Limits of agreement = -6.30 and 6.67 MJ 26% of subjects YAQ EI within 10% of TEE 50% of subjects misreported intake <u>Investigator conclusion:</u> YAQ provides an accurate estimation of mean energy intake for a group but not for an individual.

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD FREQUENCY QUESTIONNAIRE (FFQ), CONTINUED						
Yarooh et al., 2000 (262)	11-17 yrs = 22 13.6 yrs mean age; 100% female and black; low income; overweight (BMI range 22.8-49.9) Atlanta, GA	110-item modified picture-sort FFQ 2x in a 2 wk period Modified for food and drink of study population based on previous study. Interviewer-administered	24HR 3 x by telephone in a 2 wk period, between FFQ1 and FFQ2	During a 2 wk period, the FFQ was administered twice. In between the FFQ interviews, 3 telephone 24HR interviews were completed. Data examined for outliers (1<500 or > 5000 kcal); one subject eliminated.	Pearson correlation FFQ vs. 24HR Energy-adjusted range of 0.32 for protein to 0.87 for fat with most nutrients above 0.50	FFQ vs. 24HR Mean kcal (SD) FFQ1 = 2,377 (1,083) FFQ2 = 1,792 (913) 24HR = 2,323 (850)
Koehler et al., 2000 (187) Pathways to Health	11-13 yrs (5th - 7th grade) = 120 American Indian; non-Hispanic white, Hispanic Southwest US	33-item Yesterday's Food Choices (YFC) Self-administered; past day intake; non-quantitative Categories: yes, not sure, no	24HR	Compared child's reported intake of particular foods against child's 24HR, both completed on same day	Spearman correlations FFQ vs. 24HR Low fat foods = 0.71 High fiber foods = 0.35 Fruits & veg. = 0.29 High fat foods = 0.40	FFQ vs. 24HR Percentage agreement for all food items = 60%

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD FREQUENCY QUESTIONNAIRE (FFQ), CONTINUED						
Field et al., 1998 (257)	9th-12th grade = 102 50% male; 35% white; 24% black; 15% Hispanic Boston, MA	4 FFQs all semi-quant., self-admin. 1) Youth /Adolescent Quest.(YAQ) 27 item (12 fruit, 15 veg.) For past year 2) Youth Risk Behavior Surveillance System (YRBSS) 4 items (2 fruits, 2 veg.) For past day 3) Behavioral Risk factor Surveillance System (BRFSS) 6 items (2 fruit, 4 veg.) For past day 4) BRFSS 6 items (2 fruit, 4 veg.) For past year	3 24HR	Compared adolescents' reports of fruit and vegetable intake by 4 different questionnaires with report of intake on 3 nonconsecutive 24HRs completed 2 wks apart. 1) YAQ was administered 2-4 wks after third recall. 2) YRBSS administered 2-4 wks after third recall 3) BRFSS (past day) administered halfway between two 24HRs 4) BRFSS (past year) administered preceding the third recall	Spearman's Correlations 1) YAQ (past year) vs. 24HR Fruit = 0.33 Fruit Juice = 0.29 Fruit & Juice = 0.33 Veg. = 0.32 Fruit & Veg. = 0.41 2) YRBSS (past day) vs. 24HR Fruit = 0.17 Fruit Juice = 0.07 Fruit & Juice = 0.21 Veg. = 0.24 Fruit & Veg. = 0.28 3) BRFSS (past day) vs. 24HR Fruit = 0.33 Fruit Juice = 0.30 Fruit & Juice = 0.34 Veg. = 0.14 Fruit & Veg. = 0.30 4) BRFSS (past year) vs. 24HR Fruit = 0.36 Fruit Juice = 0.36 Fruit & Juice = 0.35 Veg. = 0.33 Fruit & Veg. = 0.43	

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD FREQUENCY QUESTIONNAIRE (FFQ), CONTINUED						
Green et al., 1998 (255)	16-19 yrs = 105 100% female Ontario, Canada	116-item FFQ Semi-quantitative for past year	Serum folate, red blood cell (RBC) folate, and serum Vitamin B12	Compared adolescents' reports of folate and B12 intake on weighed record against serum micronutrient levels collected 1 wk before FR.	Pearson Correlations FR Folate and Serum Folate = 0.48 FR Folate and RBC Folate = 0.42 FR B12 and Serum B12 = 0.25	
Anderson et al., 1995 (259)	18 yrs = 49 27% males Norway	190-item FFQ Semi-quantitative; past year; group (child-parent) administered	7 d Weighed FR	Students kept 7d weighed FR with parent's assistance 2 to 3 mo after completing FFQ with parent's assistance. Questionnaire is used in a national survey of Norwegian youth.	Spearman Correlations FFQ vs. 7d FR Energy = 0.51 Protein = 0.48 Total fat = 0.57. Range of correlations for 18 nutrients 0.14 for vitamin D to 0.66 for MUFA. Median coefficient = 0.52	FFQ vs. 7d FR 24% overestimation of energy intake 10.7 vs. 8.6 MJ/d FFQ significantly overestimated 16 of 18 nutrients and 8 of 13 food items than FRs. On average, 41% of the subjects were classified in the same quartile in the questionnaire and the records and 2% in the opposite quartiles.

