Supplemental Table 1: Detailed description of observational studies targeting children’s discretionary choices intake

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Reference,  Country  Study design and quality\* | Participants | Exposure (including data collection method) | ANGELO Framework  (environment size and type) | Dietary assessment | Discretionary choices targeted | Results | Results summary |
| Aguirre et al. (2012)(27)  USA  Cross sectional  Weak | N = 82 mothers of 2–6yo children; Mexican-American | Child feeding practices: restriction, monitoring, pressure  CFQ | Micro: Home  Policy: Child feeding practices | Proxy: maternal intake  Willett’s FFQ | DC | Higher restriction associated with higher maternal intake of cake (r 0.273, p<0.05).  Higher pressure associated with higher maternal intake of 8 DC (r 0.227-0.368; p<0.05).  Higher monitoring associated with higher maternal intake of 5 DC (r 0.253-0.353; p<0.05). | ++ |
| Aktas Arnas (2006)(1)  Turkey  Cross sectional  Weak | N = 347 3-8yo child (M52.7%) parent dyads | Exposure to TV food adverting  Minutes of TV watched  Parent questionnaire | Micro: Home  Physical: TV access  Policy: TV regulation | Child food intake and  Proxy: child food requests  Method not specified | DC | No significant association with TV use (hours) and food requests when shopping.  No significant association with child requests for foods in TV adverts when in the supermarket (40.4%), insisted and cried (8.9%) (X(45) = 55.55, p >0.05 NS).  Parents talking about the products presented in adverts was associated with higher number of purchasing requests (46.5%) and insisted and cried (40%) (X(19) = 39.84, p<0.05). | 0 |
| Andaya et al. (2011)(24)  USA  Cross sectional  Weak | N = 794 4-10yo (mean 6.4y; M51%) child parent dyads | Frequency of family meals (Breakfast, Lunch, Dinner)  Frequency of TV use during family meals  Measure not specified | Micro: Home  Physical: TV access  Policy: Meal pattern, TV regulation  Sociocultural: Meal time structure | Child food intake  Block FFQ (modified version) | Soda/soft drink, savoury snacks | Family meals ≥4d/wk (40%) = consumption of soda (44%) and chips (43%) 5 or more x/wk (p>0.05 NS).  Higher TV access with meals was associated with lower risk of decreasing child intake of soda and crisps (OR 0.46, 95%CI 0.32,0.65, p <0.001). | ~ |
| Arredondo et al. (2006)(29)  USA  Cross sectional  Weak | N = 812 child (mean 6y; M48%) parent dyads | Child feeding practices: control, discipline, limit setting, monitoring, reinforcement  Parenting scale | Micro: Home  Policy: Child feeding practices | Child food intake  FFQ | DC | Higher monitoring was associated with lower DC intake (negative with unhealthy eating; β-0.17, p<0.01).  Higher reinforcement was associated with lower DC intake (negative with unhealthy eating; β-0.08, p<0.01).  Higher parental control was associated with higher DC intake (β0.10, p<0.01).  No significant association with discipline (β-0.004, NS) or limit setting (β-0.05, NS) and child intake. | ~ |
| Ayala et al. (2008)(28)  USA  Cross sectional  Weak | N = 708 4-7yo child (mean 6y; M48.1%) parent dyads | Frequency (> or < 1 time/wk) of meals away from home: relative / neighbour / friend, fast food / buffet / sit down (restaurant)  Primary restaurant type  Survey | Micro: Community  Sociocultural: Meal pattern | Child food intake  FFQ | DC | Higher frequency of meals away from home at relative/neighbour/friend was associated with higher SSB intake (>1/wk 1.04(1.54) serves, p≤0.01), but no association with snacks intake.  Higher frequency of meals away from home at restaurants was associated with higher SSB (>1/wk SSB 1.06(1.54) serves, p≤0.01) and snacks (>1/wk snacks 1.58(1.94) serves, p≤0.01) intake.  No significant association with type of primary restaurant and child SSB (0.79(1.31)serves – 0.94(1.53)serves, NS) or snacks (1.14(1.76)serves – 1.42(1.87)serves, NS) intake. | ++ |