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
FOOD FREQUENCY QUESTIONNAIRE (FFQ), CONTINUED						
Rockett et al., 1997 (188) Nurses Health Study II Children	9-18 yrs = 261 9-13 yrs = 57%; 14-18 yrs = 43%; 47% male; 96% white; 19% of males obese; 13% of girls obese	131-item Youth/ Adolescent Quest. (YAQ) Semi-quantitative for past year; self-administered	24HR = 3 Telephone-administered Minnesota Nutrition Data System	The YAQ was administered by mail twice at an approximate 1 year interval (1993-94), and three multiple pass dietary recalls were collected during this period (5 months apart) by telephone. <u>Vitamin-mineral supplement:</u> information collected at end of 24HR.	Pearson correlations YAQ vs. 24HRs <u>Unadjusted</u> Energy = 0.35 Protein = 0.30 Fat = 0.41 For 28 nutrients range of 0.09 (copper) to 0.46 (vitamin C) <u>Energy Adjusted</u> Protein = 0.37 Fat = 0.49 For 29 nutrients range of 0.21 (Na) to 0.58 (folate)	YAQ vs. 24HR 1% overestimation of kcal (2196 vs. 2169 kcal) Of 31 nutrients, 16 overestimated by YAQ and 8 were underestimated.
Frank et al., 1992 (260) Bogalusa Heart Study	15-17 yrs = 22 100% female	64 items in 9 food groups of 6 to 12 foods each Semi-quantitative	7 24HRs Group recall method (263)	Female home economics students completed the FFQ and 7 consecutive 24HRs. Recalls were administered by trained nutritionists using group recall protocol. Percentage of agreement for frequency and quantity between methods for 12 foods calculated.		FFQ vs. 24HRs In general FFQ underestimated intake. % Perfect Agreement for Frequency/Amount Milk = 78/39 Bread = 26/61 Mayonnaise = 44/35 Gravy = 39/39 Butter = 61/57 Salad Dressing = 78/83 Hard candy/candy bars = 48/39 Snack chips = 61/17 Vegetables with meat = 61/48 Vegetables no meat = 26/30

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
OTHER QUESTIONNAIRES						
Frobisher et al., 2003 (211)	6-16 yrs = 37 17-82 yrs = 42 Mean age 12 yrs for children and 42 yrs for adults; university academic and administrative personnel or their children; 25 of adults and 8 of children overweight UK	Portion size estimation	Weighed portion sizes	Subjects served themselves usual portion of food. Food was immediately removed and weighed. Subjects described the portions size (S,M,L) and choose a photograph. Three to four days later the subjects described the portion size again (S,M,L) and choose a photograph. 9 foods studied: baked beans, cheese, chips, corn flakes, margarine on a slice of bread, mashed potato, rice, spaghetti and sausage roll.		Using descriptions (S,M,L) the percentage of children within $\pm 10\%$ and $\pm 50\%$ of the actual weights ranged from 3 to 31% and 19 to 84% respectively, compared with 9 to 64% and 60-91% for adults. For both children and adults the food photographs produced higher estimated weights than the descriptions.
Hoelscher et al., 2003 (264)	13-15 yrs = 209 Male and female; 38% white 41% Hispanic 17% African American	School Based Nutrition Monitoring (SBNN) secondary level student questionnaire 63 items including food and meal choice “yesterday” and “usually” for certain foods	24HR Multiple pass method	December 1995 through May 1996, instruments administered during school hours Tuesdays, Wednesdays, and Thursdays. In half the students, SBNN administered first followed by 24HR 2 hours later. In other students, the order of administration of instrument was reversed.	Spearman Correlation Correlation coefficients ranged from 0.32 for bread, buns, bagels, and others to 0.68 for milk and beans. Correlations > 0.5 for 12 of 17 food groups	SBNN vs. 24H Percent agreement ranged from 38% for breads to 89% for gravy.