| Brown et al. (2008)(46)  UK  Cross sectional  Weak | N = 546 parents of 4-7yo children (mean 6y; M46%) | Child feeding practices and parenting style: overt control, covert control, pressure to eat  CFQ and self developed likert scale questionnaire | Micro: Home  Policy: Child feeding practices | Child food intake  FFQ and 7d food diary | DC | Lower snack covert control was associated with higher DC intake (-0.27, p<0.01)  Higher pressure was associated with higher DC intake (0.11, p<0.01).  No significant association with meal covert control (-0.08, NS), and snack (-0.08, NS) or meal (-0.01, NS) overt control, and child intake. | ~ |
| Buck et al. (2013)(47)  Germany  Cross sectional  Weak | N = 384 6-9yo (mean 7.6y; M50.5%) children | Density of ‘junk’ food outlets around in schools  Experimenter observations | Micro: Community  Physical: Food availability | Child food intake  FFQ, Self-Administered Children and Infants Nutrition Assessment 24hr recall | DC | No significant association with density of junk food outlets and child intake of energy(kcal)/d (β-12.15, p0.60) or frequency of DC intake (expβ1.01, p0.57), or simple sugar foods (expβ0.99, p0.87) per week. | 0 |
| Campbell et al. (2006)(41)  Australia  Cross sectional  Weak | N = 560 parents of 5-6yo (mean 6.1y; M47%) children | Family food environment predictors  CFQ and self developed questionnaire | Micro: Home  Physical: Food availability, TV access  Policy: Child feeding practices  Sociocultural: Meal time structure | Child food intake and energy intake  FFQ | DC | Higher pressure was associated with higher energy (B 457.5(CI 225.2 to 689.9), β 0.18, p<0.001), savoury snack (B 0.6(CI 0.2 to 1.1), β 0.15, p0.005), sweet snack (B 1.6(CI 0.5 to 2.7), β 0.17, p0.006), SSB (B 1.1(CI 0.2 to 2.0), β 0.1, p0.015) intake.  Higher TV viewing was associated with higher energy (B 81.9(CI35.2 to 128.5), β 0.22, p0.001), sweet snack (B 0.2(CI 0.1 to 0.4), β 0.17, p0.013), SSB (B 0.4(CI 0.3 to 0.6), β 0.3, p<0.001) intake.  Higher mealtime interruptions was associated with lower energy intake (B -331.9(CI -592.2 to -71.5), β-0.13, p0.014).  Higher perceptions of adequacy of child diet was associated with higher savoury snack (B 0.3(CI -0.01 to 0.7), β 0.08, p<0.05), sweet snack (B 1.4(CI 0.3 to 2.5), β 0.14, p0.016) intake. | ++ |
| Campbell et al. (2010)(42)  Australia  Cross sectional  Moderate | N = 80 5yo (mean 4.9y; M50%) child parent dyads | Parent self efficacy regarding child eating behaviours (limiting DC)  Self developed questionnaire | Micro: Home  Sociocultural: Parental beliefs / attitudes | Child food intake  Eating and Physical Activity Questionnaire | DC | No significant association with parent self efficacy for limiting DC with child intake. | 0 |
| Erinsho et al. (2012)(25)  USA  Cross sectional  Weak | N = 200 3-5yo child (mean not reported) parent dyads | Parent food behaviours (purchasing, consumption patterns), TV use, meal pattern  Household survey | Micro: Home  Physical: Food availability, TV access  Micro: Community  Socio-cultural: Meal pattern | Child food intake  FFQ | DC | Higher frequency of meals away from home at fast food outlets, and other restaurants (high ≥1/wk) was associated with higher intake of French fries (fast food: OR 0.24 (CI0.09-0.60), p<0.05; other restaurant: OR 0.31 (CI0.12-0.81), p<0.05), but not significantly associated with intake of soft drinks, desserts or snacks.  Higher frequency of eating while watching TV (≥3x/wk) was associated with higher intake of fruit drinks (OR 2.33 (CI1.20-4.51), p<0.05), desserts (OR 2.84 (CI1.52-5.30), p<0.05), and snacks (OR 3.20 (CI1.59-6.41), p<0.05), but not significantly associated with soft drink intake. | + |
| Galst et al. (1976)(30)  USA  Cross sectional  Weak | N = 41 3.11-4.11yo child (mean 4.7y; M51%) parent dyads | 3x30min video taped popular children's television programs and adverts. Children controlled time advert remained on the screen (commercial-reinforcement value)  TV use (commercial and commercial free) hrs  Parent completed questionnaire / record | Micro: Home  Physical: TV access  Policy: TV regulation, Parenting | Proxy: Child food requests  Experimenter record: of child purchase attempts/ requests (successful and unsuccessful) | DC | Higher TV advert interest was associated with higher child requests (inc. food requests) (commercial reinforcement ratio: r 0.52, p<0.01; overall TV reinforcement: r 0.64, p<0.01) were associated with total child requests (not just DC).    Higher TV access was associated with higher child requests (inc. food requests) (r 0.31, p<0.05). | ++ |
| Gubbels et al. (2011)(49)  Netherlands  Cross sectional  Weak | N = 2074 5yo child parent dyads | Child activity behaviour  Standard Questionnaire for measuring Physical Activity | Micro: Home  Policy: Meal pattern | Child food intake  FFQ | DC | Sedentary child activity behaviours was associated with child intake of sweets and sugar (component loadings 0.656), pastry and cookies (0.510) and savoury snack (0.510).  No significant mutual correlations (r0.007, NS) between sedentary-snacking pattern and healthy intake pattern. | 0 |
| Gubbels et al. (2012)(48)  Netherlands  Cross sectional  Weak | N = 2026 5yo child (M51.2%) parent dyads | Child feeding practices: restriction, monitoring, stimulation  Modified CFQ | Micro: Home  Policy: Child feeding practices | Child energy (kJ/d) and added sugar (%E) intake  FFQ | Energy, sugar | Higher monitoring and stimulation were associated with higher %E added sugar intake (monitoring: β-0.08, p<0.01; stimulation β-0.07, p<0.01), but restriction was not (β-0.04, NS).  Parenting practices were not significantly associated with child energy intake (restriction β-0.03; monitoring β-0.02); stimulation β0.01). | + |
| Isler et al. (1987)(31)  USA  Cross sectional  Weak | N = 250 3-11yo child (n=118 5-7yo) parent dyads | TV use (exposure to food adverts)  Parent completed 4wk TV log | Micro: Home  Physical: TV access  Policy: TV regulation, Parenting | Child food requests  Parent diary record | DC | Higher TV access was associated with higher child total requests (food and non food, r 0.18, p0.003) and child requests for candy (r 0.19, p0.01). | ++ |
| Kerr et al. (2010)(50)  Ireland  Cross sectional  Weak | N = 115 5-8yo children (mean 6.6y) | Location of food intake (home or out of home)  Questionnaire | Micro: Community  Socio-cultural: Meal pattern | Child food intake  7d weighed food dietary record | DC | Higher frequency of snacks at home was associated with higher %E intake from added sugar (home: median 24.82; IQR 18.45,30.70; out 11.51; 0.0, 22.39; p <0.001).  Higher frequency of snacks away from home was associated with higher %E intake from saturated fat (home 14.57; 11.37, 16.59; out 25.21; 17.28, 28.03; p<0.001), from 3 DC foods (home 12.03-15.35(6.46, 32.23), out 18.26-37.24(10.58,51.68), p<0.001).  No significant difference (p0.677) in the energy density (kJ/g) of snacks consumed at home (10.68; 8.98,12.33) vs out of home (11.20; 7.67, 12.94). | ~ |