Table 6.1. Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
OTHER QUESTIONNAIRES, CONTINUED						
Van Assema et al., 2002 (258)	12-18 yrs = 51 37% male Netherlands	F/V List (short FFQ to assess fruit and vegetable intake; 6 questions on fruit and 4 on vegetables)	7d Estimated FR	Subjects recruited from random sample of medium size town (76% response rate for adolescents). FFQ mailed to subjects. 1 wk after completed F/V list returned, dietitian visited the home twice to instruct on 7d FR completion and then to review completed record.	Pearson Correlation F/V and 7d FR Total = 0.56 Fruit = 0.64 Vegetables = 0.22	FFQ vs. 7d FR Boys: 50% fruit and 29% vegetable overestimation Girls: 101% fruits and 56% vegetable overestimation 35% misclassification into tertiles for total fruit; 27.4% for total vegetables.
Van Assema et al., 2001 (258b)	12-18 yrs = 50 37% male Netherlands	Fat List (short FFQ to assess fat intake; 35 questions on 19 categories of food items)	7d Estimated FR	Subjects recruited from random sample of medium size town (75% response rate for adolescents). Fat list mailed to subjects. 1 wk after completed Fat List returned, dietitian visited the home twice to instruct on 7d FR completion and then to review completed record.	Pearson Correlation Fat List and 7dFR Total fat = 0.61 Saturated fat = 0.56 %kcal fat = 0.2 Correlations lower for girls.	Gross misclassification, defined as disagreement between the two fat consumption assessments beyond an adjacent tertile, was less than 6% for boys and 15.7% for girls for total fat intake. Relative validity for female adolescents not acceptable.
Prochaska et al., 2001 (188;265)	13-14 yrs = 59 13.9 yrs mean age; 37% male; 37% white; 25% Asian/Pacific Islander; 12% Hispanic; 3% black San Diego, CA	21-item Dietary Fat Screening Measure 4-item Dietary Fat Screening Measure	3d Estimated FR	Data collection in 1998. Students trained on 3d FR and then called in the evening to review each day's recording.	Correlations 4 and 21 item Fat Screener and total fat grams on FR not significantly correlated 21 item but not 4 item Fat Screener correlated significantly with percentage of calories from dietary fat ($r = 0.36, p < 0.01$)	21 item Fat Screener vs. 3d FR Fat Screener correctly classified 71% into low and high fat intake groups. Specificity (ability to rule out low fat intake) = 47%

Table 6.1 Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
OTHER QUESTIONNAIRES, CONTINUED						
Johnson et al., 2001	13-14 yrs (7th and 8th grade = 98 46% male; students in public school Liverpool, UK	Food Intake Questionnaire (FIQ) Self-administered adapted non-quantitative 24HR method. Questionnaire asks, "Did you at any time yesterday eat any amount of..."	3d FR	FIQ developed to reveal broad changes in food intake over time, not individual nutrient intakes. FIQ completed in classroom 2 wks before 3d FR. Each student was provided with a pocket-size diary to record all foods eaten. On the 4th day, youth were interviewed to clarify information and to assess portion sizes using a calibrated food atlas. Both FIQ and 3d FR analyzed by aggregated food groups.	Pearson Correlation 3d FR and FIQ <u>Fatty Food Group</u> Energy = 0.20 p<.05 Fat% = 0.36 p<.05 Sugars = 0.09 Fiber = -0.57 <u>Sugary Food Group</u> Energy = 0.28 p<.05 Fat% = 0.27 p<.05 Sugars = 0.23 p<.05 Fiber = -0.12 <u>Fiber Food Group</u> Energy = 0.03 p<.05 Fat% = -0.17 p<.05 Sugars = 0.12 Fiber = -0.04	
Smith et al., 2001 (266) Child and Adolescent Trial for Cardiovascular Health (CATCH)	13-14 yrs. (7th graders) = 365 54% female; 67% non-Hispanic whites; 18.5% Hispanic; 7.5% African American California, Louisiana, Minnesota and Texas	CATCH Food Checklist (CFC) CFC asks students which foods on list consumed the previous day. CFC includes 40 food items (30 foods or food groups, 2 beverages, and 8 condiments)	24HR	Randomized, controlled trial in which participants were assigned to 1 of 3 study protocols that varied the order of administration of CFC and 24HR. CFC administered in classroom; 24HR at school. Criterion outcomes were percent energy from total fat and saturated fat, and milligrams sodium intake. CFC contains foods high in total fat, saturated fat, sodium, and 3 target nutrients.	Pearson correlation CFC Scores and 24HR (Blended weights) Total fat = 0.36 SFA = 0.35 Sodium = 0.34	

Table 6.1 Validation of dietary assessment methods in adolescents (13-18 years), continued

Reference	Study Population	Test Method (TM)	Reference Measurement (RM)	Design Features	Correlation Between TM and RM	Mean Intake Difference Between TM and RM
OTHER QUESTIONNAIRES, CONTINUED						
Yaroach et al., 2000 (267)	11-17 yrs = 57 13.6 yrs mean age; 100% black female; residents of low-income public housing; overweight (BMI > 85th percentile for age) Atlanta, GA	Qualitative Dietary Fat Index Questionnaire (QFQ) (Interviewer administered; modified Kristal Food Habits Questionnaire; 18 questions)	3 24HR (By telephone in 51; 6 in-person)	Subjects originally recruited for a nutrition and physical activity intervention. Subjects completed QFQ twice over a 2 wk period. First 24HR administered after first QFQ. Two more 24HR over the same 2 wk period.	Pearson Correlation 24HRs and 1st QFQ Log Transformed Total fat r = -0.31 (p>.05) Energy (kcal) r = -0.23 (Not Significant) Fat % kcal r = -0.23 (Not Significant)	