| Lopez et al. (2012)(26)  USA  Cross sectional  Weak | N = 539 5-8yo child (mean 6.7y; M44.9%) parent dyads | Parenting model: food rules, modelling, parent-mediated behaviours (inc. meal pattern), support for healthy eating (monitoring)  Self administered survey | Micro: Home  Physical: TV access  Policy: Child feeding practices, TV regulation  Micro: Community  Socio-cultural: Meal pattern | Child food intake  FFQ | SSB | Higher frequency of fast food (high ≥1/wk) was associated with higher SSB intake (β0.095, p≤0.05).  Higher TV access was associated with higher SSB intake (β0.135, p≤0.05).  Higher monitoring was associated with lower SSB intake (β-.142, p≤0.001).  No significant association with food rule (β-0.060 NS) and parent modeling (β -0.049 NS), and child intake. | ~ |
| Murashima et al. (2012)(3)  USA  Cross sectional  Weak | N = 330 3-5yo child (mean 4.2y; M50.9%) parent dyads | Parenting: directive (overt control: restriction), non-directive (covert control: monitoring)  Questionnaire | Micro: Home  Policy: Child feeding practices | Child food intake  Block Food Screener for age 2-17 | DC | Higher covert control was associated with lower intake (β -0.209, p<0.05).  No significant association with overt control and child intake (β -0.057, 95%CI -0.202 to 0.088). | ~ |
| Ogden et al. (2006)(51)  UK  Cross sectional  Weak | N = 297 4-11yo child (mean 7.4y; M54.9%) parent dyads | Parenting: overt control (restriction) and covert control (monitoring)  Self developed questionnaire | Micro: Home  Policy: Child feeding practices | Child food intake  Total snack score measure | DC | Higher covert control was associated with lower child intake (B -0.36, p0.0001).  No significant association with overt control and child intake (B 0.03, p0.6). | ~ |
| Spurrier et al. (2008)(40)  Australia  Cross sectional  Weak | N = 280 child (mean 4.8y; M50%) parent dyads | Home food environment: availability of food, TV access, parenting, food providing behaviours (e.g. meal size, #snacks)  Direct researcher observation and self developed Physical and Nutrition Home Environment Inventory tool | Micro: Home  Physical: Food availability, TV access  Policy: Child feeding practices  Socio-cultural: Meal time structure  Micro: Community  Socio-cultural: Meal pattern | Child food intake  Children’s Dietary Questionnaire | DC | Higher frequency of takeaway foods was associated with higher intake (intake mean score: frequently 21.5, rarely 15.5, p0.005).  Higher home availability of snack foods (4 snack foods) was associated with higher intake (higher availability 17.2-18.0, lower availability 21.6-23.3, p≤0.01).  Higher number of snacks/d was associated with higher child intake (2.9±1.15 (0-8) snacks/d, r 0.23, p<0.001).  No significant association with TV access with snacks and child intake of snacks (frequently 22.0, rarely 17.7, p0.06).  No linear trend with the home food environment and child intake of SSB. | ~ |
| Tabak (2011)(32)  USA  Cross sectional  Weak | N = 82 3-8yo child (M56.1%) parent dyads | Home social environment: modelling, parental (restriction) and child (monitoring) control over food intake, meal environment  Telephone interview using Healthy Home Survey | Micro: Home  Policy: Child feeding practices  Socio-cultural: Meal time structure | Child food intake, energy and fat intake  Block Kids FFQ | DC | Higher child self-serving was associated with higher sweets intake (adjusted OR 2.53 (CI1.48-4.33), r 0.29, p0.01).  Higher parental modelling was associated with lower soda intake (r -0.26, p0.03). | ~ |
| Taras et al. (1989)(32)  USA  Cross sectional  Weak | N = 66 3-8yo child parent dyads | TV use (hrs)  Interviewer administered self developed questionnaire | Micro: Home  Physical: TV access  Policy: TV regulation | Child energy, saturated fat, sugar and salt intake  Willett’s FFQ | Energy, saturated fat, sugar, salt | Higher TV access was associated with higher requests (r0.31, p0.006), purchases (r0.44, p0.001), energy intake (r 0.34, p0.001).  Higher snacks with TV use was associated with higher requests (r 0.25, p0.02), purchases (r0.28, p0.01), energy intake (r 0.23, p0.03).  Higher meals with TV use was associated with lower energy intake (r -0.21, p0.04), but not significantly with requests or purchases  Higher frequency of high fat food requested was associated with higher intake of saturated fat (r 0.35, p0.012), sugar (r 0.54, p0.000), salt (r 0.54, p0.004).  Higher frequency of high sugar food requested was associated with higher sugar intake (r 0.24, p0.03), but not significantly with saturated fat or salt.  Higher frequency of high sugar food purchased was associated with higher sugar intake (r 0.33, p0.04), but not significantly with saturated fat or salt.  Higher frequency of high salt food requested was associated with higher intake of saturated fat (r 0.36, p0.04), sugar (r 0.54, p0.004), but not significantly with salt. | ~ |
| Vereecken et al. (2008)(52)  Belgium  Cross sectional  Weak | N = 1678 2.5-6.5yo child (M50%) parent dyads | School nutrition policy: availability of discretionary foods, food rules/restriction, other diet related activities  Principal self developed questionnaire | Micro: Educational Institution  Physical: Food availability  Policy: Nutrition policy | Child food intake  FFQ | DC | Lack of school nutrition policy was associated with higher sugared/ flavoured milk drink intake (%of total variance attributed to school: 3.6%), but not significantly with snack or sugared soft drink.  Higher availability of sugared milk drinks was associated with lower plain milk (B -29, SE 13, p<0.05), and higher sugared milk drinks (B 25, SE 13, p0.05) intake. | + |
| Wroten et al. (2012)(34)  USA  Cross sectional  Weak | N = 650 2.8-5.8yo child (mean 4.4y) mother dyads | Mothers intake  24h recall (weekend day) | Micro: Home  Physical: Food availability | Child food intake and energy intake  24hr recall (weekend day) | Sweet and savoury snacks | Higher maternal sweet snacks intake was associated with higher sweet snack (r 0.345, p<0.0001), energy (r 0.176, p<0.0001) intake  Higher maternal savoury snack intake was associated with higher savoury snacks (r 0.340, p<0.0001) intake  Higher maternal energy intake was associated with higher sweet snack (r 0.130, p<0.05), energy (r 0.483, p<0.0001) intake | ++ |

ANGELO, ANalysis Grid for Environments Linked to Obesity; N, number of participants; CFQ, Child Feeding Questionnaire; FFQ, Food Frequency Questionnaire; DC, discretionary choices; M, males; TV, television; SSB, sugar-sweetened beverages

\*Study methodology quality assessed using the Effective Public Health Practice Project Quality Assessment Tool, with an overall quality rating is assigned: strong (four strong ratings and no weak ratings), moderate (less than four strong ratings and one weak rating) or weak (two or more weak ratings)(19)

Supplemental Table 2: Detailed description of intervention studies targeting children’s discretionary choices intake

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Reference,  Country  Study design and quality\* | Participants | Intervention | ANGELO Framework  (environment size and type) | Dietary assessment | Discretionary choices targeted | Results | Results summary |
| Acran et al. (2013)(38)  USA  RCT  Moderate | N = 75 K-1 teachers (I: n=43; C: n=32); schools on American Indian reservation | Intervention: 2d teacher DC training  Control: Waitlist  Follow up: 15months | Micro: Educational Institution  Policy: Teacher classroom food- related practices  Sociocultural: Teacher beliefs | Proxy: Child exposure/ availability to DC  Teacher classroom food-related practices survey | Confectionary, fast food, SSB | Note: higher score indicates closer to ideal practices  Decrease in teacher use of confectionary as a treat (mean survey score post I:4.75, C:4.19, p=0.0005)  Decrease teacher use of fast food as a reward, incentive or treat (post I:4.55, C:4.43, p=0.008)  Increase teacher disagreement with: fast foods should be offered at school (post I:4.33, C:4.12, p=0.019), fundraising can include DC (post I:3.39, C:2.53, p=0.006)  No difference in allowing children to have SSB in the classroom (post I:4.74, C:4.74, p>0.05)  No difference on teacher keeping confectionary in classroom to give to students (post I:4.34, C:3.87, p>0.05) | - - |
| Bevelander et al (2012)(53)  Netherlands  RCT  Moderate | N = 316 grade 1-2 children | Intervention 1: Fictitious peer familiar food selection  Intervention 2: Fictitious peer unfamiliar food selection  Control: No peer  Duration: One time point | Micro: Educational Institution  Socio-cultural: Peer influence | Proxy: Hypothetical child food choice  Choice within computer based activity | Sweet snack | No significant interaction was found between the experimental conditions and the four choice blocks (P=0·41).  Number of familiar choices  I1=9.7±0.2  C=9.3±0.2  I2=8.0±0.2 (P<0.05)  Children more likely to choose DC, familiar or not compared to familiar (8·23±0.15) or unfamiliar fruit and vegetables (8.63±0.17). | 0 |
| Birch et al. (1993)(37)  USA  RCT  Weak | N = 29 2-5yo children | Intervention: 16g fat substitute menu (11820kJ)  Control: Placebo 16g fat menu (12071kJ)  Duration: 5wks | Macro: Government  Physical: Food reformulation | Child energy and fat intake  Pre and post weighed food record | Sweet and savoury snacks | 48h mean difference (±SE not reported) daily energy intake vs control, -100kJ, p<0.05; -2.3%kJ total fat, p<0.001 (+1.8% carbohydrate, p<0.001). | - |
| Dickin et al. (2013)(39)  USA  Cohort  Weak | N = 210 parents of 3-11yo children; low income | Intervention:  Nutrition and parenting education (90min x 8wk), weekly family home challenges  Duration: 8wk | Micro: Home  Physical: Food availability/ SSB substitution water, low fat milk | Child food intake  Behaviour checklist | SSB, fast food | Note: larger score represents a healthier response  Decrease parent SSB intake (pre-score X±SE 4.09±0.09; change 0.37±0.09, p<0.05)  Decrease child SSB intake (pre 4.17±0.08; change 0.34±0.09, p<0.05)  Decrease availability of fast food (pre 4.04±0.06; change 0.47±0.09, p<0.05)  Decrease availability DC snacks (pre 3.33±0.08; change 0.49±0.09, p<0.05) | - - |
| Duncanson et al. (2013)(43)  Australia  RCT  Moderate | N = 146 2-5.9yo child (I: n=75, mean 4y, M53%; C: n=71, mean 4.04y, M52%) parent dyads; rural | Intervention:  3mo nutrition  and parenting education (interactive CD/DVD; 5 food groups, dietary fats, label reading, junk food)  Control: Generic nutrition and activity education  Duration: 12mths | Micro: Home  Physical: Food availability  Policy: Child feeding practices | Child food intake and energy intake  Australian Toddler Eating Survey | DC | Decrease in child energy intake (mean difference I: -583kJ (95%CI -1203; 38); C: -13kJ(-526; 500), p<0.048) at 12mths  Decrease in all DC (serves: I: -0.23 (-1.2; 0.8), C: 0.0(-0.7; 0.7), p>0.05 at 12mths | - |
| Fletcher et al. (2013)(44)  Australia  RCT  Moderate | N = 394 3-5yo child (mean 4.3y; I: n=208, M49%; C: n=186, M54.3%) parent dyads | Intervention: 1month DC nutrition education (phone; workbook)  Control: Generic Australian Guide to Healthy Eating  Duration: 6mths | Micro: Home  Physical: Food availability  Policy: Child feeding practices  Sociocultural: Meal time structure | Child food intake  Children's Dietary Questionnaire | DC | Decrease intake of DC at 2mths (subscale score X±SE I: 2.27±0.06, C: 2.60±0.10, p<0.01); 6mths (I: 2.34±0.06, C: 2.52±0.09, NS).  Mediation model of DC R2=0.39  Child feeding strategies (R20.32, standard regression weight 0.12, p<0.001) and access to non-core foods (R20.42, standard regression weight 0.20, p<0.001) were associated with child intake of non-core foods at 2mths | - |
| Musher-Eizenman et al. (2010)(3)  USA  RCT  Moderate | N = 31 3.4-11yo children (mean 6.3y; M58%); middle class | Proximity (11inches to 33ft8inches) to snack food  Intervention: Energy-dense (animal crackers) snack  Control: Nutrient-dense (carrot slices) snack  Duration: 1 snack time x 2d | Micro: Educational Institution  Physical: Food availability | Child food intake  Experimenter record: number of serves consumed | Snack food | Closer proximity to energy dense snack was associated with increase child consumption (B±SE -0.48(0.19); ΔR2 0.17, β -0.41, p<0.05). | - |
| Stutts et al. (2011)(36)  USA  RCT  Weak | N = 236 6-11yo children (6-8y and 9-11y; M50%) | Fast food menu labelling  Intervention 1: Nutrition information (calories, fat g)  Intervention 2: Healthy heart symbol (<550calories, <20g fat)  Control: Nil.  Duration: One time point | Macro: Government  Policy: Nutrition labelling | Proxy: Child food choice  Experimenter record: menu items chosen, proportion children plan to consume | Fast food | Intervention condition combined (multivariate analysis: Wilks’ λ 0.92, *F* 1.91, p>0.05)  Intervention 1:  McDonald's menu: mean I:540cal, C:527cal, NS; fat I:22.7g, C:21.7g, NS)  Wendy’s menu: mean I:522cal, C:447cal, NS; fat mean I:21.7g, C:18.5g, NS  Intervention 2:  McDonald's menus: mean I:369cal, C:527cal, p<0.05; fat mean I:13.3g, C:21.7g, p<0.05  Wendy's menus: mean I:416cal, C:447cal, NS; fat mean I:16.6g, C:18.5g, NS | - |
| Tandon et al. (2010)(35)  USA  RCT  Moderate | N = 99 (I:51, C:48) 3-6yo child (mean 4.3y; M51%) parent dyads | Fast food menu labelling  Intervention 1: Nutrition information labelling (calories)  Control: Nil  Duration: One time point | Macro: Government  Policy: Nutrition labelling | Proxy: parent food selection for child  Experimenter record: menu items chosen by parent | Fast food | Difference mean I:569.1cal, C:671.5cal, p0.004 | - - |
| Zask et al. (2012)(45)  Australia  RCT  Weak | N = 30 centres, 560 3-6yo children | Intervention: Policy (DC left out of lunchbox), parent/ child education DC  Control: Waitlist  Duration: 10mths | Micro: Home, Educational Institution  Physical: Food availability  Policy: Nutrition policy  Socio-cultural: Parental KAB | Child food intake  Experimenter record: lunchbox contents; questionnaire to parents | DC | Decrease in the % of children with 2+DC items in lunchbox (post net difference [%of children] -24.5%, p<0.0001).  Increase in the % of children with 0 DC items in lunchbox (post net difference 29.1%, p<0.0001). | - - |

ANGELO, ANalysis Grid for Environments Linked to Obesity; RCT, randomised control trial; N, number of participants; I, intervention; C, control; DC, discretionary choices;

SSB, sugar-sweetened beverages; M, males

\*Study methodology quality assessed using the Effective Public Health Practice Project Quality Assessment Tool, with an overall quality rating is assigned: strong (four strong ratings and no weak ratings), moderate (less than four strong ratings and one weak rating) or weak (two or more weak ratings)(19)